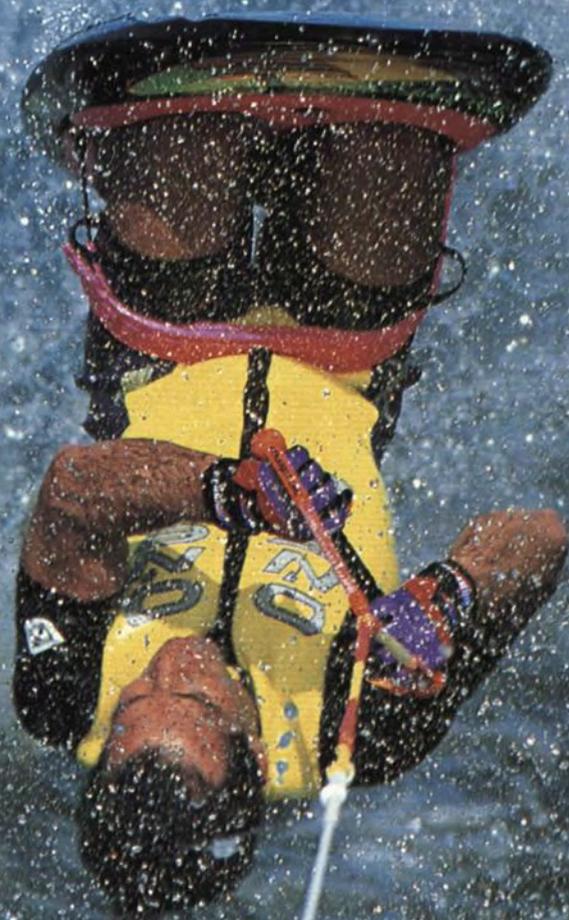


# BOAT

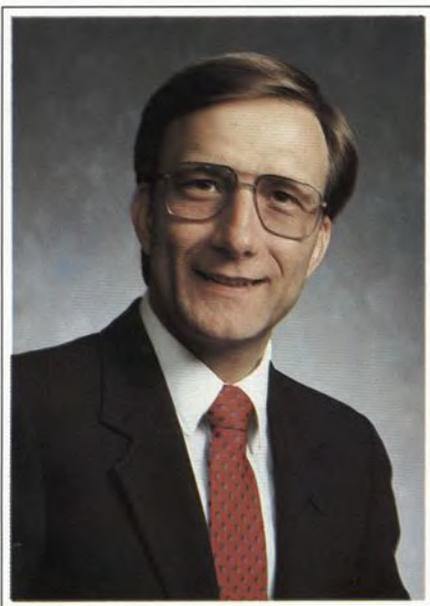
## Pennsylvania

*The Keystone State's Official Boating Magazine*

Spring 1992  
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## An Important Step for the Future of Boating



**John Simmons**

Director

Bureau of Boating

Pennsylvania Fish & Boat Commission

On December 12, 1992, House Bill 1107 was signed into law. Boat registration fees were increased for the first time in nearly 30 years and the name of the Commission was changed to the Pennsylvania Fish and Boat Commission. By changing the name of the Commission to the Fish and Boat Commission, the Legislature recognized the importance of boating to the citizens of the Commonwealth. Whether you fish, water ski or cruise, your boat has become an important part of your recreational experience. Each year over 2.5 million people go boating. Only swimming, hiking, biking and fishing had greater participation levels.

In 1963, the year the Commission was officially given authority over the Pennsylvania boating program, only 78,000 boats were registered. Since then, boating has grown steadily. Today over 302,000 boats bear Pennsylvania registrations. To accommodate this growth, additional launching facilities had to be provided. New laws and regulations had to be written. Methods to provide additional law enforcement had to be found to maintain control over the use of the water. Boating safety education programs had to be developed so that the great number of people new to boating could learn the rules of safety and courtesy.

During the development years of the boating program, expansion of the registration base and additional revenue sources, such as the return of the tax paid on fuel used in boats, Projects 500 and 70, Federal Aid for Fish Restoration and the U. S. Coast Guard boating safety assistance programs, all helped defray the costs associated with the increased services. Unfortunately, the cost to provide services began to outstrip available resources during the latter part of the last decade. Costs continued to rise, but the small increases in revenue from each new registration were not sufficient to keep up with the demands each new boat placed on the system.

When determining the amount of increase to request from the Legislature, the Commission estimated that the increased boat registration fees would have to bring in about \$3.5 million annually or about \$2.3 million more than previously collected. This amount was needed to fund current programs and to meet inflationary pressures. The Commission has identified several major areas, based on requests of the boating public, where additional effort will be made.

- More safety patrols/regulatory enforcement.** Ten additional fulltime officers will be hired along with 20 seasonal officers to help patrol the busiest waters of the Commonwealth. The Commission will also increase the compensation of deputy waterways conservation officers.

- Expand boating safety education.** Financial grants will be made available to schools to encourage them to incorporate boating safety programs into their curriculums. Additional education specialists will be hired to coordinate programs in the various regions of the state.

- Improve and maintain boating access areas.** The Commission has developed 300 boat launch sites. These areas provide a place to park vehicles and a ramp to launch boats. Additional revenues from the boat registration fees will ensure the continued acquisition and development of new access areas and the improvement and maintenance of current facilities.

- Aids-to-navigation program.** The Commission oversees a program in which over 1,700 aids are currently deployed by state and federal agencies and private parties. These navigational aids include buoys, signs and other markers. Important maintenance and systematic tracking of this program will be implemented to improve boating safety.

Act 1991-39 was an important step for the future of boating in Pennsylvania. It provides recognition of the sport and the funding to take it into the next century. The boaters of the Commonwealth were behind our efforts all the way. You have our continuing pledge that the new revenue will be used to increase your enjoyment and safety, and to ensure that boating will always be a premiere recreational activity for the citizens of Pennsylvania.

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**BOAT**  
**Pennsylvania**  
*The Keystone State's Official Boating Magazine*

Spring 1992 Vol.9 No.2

**Pennsylvania Personal Watercraft Places** by Heidi Milbrand  
Pennsylvanians have registered more than 6,100 personal watercraft, and riders need places to go. Here's where..... **4**

**Buying with Safety in Mind** by Steve Henkel  
If you need equipment for your boat, use these ideas to stretch your boating dollars and maximize your safety..... **8**

**Pennsylvania Curragh Clubs** by Paul J. Reale  
In Ireland, a curragh is an oar-driven, low, long, round-bottomed boat made of canvas or wood. They're in Pennsylvania, too, and interest in them is increasing..... **12**

**Mastering the Lake Erie Winter: Pete Traphagen** by Tom Bird  
You have to be nuts to sail on Lake Erie in the winter, right? Not so for Pete Traphagen. He's got it down to a science..... **14**

**A Six-Pack of Answers** by Art Michaels  
These six burning questions and answers can help you economize on your boat trailering expenses without sacrificing safety..... **16**

**Conquering a Class II River** by Jim Cole  
The author's lucky brush with fate on a typical Pennsylvania river could be just like your experience..... **19**

**Who's Who on the Water?** by Cheryl Hornung  
Four government agencies patrol some waterways, so who's who on the water?..... **24**

**Insurance Insight** by George Poveromo  
Understanding the fine print on boating insurance can help you get the coverage you need in Pennsylvania..... **26**

**The cover**

This issue's front cover, photographed by Tom King, whets the appetite for warm weather and sunshine. If you have similar boating plans for this season and you own a personal watercraft, check out page 4 for a raft of suggestions on where to boat. If paddling is your preference, the article on page 28 offers suggestions statewide on where to go. Trailer boaters will want to check out the useful details in the article on page 16. All boaters have a stake in two articles—one on insurance, which begins on page 26, and another on just who's patrolling our waterways, which begins on page 24.



# Pennsylvania Personal



# Watercraft Places *by Heidi Milbrand*

**O**wning a personal watercraft (PWC) today in Pennsylvania can be tough. People either like them a lot or downright hate them and wish they would be banished from our waterways.

People have to realize that personal watercraft are boats, and these boats have just as much right to the water as do 20-foot craft to 17-foot canoes and 28-foot sailboats.

Right now, PWC owners are getting a bad reputation because of a few bad apples, but isn't this true in every sport? It seems that wherever riders go, they eventually get bumped out of the areas they like.

With over 6,100 personal watercraft registered in Pennsylvania, and the number continuing to grow, owners and riders need places to go. Let this information help you find waterways where personal watercraft can ride freely.

## Shenango Lake

Located on the Shenango River just above Sharpsville (near Sharon), this Army Corps of Engineers project offers 3,500 acres of unlimited horsepower for PWCs. The Corps provides three accesses. According to Mike Cummings, resource manager of the lake, there are no problems there with PWCs. In fact, their popularity is growing. Of course, Cummings says, you have rules-of-the-road violations, but no one is "out to get" PWC enthusiasts.

The Corps phone number for Shenango is (412) 962-2315. Shenango Lake is located off I-80. Take Route 60 to Route 18.

## Lake Erie

Pennsylvania's portion of this Great Lake offers boaters more than 1,000 square miles of boating in Pennsylvania with facilities provided by the city of Erie, the Bureau of State Parks at Presque Isle State Park, the Fish & Boat Commission and privately owned marinas. The state park provides camping, picnic areas, hiking and swimming, and it has three large accesses and four smaller ones on the bay side and one on the lake side.

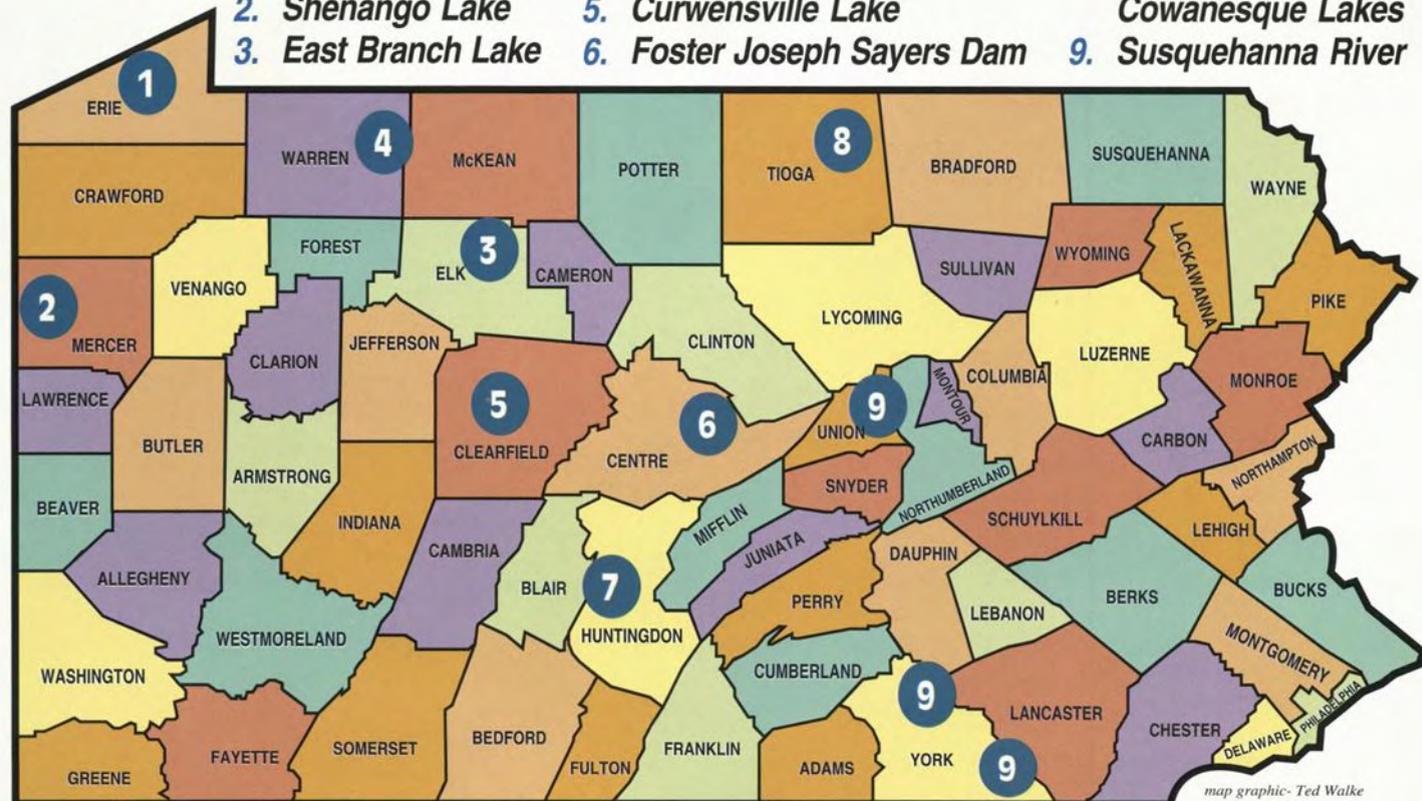
Presque Isle State Park's phone number is (814) 871-4251.

The Fish & Boat Commission has two accesses. The Walnut Creek Access is the most popular, offering overnight mooring and 24-hour security during the boating season. The Northeast Access should be completed in the future.

Boating on Lake Erie can be an exciting venture. But remember that storms come up quickly. If you boat there, stay close to shore and always boat with other people.

To get to Lake Erie, take I-80 to I-79 north to Erie. From the southern section of Pennsylvania, take the turnpike to I-79 (turnpike exit 3).

- |                     |                             |                                    |
|---------------------|-----------------------------|------------------------------------|
| 1. Lake Erie        | 4. Allegheny Reservoir      | 7. Raystown Lake                   |
| 2. Shenango Lake    | 5. Curwensville Lake        | 8. Tioga/Hammond, Cowanesque Lakes |
| 3. East Branch Lake | 6. Foster Joseph Sayers Dam | 9. Susquehanna River               |



map graphic- Ted Walke



### ***Kinzua Dam, Allegheny Reservoir***

This 12,000-acre Army Corps impoundment is surrounded by the Allegheny National Forest. It's located in the heart of one of the largest and most popular outdoor recreation areas in the north-eastern United States. The reservoir is on the Allegheny River in northwest Pennsylvania and New York, and has 91 miles of shoreline. The Allegheny Reservoir provides some of the finest year-round recreation with fishing, boating and camping. There are seven surfaced ramps each with parking available, and two marinas provide a variety of services.

To get there from south, central and eastern Pennsylvania, take I-80 to Route 219 either to route 6 or 59. The Corps office phone number for the Allegheny Reservoir and Kinzua Dam is (814) 726-0164.

### ***Elk State Park***

This park surrounds an Army Corps impoundment known as East Branch Lake in Elk County, about 15 miles northeast of Ridgway. The lake's 1,370 acres and surrounding park land offer boating, picnicking, camping and room to ride your PWC. Parking facilities are available at the north end of the lake, near the campground, along with extensive shoreline mooring.

From I-80, take Route 219 north and follow the signs. The park's phone number is (814) 965-2646.

### ***Curwensville Lake***

This lake is another U. S. Army Corps of Engineers flood-control project. It is located in Clearfield County, about 10 miles southwest of Clearfield. Curwensville has 790 acres for PWCs. Some 14 miles long, it gives you plenty of room to ride. One surfaced ramp with parking is available. Swimming is also allowed and there are several picnic areas. If you are interested in camping, nearby Parker Dam State Park, at (814) 765-5082, and Black Moshannon State Park, at (814) 342-1101, are available.

To get there from I-80, take exit 19 and follow Route 879 south. If you are traveling from the turnpike, take exit 10 to Route 219.

### ***Bald Eagle State Park***

Known as Foster Joseph Sayers Dam, this Centre County waterway is also an Army Corps project surrounded by a state park that offers year-round activities. The 1,730-acre lake has unlimited horsepower and recreation. It has six paved launch ramps, a marina, a swimming area and concessions. There are speed restrictions at the waterway's Hunter's Run area. The park's phone number is (814) 625-2447.

To get to the park, take exit 23 of I-80 to Route 150, approximately nine miles north of the exit.



## Raystown Lake

This waterway is one of Pennsylvania's most popular recreation spots. Over one million visitors annually head for Raystown Lake. Raystown Lake is probably the most popular waterway among boaters. It is 30 miles long and encompasses over 8,300 acres, which makes it the largest manmade lake completely in the Commonwealth.

PWC riders at Raystown Lake need to watch for winds that can kick up waves. You will definitely take a pounding on a PWC.

There are two major recreation areas with surfaced ramps and eight other public-use areas with launch ramps. The lake is open to all types of boating, but be sure to observe regulations in several controlled areas.

The lake is located off Route 26, south of Huntingdon, in Huntingdon County. Take the turnpike to exit 11 or 12 and follow Route 30 to Route 26 to Raystown Lake, or routes 220 or 22. The U.S. Army Corps of Engineers phone number for Raystown Lake is (814) 658-3405.

## Tioga-Hammond/Cowanesque lakes

These three lakes are located in northcentral Pennsylvania off Route 15 in Tioga County. These lakes, all Corps of Engineers projects, are located in a scenic section of the state with mountains surrounding every lake. The first lake you encounter traveling north on Route 15 is Tioga Lake, approximately 470 acres with unlimited horsepower. There is a surfaced ramp and plenty of parking. No camping is available.

Right next to Tioga Lake is Hammond Lake, with 680 acres for riding your PWC. This waterway also has ramps and parking. Both areas offer swimming, fishing and hiking with camping at Hammond Lake.

Approximately 15 minutes northwest of these two lakes is Cowanesque Lake, just increased to 1,100 acres from 410 acres last year. You'll find unlimited horsepower here, but check the zoning regulations. Camping can be found here as well as picnicking.

Take a few days off and visit all three lakes. The Corps phone number for all three waterways is (717) 835-5230.

## Susquehanna River

•**Harrisburg area.** The most popular boating spot in the area is just above York Haven Dam (Lake Frederic, Goldsboro pool). This area offers six ramps with parking. Tread lightly here with your personal watercraft. Obey all the rules and regulations and try not to "make waves." Shallow places in this part of the river can be hazardous during periods of low flow. Call the Mid-Atlantic River Forecast Center to learn the river depth at Harrisburg in a recorded message. A reading of 4.0 feet or lower requires more caution than usual. The phone number for a recorded message on Susquehanna River levels is (717) 234-6812.

Another popular area is right above the Dock Street Dam, in view of the Harrisburg skyline. One boat ramp on the southern end of City Island can be used, and parking is available there.

•**Sunbury area.** Some 3,000 acres of the Susquehanna River in this area are known as Lake Augusta, at the confluence of the North and West branches of the Susquehanna River. The "lake" there provides unlimited horsepower from the dam northward.

Access to the lake is on Packer's Island in Shikellamy State Park, with parking available. A paved ramp is located at the east end of the park with extensive parking, and a 100-boat marina is located on the west side. There are two overlooks, one on the tip of Packer's Island and the other in the Blue Hill area of the park on the west side of the river. The park is located off Route 11, north of Sunbury. The park's number is (717) 286-7880.

Three other accesses are located in the borough of Northumberland: At Hanover Street off Route 11, at Northumberland Point at the Route 11 bridge, and in Sunbury off Route 147 on Chestnut Street.

•**Williamsport area.** Susquehanna State Park is located on the Williamsport side of the West Branch of the Susquehanna River, near the Arch Street bridge and routes 11 and 15. The park is administered for Williamsport by the Department of Environmental Resources, and it also houses the paddleboat *Hiawatha*.

There is a paved launch ramp at the east end of the park, along with plenty of parking. This unlimited horsepower impoundment was created by the Hepburn Street Dam. The park also provides picnic facilities and scenic views of the river. Susquehanna State Park's phone number is (717) 326-1971.

•**York, Lancaster areas.** Two dams divide the lower Susquehanna River into two boating areas. They are Lake Aldred and Lake Clarke. Launching sites from the York County side for Lake Clarke include the Susquehanna Boat Works Marina off Route 624; Lake Clarke Marina, which is just south of the Susquehanna Boat Works Marina; Long Level Marina (private marina, no public launching), also located off Route 624; and the Safe Harbor Water and Power Company access, which has picnic tables and sanitary facilities.

On the Lancaster County side there is only the Commission's Marietta Access. This access is located at the south end of the borough of Marietta.

Lake Aldred is also accessible from both sides of the river. On the York County side, PP&L access areas include the York Furnace access at the mouth of Otter Creek, on Route 425, which has picnic tables and sanitary facilities, and PP&L's access near York Furnace at Indian Steps.

On the Lancaster County side there is a PP&L access at the mouth of Pequea Creek, just off Route 324, which has a surfaced ramp, a picnic area and a playground. Observe caution at low water levels here.

Arrowhead Marina is on the opposite side of Pequea Creek across the river from the PP&L area. It offers a surfaced ramp along with a grocery store, boat rentals and a snack bar.

The Peach Bottom Marina offers mooring over the summer months and has a grocery store, fishing supplies and bait.

Check out these spots for some hot personal watercraft action this season!



# *Buying with Safety in Mind*

by Steve Henkel



If you're like most people, when you think of "safety on the water," you tend to focus only on the most dire life-threatening situations aboard your boat, like drowning, explosion, fire, sinking, or being struck by lightning. These catastrophes can and do happen, and it's only prudent to take precautions to prevent their occurrence. But it's also important to recognize other less spectacular but still potentially serious threats to the safety and security of your boat and everyone aboard, and to fit out your boat to prevent or at least minimize the possibility of such problems.

These threats might include, for example, accidentally falling overboard or difficulty recovering a person who has fallen overboard; injury by the vessel's equipment; illness because of overexposure to sunlight or to wave motion; collision with another vessel; going aground, or once aground, stranding; gear failure (anything from running out of fuel to losing a cotter pin); inability to communicate with a source of help when in need; damage from wind, waves, spray and rain; and so on.

Protection from a few of these hazards can sometimes be achieved by carrying appropriate personal gear—for example, avoiding overexposure to sunlight by wearing a hat with a large brim, covering arms and legs with clothing, and using sunblock or high-SPF screening agents on any exposed areas of the skin.

But the real key to ensuring that your future boating experiences are pleasurable, relaxing and non-threatening is to possess a well-found vessel. Consequently, whether you're buying a boat or just acquiring more equipment for one you currently own, check the features and equipment suggested below, and consider including at least some of the items in your next boat or gear purchase.

## The boat

First, focus on the boat itself. It can be relatively safe or unsafe, depending on its design and construction, and whether it's used as the designers and builders intended. Here are some pointers when checking out boats you might like to own.

Any boat should have good enough performance to stay out of trouble, when used as it was intended by its designers. For one thing, it should have good directional stability. If you let the helm go for a few moments, the boat won't immediately start to go off course. This can be an intrinsic problem with some fin-keel-spade-rudder sailboats, especially those with "balanced" rudders, and with many I/O (inboard/out-

board) runabouts because of their designed center of buoyancy and stern and prop configuration.

The boat should also be able to get out its own way either under sail or power, and to navigate in rough water successfully—the better to escape sudden danger ahead. Sailors talk about "ability to claw off a lee shore"; powerboaters might think in terms of powering against a strong (six to eight mph) current, which requires enough horsepower to reach a speed of at least eight to 10 mph—assuming you want to move forward rather than stand still.

Sailboats with long-shaft outboards should be able to power through a short, steep chop without the prop lifting out of the water more than once a minute or so. "Rocking horse" hulls with transom-mounted engines often can't do that. Rolling as well as pitching can tend to aggravate the outboard problem.

Cruising range under power should be sufficient to get home in a blow if needed, without refueling from jerry cans in a rocking, rolling cockpit. As a rule of thumb, I'd use a 20-mile cruising range as a working minimum. Typical six-horsepower sailboat outboards get eight to 12 miles per gallon, and come with three- or four-gallon external tanks, giving a very acceptable cruising range of around 24 to 48 miles before refueling. But at least one brand carries only 1.6 quarts in an integral tank, which at eight mpg gives a cruising range of a mere 2.4 miles—too short. Small powerboats often slurp fuel at the rate of only one or two miles per gallon, and tank size becomes even more crucial.

A boat's overall dimensions can affect its safe operation. The best size boat—especially for a new sailor or power-boater—measures between 16 and 24 feet in overall length. Such a boat is easily manageable, and thus is safest for an inexperienced crew or a single-hander. It's light enough to pull to a stop at a dock using human power only, yet heavy enough to venture from the shelter of the inner harbor in safety.

Hull design and construction are important to safety. Apart from a boat's overall size and weight, some of its other dimensions have implications for safety as well. For example, a boat's freeboard (that is, height of its topsides) is important. Generally the safest boats have relatively high freeboard forward, to keep waves from breaking over the deck. They also have relatively high sterns for the same reason, to thwart following seas. However, amidships a low freeboard is desirable for ease in retrieving someone overboard as well as for low windage. Thus, the best boat is apt to have

**When you're in trouble  
and need help fast,  
a VHF radio lets you  
call someone to come  
to your aid.**

springy rather than straight sheer, making it prettier as well as safer.

A buoyant below-the-waterline shape forward and aft also helps keep waves off the deck, and generally makes for a drier, more comfortable boat—provided buoyancy isn't carried to extremes, in which case the boat can become the "rocking horse" mentioned above.

Powerboats with spray rails and "lifting strakes" also keep the spray down and hull efficiency up. Both traits make for a safer boat.

When it comes to construction, the two key words are "strength" and "durability." Assuming fiberglass construction, this means a reasonably thick and stiff hull below the waterline, where rocks—to say nothing of the bunks and rollers on the boat's trailer—can poke holes in a thin bottom.

Bulkheads should be thoroughly bonded to the hull skin, not just half-heartedly tabbed in place. Stringers and other structural bracing should also be strongly attached to the skin, and if wood, should be treated or totally encapsulated in fiberglass to prevent or at least forestall rot.

Ballast should be securely fastened in place.

To prevent sinking after a holing, flotation in some form (usually either foam, plastic bags or bottles, or multiple sealed-off compartments) must be present. If foam is used, it should be the totally closed-cell variety. Foam with some open cells is occasionally used for flotation. It eventually begins to soak up water like a sponge, which of course defeats its purpose, though it makes admirable inside ballast.

Rudder and steering gear should be rugged and easy to operate. If the boat has a rudder (rather than steering by pivoting the prop as in an I/O or outboard) it should be fastened to the hull with special attention to strength. Weak pintles and gudgeons (the hardware used to hang an outboard rudder) and underbuilt rudderstock-to-rudder joints are notorious for failing at just the wrong moment.

If wheel-steered, the wheel-to-rudder cables, push-pull rods or whatever should



be strong and easily accessed for servicing. If tiller-steered, the tiller should be generously sized and preferably made of especially tough wood like oak or ash. Mahogany and teak are sometimes used, but they're too brittle to be safe, unless built way oversized.

## Engine, fuel tanks

A boat's engine, fuel tank and other related appurtenances should be designed with safety in mind. Maintenance points on the engine (filters, spark plugs, crankcase dipstick and fill pipe, cooling system components, shaft log, etc.) should be easily accessible; otherwise, preventive maintenance activities are likely to be perennially postponed, possibly resulting in engine failure at the wrong time. Installed horsepower should be slightly oversized for the size of the boat, to provide an extra edge of reserve if needed.

Fuel tanks should be securely held in place, and properly grounded to help prevent explosion during filling. Batteries, too, should be securely fastened to a sturdy structural member, and boxed so electrolyte acid can't escape into the bilge or cockpit sole. Battery bank size should be sufficient not only to start the engine but to run navigation lights and electronics as needed without worrying about the batteries going dead. Bank size, of course, partly depends on charging capacity of the engine's alternator—the bigger, the better.

## Navigation equipment

The right navigation equipment can be a lifesaver. A built-in compass is a must except on the smallest inland lakes. So are running lights on any boat that might venture

out at night—even if only to the beachside fireworks display once a year. Charts for all areas navigated, along with a dry place on board to store them, are a good idea if you want to avoid going aground.

Other more sophisticated navigational electronics—depthsounder, radio direction finder (RDF), loran, radar, satnav—are fun to have and can be helpful, but aren't generally considered essential on a small boat used mainly on Pennsylvania waterways or in inshore areas. Still, one item I wouldn't be without when boating on "big waters" is a VHF two-way radio with channel 16 (the calling and distress channel) and the WX (constantly broadcast weather) channels, as well as several ship-to-ship and ship-to-shore communication channels. When you're in trouble and need help fast, it's nice to know you can call someone to come to your aid.

## Federal requirements

The U.S. Coast Guard requires certain safety equipment. Exact equipment depends on boat size, but in general every boat is required to have a sound-making device,

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***Safety on the water means much more than wearing a PFD and keeping a fire extinguisher handy.***

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PFDs for each person aboard, one or more B-I or B-II type hand-portable fire extinguishers, and certain visual distress signaling devices.

Perhaps as important as having this equipment is having it readily accessible. Specifically, the boat should have an easily reached locker in the cockpit (not below) dedicated to PFDs, and should have fire extinguishers mounted (not stuck loosely in a drawer) for ready use, but not mounted where fire is likely to break out. That is, don't mount extinguishers over the galley stove, or near the carburetor in the engine compartment.

## Safety below

Safety below includes some prosaic items. For example, if a permanently mounted flush toilet with through-hull and holding tank connections is installed, it should be located so that the rim of its bowl is at least an inch above the boat's load waterline, and should have easy-to-get-at seacocks on all through-hull connections. Any other through-hulls such as for a sink, an inboard engine's water intake, or cockpit scuppers if at or below the waterline, should also be protected with easily accessed seacocks.

Every boat should be designed so all water may be evacuated from the bilge. To prevent disaster in the event of electrical failure, each electric bilge pump should be backed up with at least one (and preferably two) high-capacity manual bilge pumps.

The galley stove should be placed so that when in use its flames won't be close to combustibles such as portlight curtains, wood cabinetry or electrical wiring even during a flareup, which can happen occasionally with many seagoing stoves.

Electrical wiring should be properly insulated and neatly led in trays or bundles, with diligent attention to potential chafe or heat degradations, especially within the generally hot, vibration-filled engine compartment.

Ventilation within the cabin should be sufficient to prevent oxygen starvation or carbon monoxide accumulation under any circumstances, such as when a cabin stove is run on a cold night to ward off the chill, or the engine is used on a long downwind run with the exhaust fumes carried forward on the breeze. Cabin ventilation should also be sufficient to keep the cabin sweet and dry, as an aid in preventing not only mildew but dryrot, which could lead to structural damage and ultimately an unseaworthy hull.

## Cockpit, deck design, equipment

Cockpit visibility from the helm should be excellent all around the horizon, preferably without the helmsman craning his neck or squashing his face against the side deck to see under the skirt of the genie.

The cockpit should be self-draining if at all possible, to avoid reliance on electrical bilge pump systems, which tend to fail at inopportune times. Cockpit scuppers should be as large as possible; three-inch exit holes, screened like a sink drain, wouldn't be considered too large.

The transom on a powerboat should be high enough to prevent water from surging over the stern when stopped in a following sea with passengers crowded at the stern end, and low enough so an outboard, if used, will have its prop sufficiently immersed.

If possible, a pulpit, pushpit, lifelines and stanchions should be installed to provide a measure of security going forward. These should be at least 24 inches high (27 inches is better if the aesthetics can be worked out). They should also be made of strong materials strongly secured to the hull. Strength should be such that a 200-pound man can sit on or vigorously push against the top of a stanchion or sit on the pulpit or pushpit without damaging it or the boat.

An anchor of sufficient size to hold the boat in a blow, plus a second anchor one size larger, should always be aboard and ready to use at a moment's notice. Each anchor should be shackled to at least six feet and preferably 10 feet or more of galvanized chain, which in turn is secured to at least 100 feet of nylon line at least 3/8 inch in diameter (1/2 inch for boats over 23 feet). One of the anchor lines may be

used to double as a tow line if needed.

At least four dock lines, each roughly as long as the boat, should always be aboard—one for bow, one for stern, and two spring lines.

The deck should be sprinkled with plenty of beefy, well-secured cleats, well-bolted to the deck with proper backing plates for maximum strength. Ideally there should be two cleats forward, one on each side amidships, and one at each stern quarter, totaling six. Each cleat should be big enough to accept at least 1/2-inch line, and the bow cleats should be able to handle 3/4-inch stuff. All should be rounded and faired to virtually eliminate chafe against rope secured to them, and to minimize stubbed-toe damage to the crew.

A swim ladder that deploys from the side—best for picking up people who've fallen overboard—is good to have. A second swim ladder off the transom, preferably emanating from a built-in swim platform, is also desirable, though if only one ladder is possible, the side type is the one to choose.

## Rigging

Rigging—for both sail and powerboats—should be looked at with safety in mind. For example, lightning protection on a boat is only possible if a grounded metal object is raised to the apex of a “cone of protection” extending to the water at 45 degrees from the apex. Such a rig can be made for either a sailboat or a powerboat. Electrical bonding and grounding of all metal in the boat, including standing rigging, engine, fuel tank, etc., is also part of good lightning protection practice.

On a conventional sailboat (sloop and cutter), standing rigging should preferably include a backstay for extra security (as well as to help keep the forestay tight). Upper shrouds as well as lowers, if sufficiently strong, will be some insurance against the mast going over the side in the event of one stay parting.

Shroud attachment points (wire rope terminals, chainplates, mast tangs, spreader tips, toggles, turnbuckles) should all be robustly constructed of top-grade materials (stainless steel or bronze) without fissures or cracks. Spreaders should be stiff, and designed to cock up slightly to bisect the tip angle with the shroud.

## Boat trailer safety check

If you're buying a new trailer, does the capacity (usually stated on a label affixed

to the tongue) match the load? Remember, the load isn't just the weight of the boat plus engine; it also includes weight of fuel, anchor and rode, water skis, fishing gear and anything else you carry on board while towing. For gasoline, figure six pounds per gallon; carrying 50 gallons can add 300 pounds to the trailer's burden.

Check the tires for load-bearing capacity (marked on the sidewalls) and make sure inflation pressure—often as high as 60 or 70 pounds—is adequate to support the weight.

Is the trailer length and support arrangement right for your particular boat? If the boat sits either too far forward or too far aft on the trailer, you may experience steering control problems, especially at highway speeds.

If the trailer plus the load of the boat and gear is more than a certain amount—3,000 pounds total weight in many states—you must by law equip your trailer with brakes. Otherwise, your car might not be able to stop quickly enough—a clear safety problem.

Is the frame galvanized rather than painted? If it's painted, you'll have to make frequent inspections for rust, and use rust-inhibiting touchup paint where necessary. Rust can weaken not only the frame, but springs, axles, and cross beams as well. If your axle collapses while you're speeding along the highway, you could be in big trouble.

If you plan to submerge the axle of your trailer during the launching process, bearings should be equipped with bearing protectors or the equivalent, to prevent rusting. Otherwise bearings could overheat and fail when you're on the highway, again causing big trouble.

Wiring to trailer lights should be substantial and well-insulated, and light bulbs and contacts should be cleaned at frequent intervals. Otherwise, it's almost a sure bet that eventually the lights won't work, making driving at night hazardous.

There's more to safety on the water than wearing a PFD and keeping a fire extinguisher handy. We've mentioned many more—and probably haven't exhausted the list of worthwhile small-boat safety features at that. Still, it's a good start. So when you're shopping for your next boat, or when you're thinking about your current boat and its equipment, check out how many of the items mentioned here are adequately addressed. You may be surprised at what you find



# PENNSYLVANIA CURRAGH CLUBS

BY PAUL J. REALE  
PHOTOS BY THE AUTHOR



In Ireland, the curragh (pronounced KURR-ah) is an old, old story. It's an oar-driven open boat, a long, low, round-bottom vessel of canvas or wood. It's a tough, sturdy workhorse of a boat, and as primitive as can be. The oars are unusual, to say the least. They're 10 feet long and resemble stilts—no paddles, just shaft. A visitor to the Emerald Isle, particularly in the west coast counties of Galway and Kerry, can easily spot curraghs, their occupants pulling in herring, salmon and lobster, or hauling peat. The curraghs are as much a part of the quiet picture as are the deep-green mountains of Connemara that rise more than 2,000 feet above them.

Legend credits St. Brendan, the sixth-century Irish monk, with using a curragh (also spelled "currach") to make a 4,000-mile transatlantic crossing from County Kerry to the New World 1,300 years ago—or 500 years before the Norsemen and 1,000 years before Columbus. His vessel is believed to have been a 36-footer of wooden staves covered with leather.

But how come curraghs in Pennsylvania waters? Irish-born newcomers to these shores have introduced the boat to the New World by way of preserving and perpetuating something that was so much a part of them in their homeland.

And besides, racing curraghs is great sport.

Pennsylvania has two curragh organizations today—the Pittsburgh Curragh Racing Club and the Philadelphia Celtic Curragh Club. Marcus J. Flaherty, 56, business agent for Local 373, AFL-CIO, heads the Pittsburgh group. Philadelphia's president is Mike Mullen, a plumber. Flaherty's club, based in Lawrenceville, takes to the Allegheny River or Monongahela River three times weekly for rowing practice. The Philadelphians operate out of the Pyne Point Boatyard in Camden, NJ, on the Delaware River. Three-times-a-week practice is also a ritual with the club, says its vice president, Ed Lafferty, a biomedical engineer. The usual course is a brisk five-mile pull around Petty Island.

"The Delaware can get choppy at times, which is one of the reasons we choose to practice on it," says Lafferty. "When we go to regattas we have to be prepared to row, whatever the weather."

The workouts have paid off in national competition. More than once has Pittsburgh out-raced teams from Annapolis, Boston and New York. Philadelphia oarsmen have also been impressive, often showing up in the winner's circle.

## "Family car"

Marcus Flaherty, born and raised on a little island in Galway Bay, remembers the role the curragh played in his

boyhood. Even though the boat was first of all for fishing, it was also for transportation. "The curragh was the family car," he says. "My island had only five houses on it. To get to the mainland for shopping, school or church, you took a curragh."

The curragh also provided recreation because the island was short of ballfields, basketball courts and the like. The boys were left to find sport in racing their curraghs, initially among themselves after a day's fishing and later as teams of teenagers challenging similar teams from neighboring islands and coastal villages. The tradition came along when young men departed Ireland for the U.S. The boat was a fun way of keeping in touch with their roots.

Boston's Irish Curragh Racing Club is viewed as the granddaddy of the curragh groups that have sprung up across the country. It was founded in 1970. Johnny Joyce, a pressman for the *Boston Globe*, is president. Pittsburgh-born Ann O'Donnell, a bank accountant, is club treasurer, and a rower.

## New clubs

In recent years, boaters have formed clubs in Annapolis, MD, Albany, NY, and Center Island, NY. A new club is reported taking shape in Atlantic City, NJ. A second Boston group has been formed: the Shamrock Rowing Club, headed by Patrick Lee, a Galway-born carpenter.

The Pittsburgh organization was launched eight years ago, and Philadelphia following shortly after. A Milwaukee club began in 1990. Now there is an umbrella organization, the North American Curragh Association, started in 1982. President is Mark Egan Nerich, Annapolis commercial builder. Clubs pay \$100 a year to belong.

Galway-born Peter Mulkerrin, 42, and his brother, Joe 44, from Pittsburgh, come from a long line of curragh builders. "It was a family business back in Ireland," says Peter. So the Pittsburgh club was in luck having the Mulkerrins as members. The brothers are credited with building Pittsburgh's two currachs and, when necessary, teaching novice members to row them. Furthermore, the brothers have built two currachs for the Milwaukee club, which is led by architect Tadhg McInerney. Founder is Dublin-born John Gleeson, a University of Wisconsin professor who teaches Europe and Irish history. "Pittsburgh's been an inspiration," the professor acknowledges.

Monty O'Leary, a curragh craftsman from County Kerry, was brought over to build Philadelphia's three currachs.

This is not to say that curragh construction is only for pros. Fact is, some men, though amateurs, do put together their own currachs, working in their garages or in their yards. Boston's Johnny Joyce can attest to this. He has a spacious backyard that friends use both as birthplace and berth place for their "homemade" currachs. "My backyard looks like a boatyard," he reports.

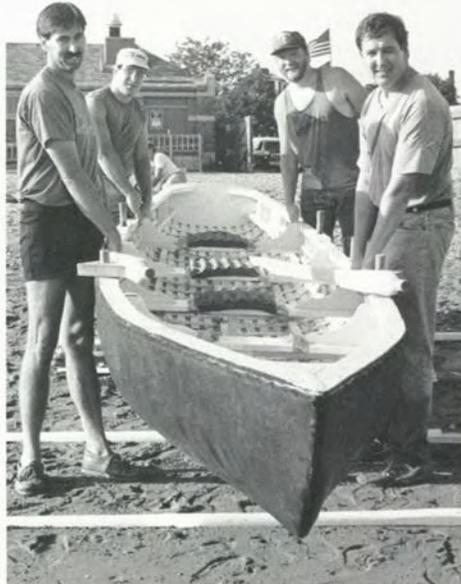
The curraghians are predominantly men born in Ireland, or of Irish ancestry, although more and more non-Irish find themselves attracted to the sport, and are made welcome. Marcus Flaherty says, "All we really care about is that you want to row. That's our only requirement."

Members come from all walks. Pittsburgh rowers include a couple of engineers, a registered nurse, a cardiologist and several college students. Add Irish-American musicians Bruce Foley and Patrick Folan, plus Dan Berry, a Vietnam hero, now working for the Veterans Administration (involved in a rescue mission, he lost a leg to a landmine).

Ken Wilson, attorney, is among Philadelphia's oarsmen. Paul Phillips, former president of the Philadelphia club, and his younger brother, Vincent,

gave up rugby to take up curragh rowing. "It's a very good aerobic workout. You really feel it," says Paul.

Women are making waves, literally. Pittsburgh's club has a dozen women members, described by president Marcus as "fantastic rowers, unbeatable." He names four-year member



*Currachs are typically made of oak and range in length from 18 to 27 feet. With the unusual oars the trick to propelling a curragh is to lift the boat out of the water.*

Kathy Conroy, a chemical engineer, as one of his best rowers. "Rowing is wonderful exercise," Kathy says, reporting that her kid sister, Colleen, also rows. (They're the daughters of Ireland-born parents.)

Jeanne Toth, of the Albany club, is of Hungarian-Ukrainian descent. She says, "I do enjoy rowing, and I just happen to love Irish culture."

Marcus notes, too, that the sport is family-oriented. Peter Mulkerrin has two daughters who row—Christine and Carolyn. Joe Mulkerrin has three rowers in his family—his daughters Mary Eileen, Bridget and Patty. Peter and Joe have a younger brother, Michael, who is also a Pittsburgh oarsman.

The clubs come together periodically for dawn-to-dusk competition. Crews of bare-chested men with headbands in place drive to buoy and back, distance totaling five miles. Distance for the women is reduced a bit. There are one-,

two-, three- and four-person races. The competition concludes with scraped knuckles and blistered palms, pretty much remedied with an awards ceremony, lively Irish music, dancing and hearty comradery.



## CLOSE LOOK AT A CURRAGH

Originally, a curragh was anything but a racing boat. From ancient times, the Irish used it as a fishing craft, and for their transportation. In more recent years the curragh has found favor in racing circles.

The boats are typically made of oak given a lattice structure. They're 18 to 27 feet long, the length pretty much up to the maker. The beam averages 3'6" to 3'9". Size is determined largely by the number of intended occupants, whether one, two, three or four. The hull is typically covered with canvas and coated with tar. In the old days animal hides were used. The cost of hiring a skilled craftsman to build a curragh these days is reported to be about \$1,400.

Like everything else about the curragh, its oars are unique. Commonly made of spruce, they run eight to 10 feet long and are never wider than three inches, an arrangement quite different from the familiar oar that flares dramatically as it grasps the water. What's more, attached several inches from the handle end is a somewhat triangular-shaped piece that is pierced. This is the "block," its hole made to fit snugly onto a "thole pin," or oar pin, fitted into the boat's gunwale. The arrangement ensures that a fisherman won't lose his oars over the sides when he has to let go of them to lift lobster pots from the sea or run lines.

Sportsmen say the curragh's bladder bottom gives more stability than a sleeker hull. Furthermore, the oars (weight about eight pounds) are superior to the familiar paddle oars in cutting the wind. Their length also allows rowers to dig deeply into the water, in effect lifting the boat so that it rides over rather than plows through the waves. There's no scull or rudder. It's "pull left" or "pull right." The trick is to lift the boat out of the water with the oars.—PJR.

# Mastering the Lake Erie Winter: Pete Traphagen *by Tom Bird* *photos by the author*

While most lakefront inhabitants are safely snuggled beneath a warm blanket, curled up on a couch, or lounging on their favorite recliners, the fireplace blazing as the winter winds howl outside, there's a good chance that Pete Traphagen is still sailing on Lake Erie.

"To me, sailing during the late fall, winter and early spring is the best sailing one can experience," says Pete Traphagen, 57, of Erie, the captain and owner of the *Sojourner*, a Pearson 53 housed at the Erie Yacht Club.

Traphagen is a sailing purist, considering mostly the wind, as opposed to a dozen other variables typically taken seriously by other skippers. Sailing is in his blood. His father was a sailor. His brother is a sailor, too. In fact, the same brother once attempted to sail around the world. While the other boys in his area were learning to throw baseballs, kick footballs and dribble basketballs, Traphagen's father was teaching him to chart courses and trim sails.

As far back as he can remember the sport ran uncontrollably through his veins.

"I don't have any memories that don't include sailing," he recalls.

When he was eight years old, he was too young to skipper a vessel on Lake Erie by himself, so he chose a land sailing route. Permitting his engineering mind, which he eventually fine-tuned at Yale University, to run wild, young Traphagen focused his attention on his little red wagon. With a mast constructed from an old 2x4 and a sail made out of an old bed sheet, he'd hop in and set sail for the neighborhood.

Traphagen's love for sailing grew even more as he matured. He simply couldn't get enough of it. In his late teens he was hired as a maintenance worker on a 40-footer owned by an old salt named Spike Spencer. According to Traphagen, Ol' Spike taught him more about sailing than he ever thought possible to learn.

"The winds are exhilarating and they give you a tremendous ride during the foul-weather seasons," says Traphagen. "I sail in the summer only for my friends and family. The late fall, early spring and most of all the winter belong to me. In fact, I do 75 percent of my sailing during that time. There's no one else out there, thus no traffic, and the winds are outstanding. It's the best time to sail.

"In the last 11 seasons we've been the last boat out of the water about half of those years, which is something I'm proud of," he says. "We've also participated in each of the Thanksgiving Day sailing races organized by John Ashby. I think that goes back seven years or so. There's usually between four and 11 other boats that participate as well."

Not every Erie sailor, no matter how hearty he or she may be, is made for foul-weather sailing, Traphagen openly admits.

"I remember one time I invited a friend to go sailing. Unfortunately for him it was the first time he'd ever sailed and we'd gotten an eight-inch snowfall the night before. We had to shovel the snow off the boat to come aboard but that didn't really bother me. I found that the snow was an excellent place to keep the drinks cold that we'd brought along with us. But my friend was scared to death and cold, too. I don't think he enjoyed the sail at all. There's no doubt that it's a lot harder to find crew in the winter.

"In fact, there's only been about a dozen different persons who have chosen to sail with me in the foul-weather season over the last 11 years," he recalls. "Most of the summer sailors have a totally different mind set around that time of year. They see it as ski season. But my feeling is that if they can ski during that time of year, they can sail as well. It's just a different mind set."

One of Traphagen's most prized possessions is a placard he owns and which was given to him by the Port Dover Yacht Club in Ontario.

"It was a reward for having logged lake crossings in November and December of 1988 as well as in January, February, March and April of '89," the coldest and most

furious months of the year on Lake Erie, which because of its relatively shallow depths is easily the most treacherous of all the Great Lakes. According to a flock of respected sailing authorities in the area, Traphagen's feat was the first time that anyone had ever even attempted, let alone completed, consecutive lake crossings in each of those six months. In fact, a few times during the last few decades the lake has been completely frozen over during those months, and often it is at least partially covered by a thick sheet of ice.

Traphagen's most memorable crossing of the series came on the evening of January 28, 1989.

"We had gotten a 12-hour window in the weather," he recalls, "and Al Taylor, my good friend and most frequent sailing partner, decided to give a crossing a shot.

"We headed out of the entrance to Presque Isle Bay at about 8 p.m. that evening. Ah, such freedom I felt. No one was around. We were all alone with the wind, the elements, the lake, the stars and us, a sailor's dream.

"We decided to head to Point Dover, and made good time. The wind was giving us a good ride. But when we neared the other side, because it was a moonless night, we had a hard time marking the harbor. Plus the lighthouse at the point had been extin-





guished for the season. But we finally found our way into the harbor at about 1:30 a.m. We then headed onto shore to have a bite to eat. The people we met couldn't believe we'd made the crossing. They'd never remembered anyone ever doing such so late in the season before. In my mind, they didn't know what they were missing.

"Then after catching a few hours rest, Al and I decided that we'd better head back across the lake before the weather caved in on us. But by the time we had come back aboard the wind had already shifted and the ice had started to head back into the harbor. Just then the clouds parted and a full moon appeared above us, giving us the light we needed to see our way out. Ah, what a beautiful sight the moon made out of that ice."

Traphagen may sound eccentric, because he is. In fact, when he was looking to purchase his dream boat, one significant consideration was whether he'd be able to fit a baby grand piano below deck.

"I had her measured for a piano. I believe a Yamaha 100 would fit below quite nicely."

But Traphagen is far from lazy when it comes to safety aboard ship. Such is one of the reasons that he is one of the area's most respected sailors. He understands what the lake can do for you, and what it can do to you.

"Even when we made our Point Dover trip on January 28, we would not have even considered going if Al and I weren't 100 percent sure that we'd have at least a 12-hour window in the weather."

As well, Traphagen has specific requirements for any sailing in such foul weather.

"To go with me a person has to be well-prepared for the elements. A snowmobile suit is a necessity, so are ski gloves, a face covering of some sort and good, thick shoes. I carry enough aboard to outfit three extra men besides myself.

"Besides that, the boat has to be ready. All persons aboard have to have the will to endure the sail. We have to have open water and favorable weather, and we have to have a shovel along to clear the snow off the deck and out of the cockpit.

"The toughest part of sailing during this time is doing so when the temperature dips below 40 degrees because you begin to lose dexterity in your fingers."

But to Traphagen, all the potential risks and additional preparations are worth it.

"To me, the conditions bring me closer to nature than I've ever been before, and that makes it all worthwhile. I feel a part of everything, the wind, the water, the sky, nature. We're all alone with the elements out there. It's rough, yet peaceful.

"I remember one time when I was standing on the bow watching everything flow by. We were only a few miles offshore. The clouds were moving rapidly across the sky. They were winter clouds, storm clouds. I just stood there watching them rush across the sky. It was all before me. I felt so all alone with my life. Yet, I felt such a part of everything. Such a part of life."



# A Six-Pack of Answers



by Art Michaels  
photos by the author

"These days trailering a boat can be very expensive," my neighbor says. He's an avid fisherman and family water skier, but increasing costs are causing him and his family to look at the expenses of trailering and boating more closely than ever before.

He and many other boaters are looking for ways to cut corners without sacrificing safety, and he takes advantage of every opportunity to economize.

Here are six of my neighbor's questions about saving money while trailering—a six-pack of answers, he calls them. Use the ideas to get more for your sport.



**A taut, flat strap can chafe the hull, lowering your boat's resale value. Twist the gunwale strap once or twice and place foam pads where the strap meets the hull.**



## Is my trailer a drive-on?

*Some boaters retrieve their boats by driving the boats right onto their trailers. Others push and pull their boats onto their trailers. How can I tell whether or not my trailer is a drive-on? What are the pros and cons of retrieving this way?*

In the long run, driving your boat onto a trailer not meant for this kind of retrieval can cost you more in rusted trailer frame members, axles and suspension systems. It can also prematurely wear or damage the inner parts of each hub because for drive-on retrieval you must dunk the trailer considerably deeper than you might otherwise.

There aren't any strict guidelines for determining whether or not you should retrieve your boat by driving it onto your trailer. One way to find out is to ask the dealer or the manufacturer if the trailer is designed for drive-on retrieval.

Generally speaking, trailers meant for drive-on retrieval feature frames that lie close to the road. You find the least ground clearance on these kinds of trailers. The tires and fenders lie noticeably high above the frame. These construction features let you position the trailer for drive-on retrieval on most ramps without needing to back the tow vehicle far into the water.

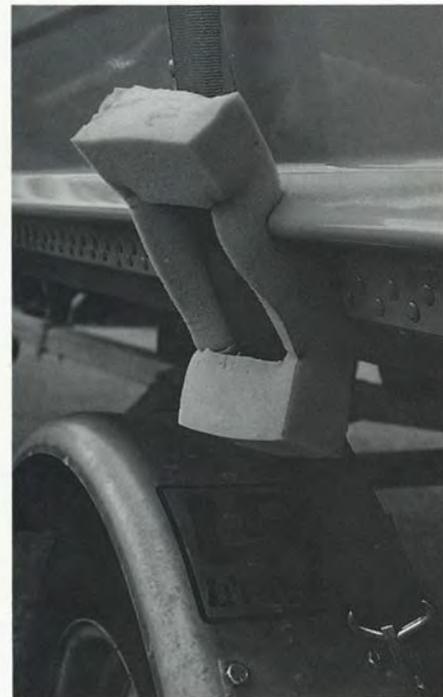
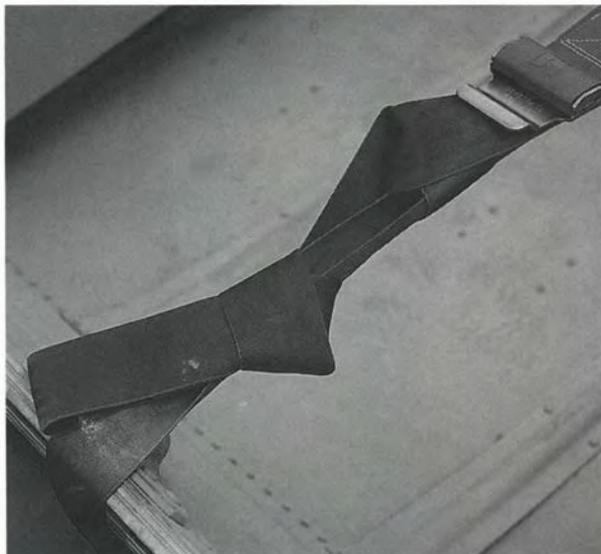
Manufacturers and dealers often match bass boats, water ski boats and some flat-bottomed boats with trailers meant for drive-on retrieval.

Trailers not meant for drive-on retrieval feature bunks or rollers mounted higher

above the trailer frame. These trailers have more ground clearance. Drive-on retrieval isn't safe or practical with these rigs. You have to back the tow vehicle farther down the ramp into the water to position the bunks or rollers properly. This maneuver can be unsafe, especially on ramps that are slippery, unimproved or damaged.

## Suggestions on straps

*My runabout is 16 feet long, and I use only a gunwale tie-down strap in addition to the bow hook. At highway speed, the strap whistles and hums and flaps against the boat. Is this safe, and can it damage my rig?*



Don't underestimate the importance of using your gunwale tie-down strap safely and efficiently. At highway speeds, a gunwale tie-down strap that's tightened flat and smooth often vibrates and beats against a boat's hull. The flapping strap can work loose, so tie off the end so it doesn't flap in the wind.

The strap beating and slapping the boat hull also damages both aluminum and gel coat hull finishes as if you were rubbing the hull with sandpaper. If you don't take steps to solve this problem, you might notice hull damage even on a new boat during the

first season. This problem is more cosmetic than anything else, but it could affect the resale value of the boat if you don't solve the problem.

Prevent this kind of damage by twisting the gunwale tie-down strap one or two times between the strap's J-hooks and the places on both sides of the boat where the strap touches the gunwale.

Take additional steps to protect your boat's hull by positioning blocks of closed-cell foam rubber in the places where the strap touches the boat hull. You can obtain this kind of foam rubber in bedding stores. You need two blocks that measure about six inches long, four inches wide and two inches thick—about the size and shape of a brick. Adjust the size of each foam block to match the configuration of your boat's hull and how much of the strap touches the hull.

With a single-edge razor blade or similar instrument, cut a two-inch slit at each end of the blocks and thread them onto the

tie-down strap. Fit them over the places where the strap touches the hull. You can also use carpet swatches about the size of a footprint.

Rig your gunwale tie-down strap so that you adjust it from the trailer's right side. If you have to pull over to the side of the road and adjust the strap's tension, the rig stands between you and oncoming traffic.

## Turn signal trouble

*When I drive my car, my turn signals work fine. When I hook up the boat trailer and the wiring harness, the turn signals flicker weakly and rapidly. What's wrong?*

The problem is that the extra load of the trailer lighting makes the car's original-equipment turn signal flasher operate too fast.

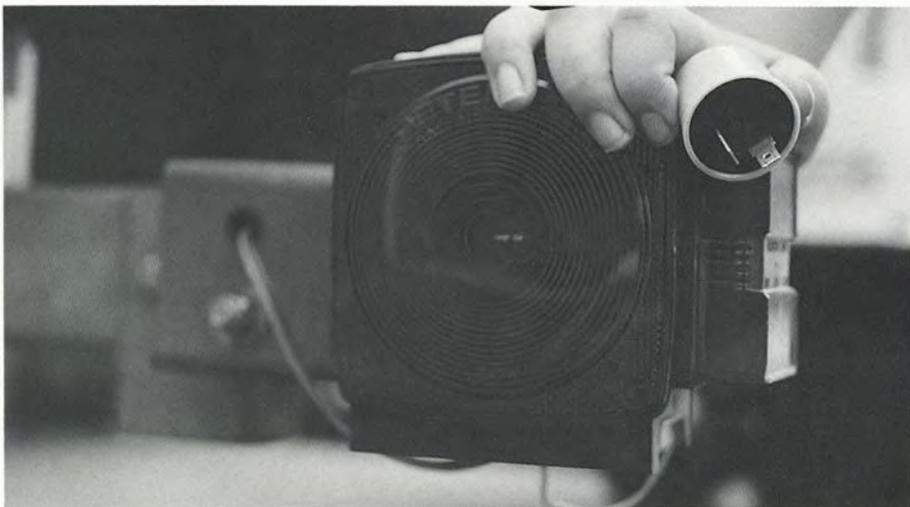
Pennsylvania vehicle equipment standards for safe operation require that turn signals flash no fewer times than 60 per minute and no more times than 120 per minute. If your original equipment flasher doesn't allow this operation, your rig violates the standards.

To solve this problem, replace the original-equipment turn signal flasher with a heavy duty one. The flasher is located on or near your tow vehicle's fuse panel. It looks like a cylinder with plug-in prongs.

Most tow vehicles have two flashers—one for the turn signals and another for the hazard lights. Replace only the turn signal flasher because the hazard lights flasher can handle the trailer's extra lighting load.

You can buy a heavy duty flasher at automotive supply stores and boat dealerships for a few dollars. Replacing the turn signal flasher simply requires pulling out the old one and plugging in the new one.

This easy change makes the turn signals flash normally. That lets other motorists see you easier, and that makes you safer on the highway.



## Running on empty

*I often tow my boat long distances. My entire rig is fully loaded on these trips. Any ideas on how to lighten the load and save money?*

A gallon of gasoline weighs about six pounds. So if your boat has an inboard tank with a capacity of about 30 gallons, that's some 180 pounds of fuel you're towing. Lighten the load and increase your tow vehicle fuel economy by trailering to distant destinations with an empty or nearly empty tank. Fill 'er up when you arrive.



## Bow business

*Some trailering friends use a bow safety chain and others do not. What do I really need to secure my boat's bow?*

In addition to the bow winch, you need a bow safety chain. The safety chain is designed to prevent an accident if the winch rope or cable fails or if the winch itself fails.

To make your own bow safety chain, here are the parts you need: a suitable length of galvanized steel chain, 3/16-inch for small boats and 1/4-inch for larger boats; a 1/4-inch or 6mm connecting link or an S-hook; and a 1 1/2-inch or 2-inch bolt with a suitable washer and hex nut, 3/8-inch bolt for small boats and a 5/16-inch bolt for large boats.

Bolt the chain to the trailer stand—don't attach it to the winch. Drill a hole in the stand, if necessary. Use enough chain so that you can easily attach the S-hook or the connecting link to the bow eye.

If you tow a large boat, one that weighs over 2,000 pounds, in addition to the bow



safety chain, you might also want to use a bow chock device. This safety measure is designed to prevent your boat from ending up in your tow vehicle trunk or back seat if you have to apply the brakes quickly and forcefully.

A bow chock device attaches to the trailer tongue directly beneath the bow eye. The other end hooks onto the bow eye.

To make a bow chock device, you need an 18-inch to 24-inch turnbuckle, wing nut the size of the turnbuckle bolt, and an eye bolt.

Directly beneath the bow eye, drill a hole in the trailer tongue. Attach the eye bolt with the nut on the bottom. Attach the turnbuckle top hook to the boat bow eye and screw on the wing nut. Tighten the top turnbuckle hook into the turnbuckle and screw down the wing nut.

You can also use chain to make a bow chock device. The chain should be taut, but leave just enough room to place the chain's S-hook on your boat's bow eye.

Do not replace the bow safety chain with a bow chock chain. Each functions differently, so use both together.

## Tool talk

*Which tools do I need on the road for trailering my boat—minimum essentials without spending an arm and a leg?*

The most economical on-the-road repair

strategy is to keep your rig operating at least long enough to get to a dealer for repairs, if you can't just fix something on the spot. You need wrenches, pliers, screwdrivers, a ball peen hammer, a six-inch two-by-four (for removing and installing bearing protectors), grease gun, extra tube of grease and spare parts.

Furthermore, carry a flashlight with fresh alkaline batteries (and spare batteries) and a small, powerful lamp with a long cord that plugs into the tow vehicle's cigarette lighter. You might also want to buy a device for the light with a long cord that lets you hook up the light directly to the boat battery. When you need to check something or repair an item, the light turns dark and dimness into sunlight.

A long cord on the lamp lets you reach the length of your trailer. Even in daylight, you might need a light to check beneath your trailered boat, for instance, or to peer inside a wheel hub.

Except for your spare tire, carry all your tools and spare items in their own box, and buy separate tools from those you have for home repair and maintenance. In this way, you know that on a foggy, rain-soaked highway at midnight the ball peen hammer and pliers are in the repair kit when you might need them, not sitting on your washing machine at home, 347 miles away.



# Conquering a Class II River

by Jim Cole

As you looked around the group, you could not have known it was a cold, cloudy day. The only thing that seemed to matter was how fast the water was flowing. This was the trip so many of us had waited for all year.

This river seemed different from the other class II rivers that I've been on. You could feel the power as you stood on the bank watching the river rush by. The current was much faster, the slope much steeper. There would be very little dead water between the many rapids.

It seemed as if the river was fighting for control from the moment the canoes touched it. Just one small distraction or one single mistake could make the difference between riding and swimming. This was definitely not the river to be overconfident in.

As we started down the first section of the river, there seemed to be nothing but rushing water. I could make out the pillows followed by curling waves, but most of all the continuous fields of haystacks as far downstream as I could see. The water along the banks moved almost as fast as the middle of the stream, making an easy exit almost impossible.

Just after putting in we passed under a bridge. The river bends to the right, giving the first signs of the calm water of an eddy. Our flotilla of a dozen boats used this opportunity to eddy out as we were joined by one more canoe.

The force of this river seemed to increase with each new twist and turn. As we looked downstream, the declines continued with no end in sight. Rock dodging didn't seem to be required because the shear volume of water floated us over most obstacles. The larger boulders provided lots of practice on those eddy turns, even if they all seemed to be on the right-hand side.

When the river branches off in two directions, our more experienced paddlers told us to keep right. This is the route they are familiar with and the rest of us would follow. Even though the left branch is inviting, it should not be tried alone, we were told.

After several more bends, just below a long field of haystacks, there was a small covered bridge, behind which was a large eddy on the right, and our second break. The size of the eddy made it almost impossible to miss, but with my usual luck, I was on the wrong side of the river. My ferry brought me over just in time to catch the end of the eddy, but not without the need to maneuver around a strainer in the river.



An assessment of me and my canoe led me to realize how wet I was even though I had yet to take a plunge. With many curling waves and haystacks breaking over my low bow, a deposit of several inches of water had accumulated. I used this opportunity to bail the water out of my boat.

I also realized the amount of energy that I had already expended fighting the rapids. Each time I lifted my bailer, it seemed to be a little heavier. If I were to finish this trip, it would be necessary to go with the flow. Don't fight the river, but use it to get where you want to go, I had learned.

As we continued on our way, I started to relax a little more, letting my pries and draws control my direction and my braces to hold me upright. This was much easier than the frantic paddling I had started with. Now I understood what it meant to go with the flow and let the river do the work.

After a short distance we came to the confluence of the two branches, and the river widened considerably. The haystacks at this point seemed to be endless, but after a short distance there was a hefty little drop followed by a bend in the river. There was some calm water on the left, giving us a much needed break and a sandy bank—an ideal spot to stop for lunch.

**I lost control as the river pulled me down. Flotation seemed to be the only thing that stopped the river from swallowing me up. The shear force of the water now overpowered me. I exited on the left side, as my canoe finally capsized, trying unsuccessfully to grab my painter.**



Marsh Creek State Park

With our hunger satisfied and many stories told, we headed for the next drop. This, I was told, at the current water level, should be run on the left. Only the more experienced boaters should try other paths through this dangerous area. Most of us should keep to the left, at least for our first pass.

At first glance this drop seemed like any other in the river. The water was running fast, but at a distance this didn't look much worse than many of the other rapids we had navigated this day. My first pass on the left didn't prepare me for what was to come.

After a short rest, I decided to take a second shot at this drop, and I ferried across to the left bank. I lined my canoe as far upstream as possible, hopped in and headed for the middle of the river. Luckily, another boat came downstream, keeping me to the left, and again I managed to make another successful but unspectacular descent.

Even more determined than ever, I again lined my canoe upstream for another try. I went as far upstream as I could go. This time I managed to make the middle of the river.

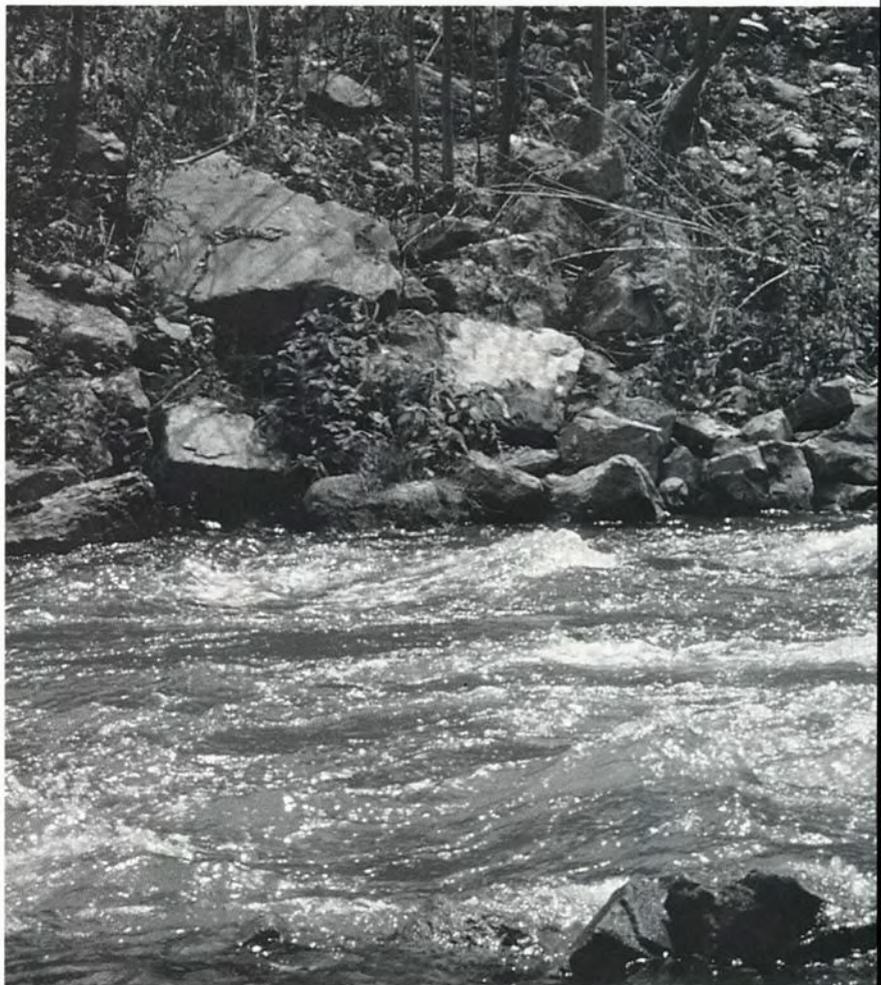
I could see the first standing wave as it broke over the bow of my canoe. The water from this wave curled back and hit me in the face as my bow bounced up and down, slicing deeply into the next wave. Several inches of water were now in the bottom of my boat, splashing from side to side, making it very difficult to hold steady.

As I held my brace, I could see the souse hole a foot or more below me as the second wave showered me and finished filling my canoe. Control at this point was non-existent as the river pulled me down. Flotation seemed to be the only thing that stopped me from being swallowed up.

One more wave was yet to come, but it didn't matter at this point. The shear force of the water now had control. I exited on the left side, as my canoe finally capsized, trying unsuccessfully to grab my painter. I did manage to hold on to my paddle and point my feet downstream until I floated clear of the rapids.

I remember thinking how strong this current was, compared to the rescue clinic of several weeks before. As the water calmed, I managed to get my footing on the bottom. Standing in water just over waist deep, I looked around to assess my situation.

As I began to pull myself together I saw my canoe headed directly for me. What I thought to be an easy job of grabbing my canoe, sent me for another swim. I did manage to grab the painter this time, but the weight of the canoe filled with water was just too much, and I had to let go and swim to shore alone.



Even the swim to shore was difficult as the current of this mighty river continued to pull me downstream. The calm water of the eddy was a much needed relief after what seemed like forever. Once on the river bank, I managed to exhale most of the water I had taken in. I had been lucky that my swim was short, even if it didn't seem to be.

My canoe had also been rescued a short distance downstream, so I decided that a short swim along the bank would be easier than trying to tow it upstream. Sticking close to shore I managed to make it down to the canoe without too much difficulty. I was pleasantly surprised to find that it had already been bailed and was ready to go.

**As I began to pull myself together I saw my canoe headed directly for me. What I thought to be an easy job of grabbing my canoe, sent me for another swim.**

Even though this was not my first swim, and definitely wouldn't be my last, it was one that I will not forget for a long, long time. It has taught me to respect the power of a river and my own limitations. It has also shown me the need to go in groups. You never know when you may need help.

After more playing at this drop, and several other spills by other members of our group, we headed down the final stretch to the takeout. Here I managed to miss the final eddy and had to fight the current back upstream. It was over for today, but we would be back tomorrow for another day on the river.

Day two of our trip was sunnier than the first and much warmer. The current did not seem to be as strong as the day before and the water a little lower, but it was by no means slow. It also meant we'd have to dodge more rocks.

This trip was barely under way when we had our first swimmer of the day. A dump at the start of a long shallow

My first run today was again on the left, while trying to scout the portion of the rapid to my right. I also eddied out along the right bank to do more scouting. After several minutes of evaluating the possibilities I decided to shoot it again, but this time much farther to the right.

After lining my canoe upstream along the left bank, I started my ferry across. Another canoe coming downstream cut across my path, and my second run was farther left than my first. This made me more determined than ever to try again.

My last attempt was by far my best. After ferrying to the right bank, I waited until there were no boats upstream. I then slowly entered the river drawing my canoe to the desired course.

This time I felt in control as I entered the rapid right on my mark. The first wave broke over my bow but left very little water behind. As my canoe bounced up into the second wave I



rapid must have left many bruises on that paddler. Once out of the water, it was also necessary to share a ride downstream to where we finally stopped the runaway boat.

We eddied out right after the covered bridge for a short rest. This time another canoe managed to hit the upstream side of the strainer, but managed to get off it without too much difficulty. Another boat managed to hit this tree while peeling out, causing a short, but embarrassing swim. We also met some other paddlers at this point.

Things remained uneventful until our arrival at the drop. But today with a lower water level, even this drop seemed a little gentler. Maybe even a boat like mine could make it.

caught myself grabbing for my gunwales and managed to get back to a brace.

I had finally made a good run and felt very good as I eddied out at the end of the rapid. It probably would have been even better if I had not grabbed for the gunwales at all. But this was my last run of the day and there will always be next year.

This had to be the best trip so far this year. Everyone seemed to have a great time, even with all the spills. After a chorus of "Happy Birthday" to one paddler at the takeout, we all headed home, knowing that we would meet again on the river.



## Boating Instructor Courses

The Bureau of Boating has scheduled a *Boating and Water Safety Awareness Instructors Course* on April 11, co-sponsored by the Pocono Environmental Education Center. This instructor course involves both classroom and swimming pool training. The course was developed for instructors teaching youth in the middle school and high school age groups.

The Bureau of Boating also conducts a *Basic Boating Instructors Course*. This course involves classroom time only.

Topics covered in both courses include personal flotation devices, required safety equipment, boat safety, accident prevention, environmental considerations, basic rescue, safe boat operation, hypothermia and alcohol. To register in any of the courses or for more information, contact Cheryl Hornung at the Fish & Boat Commission headquarters at (717) 657-4540.

## Weather for Boaters: Know Before You Go

High winds, rough water and thunderstorms can quickly turn a pleasant day of cruising or water skiing into a struggle to stay afloat.

The best way to handle adverse weather is to avoid it. Before going out, check the weather forecast. The National Weather Service issues marine forecasts every six hours. These forecasts include predictions for winds, seas, weather and visibility.

When weather warnings are in effect, determine whether you can operate your boat safely. Have the proper equipment aboard—a sturdy anchor and appropriate length of line, paddle or oars in case of engine failure, and visual distress signals to avoid stranding.

Check weather forecasts frequently on channels WX-1, WX-2 and WX-3, which broadcast continuously on your VHF radio. These days, hand-held VHF radios are common, so even small-boat owners can carry them conveniently. Heavy static on an AM radio may indicate nearby storms.

Weather forecasting is not a perfect science. There is no substitute for the traditional practice of scanning the horizon for changes in wind, waves, water and sky.

Watch for dark, threatening clouds indicating a thunderstorm, or any steady increase in wind or waves.

The transition from a small cloud into a dark, turbulent, electrified storm can take as little as 30 minutes. Strong, gusty winds and heavy rain with thunder and lightning will probably follow soon.

Determine the distance, in miles, of an approaching thunderstorm by counting the seconds between the lightning flash and the thunder clap and dividing by five. For instance, if it takes 10 seconds to hear the thunder, the storm is about two miles away.

If you get caught in a thunderstorm, pinpoint your location on a chart before heavy rain reduces visibility to zero. Watch for other boats or obstructions, secure hatches and ports, strap down or stow in lockers all loose gear, and make sure everyone is wearing a life jacket.

When the storm hits, try to take the first and heaviest gusts of wind on the bow. Approach waves at a 45-degree angle to keep the propeller underwater and reduce pounding. If there is lightning, unplug the radio and electrical equipment, keep away from metal objects, and stay low. Place fishing rods flat on the boat deck, and lower antennas.

For a free brochure, *Weather for Mariners*, write to BOAT/U.S. Foundation, 880 South Pickett Street, Alexandria, VA 22304.

## Simmons Appointed to NBSAC

John Simmons, director of the Commission Bureau of Boating, was recently appointed to the National Boating Safety Advisory Council (NBSAC) for a one-year term.

The council is sponsored by the Coast Guard and consists of 21 members who meet periodically to provide advice to the Department of Transportation on recreational boating safety issues. The National Boating Safety Advisory Council was established by Congress in the Federal Boat Safety Act of 1971. It comprises members drawn equally from the boating industry, state boating safety administrators and the boating public. Appointed by the secretary of transportation, the members review proposed regulations and standards and advise the commandant of the Coast Guard in boating safety matters.

## Leading Causes of Collisions

Numbers speak for themselves. The typical recreational boater is more likely to have a collision with another vessel or a fixed object than any other type of boating accident. Collisions are the third most frequent cause of fatalities, behind falls overboard and capsizing.

The Coast Guard estimates that it receives reports for only a fraction of reportable accidents. Here are Coast Guard statistics for 1986 through 1990 for the leading causes of collisions.

Boats involved	Causes
9,426	Improper lookout
8,616	Other vessel/operator at fault
2,249	Submerged object (logs, rocks, etc.)
1,478	Operator inattention or carelessness
945	Other
754	Strong current, rough water, weather, etc.
721	Speeding
641	Other equipment failure
537	Navigational error
394	Rules of the road infraction
373	Inexperience of operator
280	Improper navigation lights
214	View obstructed (bow in air, sun glare, bright lights, etc.)
194	Steering system failure (cable, pulleys, fittings, etc.)
176	Loss of stability: strong current, weather, rapids, whitewater, etc.
119	Force of wake or wave striking vessel
68	Poor visibility (rain, fog, darkness, etc.)
50	Throttle failure

## Boating Can Be Stressful

A day on a boat, with the sun shining, a breeze blowing and the boat gently rocking, sounds like pure relaxation. Add a few drinks to the scene and it's an idyllic vacation.

But the scene can easily turn from a dream to a nightmare. A few hours of small-boat operation can prove more stressful to a person than the same amount of time spent driving on the highway.

Studies have shown that exposure to the sun, wind, engine noise, vibration and constant motion can slow reaction time significantly.

Boat operators tested on specially designed courses showed a decreasing ability to deal with obstacles and to control their vessels in tight maneuvering situations as the day progressed. One operator stated, "On the last run, I had no business being out on the water. I was too blitzed to handle it."

Consuming alcoholic beverages makes the situation worse. Peripheral vision is reduced and hearing is less acute. Most operators who have been drinking don't feel the effects. They feel fine until they hit the dock—or something else.

Don't let the operator of your boat become another accident statistic. Make sure he or she takes a break and rests to compensate for the fatigue of being exposed to the environment for extended periods. Don't let the boat operator drink and drive—it's not only illegal, but an intoxicated boat operator can be deadly.—*Hunt Anderson.*

## NOAA Weather Radio

NOAA weather radio is a service of the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce. The "voice of the National Weather Service" provides continuous broadcasts of the latest weather information directly from National Weather Service offices. Taped messages are repeated every four to six minutes and are routinely revised every one to three hours or more frequently, if needed. Most stations operate 24 hours daily. The broadcasts are made on one of seven high-band FM frequencies, ranging from 162.40 to 162.55 megahertz (MHz).

NOAA weather radio broadcasts are vital to boaters. Listed below are the Pennsylvania NOAA weather radio network stations and their frequencies. For more details, and to receive a listing of NOAA weather radio receiver manufacturers, contact the National Weather Service (Attn: W/OM15x2), National Oceanic and Atmospheric Administration, Silver Spring, MD 20910.

Allentown	162.400 MHz
Clearfield	162.550 MHz
Erie	162.400 MHz
Harrisburg	162.550 MHz
Johnstown	162.400 MHz
Philadelphia	162.475 MHz
Pittsburgh	162.550 MHz
State College	162.475 MHz
Wilkes-Barre	162.550 MHz
Williamsport	162.400 MHz

## 10 Personal Watercraft Riding Tips

Personal watercraft riding is more popular than ever. As the number of people enjoying the sport increases, so does the need for safe boating procedures. Everyone from beginners to experienced riders can have more fun and ride safely by following the 10 tips provided by Bombardier, Inc., manufacturer of Sea-Doo watercraft.

- Know your watercraft. Learn as much as you can from the dealer and from the owners manual before riding.
- Always perform a pre-ride check and become familiar with all controls and the function of each.
- Follow the laws governing waterway use, obey posted speed and wake restrictions and always wear a Coast Guard-approved personal flotation device.
- Adjust your riding style to water conditions and the number of other boats. Slow

down and leave more turning space in rough water.

- Ride a safe distance from other boats, swimmers, fishermen and water skiers.
- Always look in all directions for boaters, water skiers and swimmers and change your speed or direction accordingly.
- Walk before you run. Even professional riders spend time riding at half-throttle when trying new maneuvers. Learn and practice new skills at slow speeds.
- Just as an athlete warms up before a game, watercraft riders should warm up their reflexes and ease into a ride.
- Do not jump boat wakes or cross the path of oncoming boats or watercraft.
- If you have a watercraft designed to carry more than one person, make sure your passenger grips the seat strap. Watercraft behave differently with extra riders aboard, so reduce your speed and avoid sharp turns.

## Does Your PFD Have a Sunburn?

A personal flotation device (PFD), like any other item of equipment, eventually gets old and worn and must be replaced. How do you know when a PFD must be replaced? Broken zippers and frayed webbing are frequent indicators of a worn device. Less obvious is the cover fabric of a PFD that has been weakened by extensive exposure to sunlight.

The most popular personal flotation devices are fabric-covered type II near-shore buoyant vests and type III flotation aids. The fabric covering most often used is one of several types of nylon or polyester.

These synthetic fabrics have advantages for use in PFD construction. They are economical, durable and resistant to rot caused by microbes. They can be dyed in a wide range of colors. They are easy for PFD manufacturers to work with. They "drape" reasonably well, and are therefore desirable for making wearable articles. The nylon fabrics are similar to those often used in jackets and camping gear.

Nylon and polyester are plastics, however, and like many plastics they can break down after extended exposure to the ultraviolet (UV) light in sunlight. Fabric manufacturers can include UV inhibitors to slow the degradation process, and dyes used to color the devices also provide some protection. Generally, darker dyes provide more protection than light or bright dyes, such as "neon" (fluorescent) shades. This is not always the case, however.

A PFD with a UV-damaged fabric cover should be replaced. A weak cover could split open and allow the flotation material inside to be lost. How can you tell when a fabric PFD cover is worn out? Badly faded bright colors are a clue that deterioration has taken place. Compare fabric color where it's protected, under a body strap, for example, to the exposed fabric. Another simple test is to pinch the fabric between the thumb and forefinger of each hand and try to tear it. If you can tear the fabric cover, replace the PFD.

Fabric-covered PFDs should ordinarily last at least several boating seasons in normal use. PFDs used every day in direct sunlight probably have to be replaced more often. When you operate your boat, PFDs should be out and worn by everyone on board. If the devices are not worn, they should at least be readily available. When you're not using your boat, PFDs should be allowed to dry. Then stow them under cover out of the sun.

# Who's **Who** on the

by Cheryl Hornung

It was a busy summer weekend on the water. A drunk operator in another powerboat almost ran you down, and you flagged the patrol boat to report it. The officers took the information and pulled away looking for the drunk operator. As the patrol boat raced across the lake, the passengers on your boat started talking about the officers. An argument broke out on whether they were the Coast Guard, Forest Rangers, Park Rangers or Fish & Boat Commission. What is the agency responsible for boating law enforcement on the water?

All boating is subject to laws and regulations. Acts of Congress provide basic policies and rules on which more specific regulations may be based. These federal boating regulations are primarily enforced by the U.S. Coast Guard. The Coast Guard is the agency that most boaters expect to see on the water. However, in Pennsylvania, they are present only in the Three Rivers area (Pittsburgh), Delaware River and Lake Erie. Their primary patrols in Pennsylvania concern aids to navigation, drug law enforcement, pollution, and search and rescue.

## **Army Corps of Engineers**

The U.S. Army Corp of Engineers also enforces federal regulations. Corp rangers patrol the Commonwealth waters to give assistance to visitors, provide them with information and tow disabled boats. The rangers patrol the waters, enforcing regulations and ensuring that users operate their watercraft in a safe and reasonable manner. While on boat patrol, rangers typically check for current registration, decals and bow numbers, as well as required safety equipment.

There are four U.S. Army Corp of Engineers districts in Pennsylvania. The Pittsburgh District is in the western part of the state and includes waters such as Shenango and Tionesta. They also are active with patrols and programs in the Three Rivers area. The Philadelphia District covers the eastern part of the state. Blue Marsh Lake is its busiest recreational waterway in Pennsylvania. The Baltimore District covers the central part of the state and includes Raystown Lake. The Buffalo District includes Lake Erie.

## **National Park Service**

The National Park Service (NPS) enforces not only federal laws but also state laws. NPS lands along the upper Delaware River border both New York and Pennsylvania. The agency was established in 1916 to conserve the resources of NPS sites as well as provide for visitor enjoyment of such areas. Park rangers carry out this mission daily as part of their duties.

Within a given day, a patrol ranger may give safety talks to groups, provide rescue, interpret historical significance of sites and report information on resource degradation. Safety and environmental regulations that rangers enforce include compliance to fishing regulations, boating safety equipment, drug and alcohol regulations, anti-littering and more. Rangers are on the river to serve visitors and protect the resource. The National Forest Service is also present on the waters in the Allegheny National Forest.

## **Fish & Boat Commission**

Boating on all Commonwealth waters falls under the jurisdiction of the Pennsylvania Fish & Boat Commission. The Commission was given the responsibility for fishing in 1866 and the first boating regulation was written in 1932. The enforcement of fish and boat laws and regulations is the primary responsibility of the Commission's waterways conservation officers, although they also spend much time on pollution and litter cases.

The Commission administers and coordinates the activities of the Commonwealth relating to watercraft. This includes the enforcement of boating regulations, the improvement and maintenance of waterway facilities, aids to navigation, and administering the boating education programs of the Commission.

The Pennsylvania Fish & Boat Commission administers laws relating to the encouragement, promotion and development of the fishery interests; the protection, propagation and distribution of fish; the management of boating and the operation of boats; and the encouragement, promotion and development of recreational boating.

The Commission cooperates with the federal government and other states to promote the uniformity of rules, regulations and navigation aids. There is concurrent jurisdiction on the water. Any agency that imposes a regulation on the waters of the Commonwealth must cooperate with the Commission to carry out the mission.

## **DER**

The Department of Environmental Resources (DER) was created in 1970. DER is responsible for managing the state's natural resources and enforcing laws and regulations to prevent environmental pollution and degradation. DER manages Pennsylvania's extensive system of 114 state parks, 20 state forests, and four environmental education centers. Waterways are an important factor in DER's system and its rangers spend time patrolling it.

Wildlife conservation officers of the Pennsylvania Game Commission also spend time on the water patrolling in areas that are used heavily for hunting.

These are the primary state and federal agencies that you might see patrolling on the water. However, county and city enforcement agencies on the water may also enforce boating laws.

## **Philadelphia Marine Police**

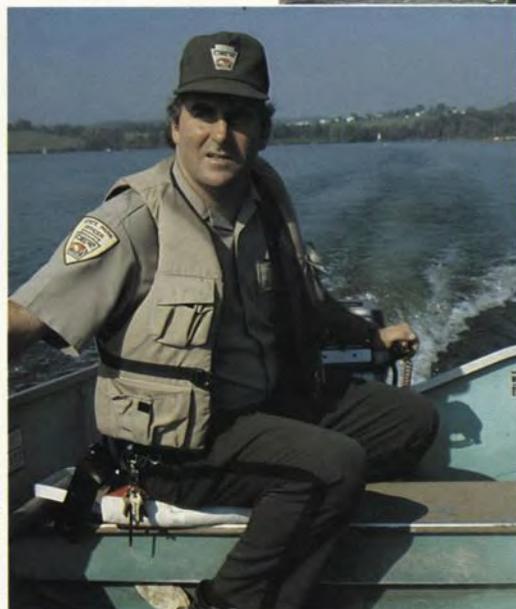
An agency of this kind is the city of Philadelphia's Police Marine Unit. It was originally called the "Harbor Police" and was created by an act of the Philadelphia City Council in 1859. This unit was originally established to cope with crimes along the waterfront by river pirates and dock thieves. Today, it is no longer just a visible waterfront patrol. The duties of emergency response and rescue have been added. This change is caused by an increase in the number of recreational boaters and sightseers. They are responsible for over 40 miles of navigable waterways along the Delaware and Schuylkill rivers.

# Water?



U.S. Coast Guard

The Coast Guard (above) and a DER state park officer (below) on patrol.



National Park Service



A National Park Service officer (left) patrols a stream.

National Park Service

National Park Service officers (below) patrol a river.



National Park Service

Other cities also have special police, fire and rescue or emergency service units that patrol or respond to accidents on the water.

## Volunteers

Volunteer organizations such as the U.S. Coast Guard Auxiliary are also present on the water. The Auxiliary's mission is to promote boating safety on the water. Along with teaching public education courses, safety patrols, regatta patrols, and search and rescue, aids to navigation patrols take up their time. Auxiliarists also conduct voluntary Courtesy Marine Examinations to encourage



Art Michaels

WCO George Jones (above) patrols the Allegheny Reservoir.

boaters to carry safety equipment and to meet higher standards than those required by state boating regulations.

You have the advantage if you know which agencies are on the waterway on which you boat. If there is a park office, stop by to pick up a map and see if there are additional safety regulations than those listed in your *Summary of Boating Regulations 1992*. If there is an emergency on the water, who should you notify? Knowing the regulations and emergency procedures could make your boating trip safer and more enjoyable.



# Insurance Insight

by George Poveromo



**A** Hollywood special effects team would have been hard pressed to duplicate the frozen, pasty white expression on the gentleman's face when he happened upon his boat, submerged and straining on the mooring lines at the dock. A sizeable group of onlookers had gathered, and as the captain lay down his gear, sat on the dock box and began collecting his thoughts, one could only imagine the headaches and expenses he faced.

We returned from cruising and walked into the restaurant to discover the owner of the craft hunched at a table.

A through-hull fitting reportedly gave way, filling the bilge faster than the pump could handle. The batteries were covered and the rest was history. What's worse, he assumed his insurance covered him. It didn't. He had neglected to secure a rider before leaving Pennsylvania and was now nursing the shock of his financial responsibility for the salvage and damage of a \$20,000 boat.

The standardization of homeowners and auto insurance makes them somewhat simple to comprehend and select, but the lack of a universal format in boating coverage often breeds confusion. Many competing companies differ in their types of coverage, making your decision not unlike that of custom rigging a boat. However, the wide-open market can offer some substantial savings, if you define your basic marine needs and understand a bit about boating coverage.

## Risks

Insurance companies are in business to generate profits. An underwriter must decide which "risks" can make money and which ones may best be left alone. Such data is gathered primarily on the application under "Owner Experience." Inquiries related to years of experience operating a craft of like size and kind, captain's license, completed boating courses and "protective devices" such as VHF radios, single side band, radar, loran, EPIRB, etc., help an underwriter learn more about the applicant.

Experienced boat owners may complete this section with swelled chests and visions of huge discounts or credits, when actually they're probably only guaranteeing themselves coverage. Such discounts, if offered, are often minimal and additional safety gear such as radar may even increase a premium because they inflate a boat's value.

An applicant's driving record is also consulted because insurance companies believe there is a direct relationship. Speeding tickets, DUI or reckless driving convictions reflect how a boat will be operated and any coverage is likely to be accompanied by heavy rates. A similar motive lies behind the "type of watercraft" segment, where a description of the boat, construction, equipment and speed lends an idea of its use and intentions.

The bottom line is that an underwriter must learn about an operator and vessel (including equipment) to determine the risk factor and guidelines should a claim occur. Who would you select—a safe, seasoned veteran or a first-time boater who plans to operate a 40-footer and dock it in a crowded marina?



Art Michaels

## Navigational area

When designing a policy, it's imperative to clarify your navigational boundaries. Determine your boating range and make certain it falls within the area of coverage, including any vacations.

Had the gentleman who's boat sank outside of Pennsylvania understood his limitations and made the necessary adjustments, his problems would have been downgraded to a major inconvenience.

Some companies leave a vague description of navigational areas, such as "U.S. Atlantic coastal waters." Does that mean coverage exists within state waters (three miles on the Atlantic), or does it include federal waters? The best advice on navigational coverage is to insist on a hard definition by your carrier, especially if the carrier tries to remain vague.

You should also inquire about trailering coverage (are there any mileage limitations?) and purchase the necessary rider(s) to protect your investment. They're reasonably priced, they can be customized for your traveling or vacations, and they can shield against a major financial disaster.

Other worthy endorsements should complement an owner's normal boating itinerary, such as docking and/or hoist liabilities, and personal affects that cover all gear against sinking, theft and fire. Question your agent on any or all available endorsements that can enhance a policy's coverage and also any exclusions.

Of great importance is protection indemnity (P & I) or watercraft liability, which an owner should purchase as much of as he can afford. It covers property damage and liability to others that may result from an accident, fall or other boating-related mishaps.

## Replacement value

Unless otherwise arranged, insurance

companies will determine the replacement value of a boat based on the ACV (actual case value) or depreciated cost. An owner can control, to a certain extent, the replacement costs of a boat by purchasing a replacement cost endorsement. For a nominal increase of roughly 10 to 15 percent, a boat



is insured for what it would cost to replace it in "like kind and quality" without a reduction for depreciation (less the deductible).

To protect themselves from the obvious, insurance companies will not exceed the specified hull value (they'll check current market prices on all items listed on the policy) and will retain the option of furnishing you with an identical boat, even if you've decided to get out of boating.

## The best deals

Insurance companies may have the upper hand when it comes to dealing coverage, but there are ways to reap the best deals and keep them in check. By understand-

ing your exact needs, you can receive quotations from competing companies. Before finalizing a deal, be aware of the financial credibility of the company and if it's licensed to do business in Pennsylvania. The A.M. Best Company, independent analysts of the insurance industry since 1899,

reviews the financial status of thousands of insurers, their relative financial strength and operating performance, publishing their findings and ratings on each company annually in a pamphlet that's available through a library or on demand from an insurance company. Ratings range from an A+ (Superior) through a C- (Fair). If a company seems questionable, exercise caution.

Mail solicitations touting reasonable savings are a consideration. These discounts, if any, are made because a client is dealing with direct writers, bypassing an agent and any commission. The general consensus on this type of business is that you need to be concerned with who the companies are. These concerns include if they're licensed to do business in Pennsylvania, have claim handling abilities in your area, and if it's easy to pursue a claim, particularly if the company has an international office.

If the company is reputable and can be dealt with efficiently and falls within your financial boundaries, it may be a good choice. However, a good agent can often match

a competitive price, plus an agent can "go to battle" for you if a problem does arise.

My agent commented on the fact that he deals with 28 insurance writers and has the ability to design a policy competitively that affords the best possible protection. Some companies favor certain types and sizes of boats and through this knowledge, he knows exactly where to go for the most comprehensive coverage and pricing. He also allowed that it's definitely an open market and that if you outline your exact needs and have an experienced agent, securing boat insurance isn't as expensive and confusing as one may think.



# Day Tripping

*by Heidi Milbrand*



*photos by*





or

**J**ust about anywhere in Pennsylvania you can find water—streams, rivers, creeks and lakes. Pennsylvania has 205,000 acres of flat water and over 45,000 miles of moving water. It also has some of the finest whitewater rivers in the East. The Lehigh and the Youghiogheny rivers are two of the most popular.

And there's no better way to get to it all—or away from it all—than canoeing. Pennsylvania is recognized as having some of the most beautiful wilderness areas in the nation, and canoeing remains one of the best and most popular methods of exploring the wilderness. In addition to the breath-taking scenery and wildlife visible on the shore, there are many other marvelous things to be seen in Pennsylvania by canoe. Many waterway locations lie near other noteworthy cultural, historical and big-city sites.

If you are looking for a new stream to paddle, let the following serve as a guide.

### Allegheny River

The Allegheny, a big and scenic river, provides miles of canoeing enjoyment with numerous recreational facilities along the river. The upper reaches can interest the whitewater enthusiast until mid-May, but during the summer months, the paddler will find most sections usable. There are several favorite “day trips” a canoeist can take.

- Kinzua Dam to Irvine, 10 miles; Class I water; scenery good. Put in immediately below Kinzua Dam, at an Army Corps of Engineers access. This particular section has all Class I water, perfect for the beginner. You can take out at the Buckaloons campground, just above Irvine on the east side of the river, or canoe to Irvine and take out there.

- Franklin to Emlenton, 35 miles; Class I, II water; scenery excellent. This section runs through a canyon-like gorge with excellent scenery. Put in at the Fish and Boat Commission access below the Route 322 bridge in Franklin. You can stop halfway in Kennerdell (second bridge encountered) or continue to Emlenton. Leave the river at the SR 208 bridge, just above Emlenton.

### Toby Creek

Toby Creek is a small, scenic tributary to the Clarion River. Its dreary beginning in coal country leads to a remote segment for a quiet springtime run suitable for beginners.

- Brockway to the mouth, 11 miles; Class I water; scenery very good. You can put in at an athletic field below Route 28. After a drab start, the creek enters a wooded gorge. A road follows the stream for a while, but

then turns away from the creek. The water runs smooth for much of the way, and except for a rare strainer, the stream is simple and forgiving. Take out at Portland Mills.

### Buffalo Creek

- Worthington to West Winfield, 8 1/2 miles; Class I, II water; scenery good to excellent. This is a pretty stream not far from Pittsburgh. The upstream run can be made only on higher-than-average spring water. For a good day's run on this section, put in about one mile south of Worthington near the village of Buffalo Creek and take out at Iron Bridge, about four miles below West Winfield. Shuttle is along the east side, via Slate Lick.

- West Winfield to Freeport, 11 miles; Class I water; scenery good. The put-in is the same as the take-out in the previous section. Two miles south of West Winfield the creek is posted against trespassing. The cable is high enough above the stream, so it does not present a problem for boaters, but no one else can go any farther. Two miles south of a one-lane bridge at Iron Bridge are old bridge pilings by the gauging station. Driftwood accumulates on these pilings, blocking passage for canoes. The water flows under the blockage. Do not run it—portage on either side. The take-out spot in Freeport (Laneville) is a few hundred yards downstream from the brick kilns on the left bank.

### Casselman River

The Casselman starts high atop the plateau of western Maryland and follows an arc across Somerset County to end in the Yough. The Casselman flows through a wooded gorge and offers some great scenery.

- Garret to Markleton, 14 miles; Class I, II water; scenery good. This section flows through a wooded gorge that offers a visible railroad and some fire-damaged forest land. There are a few easy rapids and then the river becomes a smooth ride to Rockwood. Below Rockwood, the river picks up the pace and goes through some more rapids. The bridge is off limits in Markleton, so travel downstream a little farther and take out along the road upstream of town or exit at the town of Casselman.

### Crooked Creek

- Creekside to Shelocta, eight miles; Class I water; scenery good to excellent. Put in at the Route 110 bridge in Creekside where a short but pleasant run starts and then ends 4 1/2 miles downstream at a covered bridge at the mouth of Dark Hollow. The stream lies in a narrow, winding channel with high,



wooded banks. The whole stretch is Class I water with a fast current. There are two ledges less than a foot high about 1/2-mile to 3/4-mile from the start of the trip. Take out at the Route 156 bridge in Shelocta.

- Shelocta to Girty, 10 1/2 miles; Class I water; scenery good. The backwaters of the Crooked Creek Dam provide good still water for canoeing, swimming and water skiing. To get away from the powerboats, paddle upstream from the boat launch area. One can paddle several miles even in late summer when the water is low. The banks are attractive and there is a good swimming spot just before the current begins to get strong. This particular run provides a scenic trip with fairly fast water and a few sharp bends to keep you on your toes.

### Clarion River

The Clarion is a superb river that is suitable for beginners for its entire length. Water levels are generally favorable well into summer.

- Ridgway to Hallton, 18 miles; Class I, II water; scenery excellent. Put in at the route 948 and 219 bridge in Ridgway. Peace and quiet are this river's trademark. This is a generally smooth but swift river, broken by gentle and straightforward riffles.

- Hallton to Clarington, 18 miles; Class I, II water; scenery excellent. Same as above, but once below LR 15055, the gorge is primitive. The "leave no trace" ethics are stressed in this area. Take out at the Route 899 bridge in Clarington (third road bridge encountered).

### Youghiogheny River

This large and powerful river is one of the finest whitewater runs in the eastern part of the United States. Water released from the Youghiogheny River Lake provides adequate canoeing year-round—when there is rainfall.

- Confluence to Ohiopyle, 11 miles; Class I, II water; scenery excellent. The put-in for this section can be either the entrance to the Corps of Engineers campground at the tailrace of the Yough Dam or approximately two miles downstream at the Ram Cat Hollow access area (maintained by the state park). This section is commonly known as the Middle Yough and lets the beginner

get a taste of what is downstream. This is the forgiving section of the river. The river cuts through the Laurel Highlands to form a great wooded gorge that is totally free of development. The peace and quiet are broken by the occasional train making its way through and a biker or hiker on the trail on the river's other side. The water is clear and cold as it comes from the depths of the Yough Reservoir.

The approach to the take-out can be tricky. All paddlers must leave the river above Route 381 on river left at the state park take-out, above Ohiopyle (first highway bridge encountered). As the bridge comes into view, stay as close to the left shore as possible.



Ohiopyle Falls are directly below the launching site.

### West Branch, Susquehanna River

Looking at a map of Pennsylvania, you can see that the West Branch is almost a perfectly centered arc within easy reach of just about everybody. Its 230 miles offer an outstanding canoeing river that flows through forests, mountains and fields. It offers paddlers solitude, the beauty of the land and peace of mind.

- Frenchville Station to Karthaus, 17 miles; Class I, II water; scenery excellent. Put in at the highway bridge in Frenchville

Station. The river continues through a deep canyon as rapids become more numerous. Moshannon Falls begin opposite the Karthaus railroad tunnel located on the river bank. This is the most difficult set of rapids on the West Branch, but still only Class I. Enter Moshannon Falls at river left and then paddle to the center of the river. Paddlers may leave the river on the right side just before the Route 879 bridge at Karthaus

Canoe Access, provided by the Pennsylvania Bureau of Forestry.

- Karthaus to Renovo, 30 miles; Class I water; scenery excellent. Put in at the Route 879 bridge. The stretch from Karthaus to Keating is the most isolated on the West

Branch. The right side is primarily public forest land in the Sprout State Forest and state game lands. A railroad follows the canyon but is lightly traveled. Some camps appear, but they are few and far between. There are a few mining scars visible, and tornadoes ripped through here in 1985 and signs of the damage are still present. Take out at the Route 144 bridge.

### Pine Creek

This waterway carved Pennsylvania's "Grand Canyon" and is probably one of the most popular canoe streams in the state. The creek is gentle and forgiving, with a spot

or two where paddlers will need some knowledge and maneuvering skill. Scenery along this stream is rugged and unspoiled. Canoeing facilities along Pine Creek have been developed and are maintained by the Pennsylvania Bureau of Forestry.

- Blackwell to Slate Run, 11 miles; Class I, II; scenery excellent. Put in at the Blackwell access area located along Route 414 just south of the Pine Creek bridge in Blackwell. The creek flows through steep, gorge-like land, although it is not as undeveloped as northern sections of Pine Creek. Route 414 parallels the creek most of the way. Take out at the Slate Run access area on the left side of the creek just north of the Slate Run bridge.

*This bridge spans Little Pine Creek in Little Pine State Park, western Lycoming County, near Jersey Mills. Check it out when you float nearby Pine Creek.*

- Slate Run to Waterville, 17 miles; Class I, II water; scenery good. The put-in is the same as the take-out in the previous section. The creek flows through steep-sided valleys with cabins and cottages dotting the shorelines. The small village of Cammal is the halfway mark with a historic bridge crossing the creek. Take out at the junction of Little Pine Creek on the left at Waterville, but be aware of possessive

landowners. Do not trespass. Stop by the Waterville Hotel and have a "Mountain Burger."

- Waterville to Torbert, 9 miles; Class I, II water; scenery good. The put-in is the same as the take-out in the previous section. The high mountains start to recede, giving way to wide flood plains and the creek finally breaks out into a wide valley at Torbert. Take out at the Torbert access, located two miles north of Route 22 or Route 44, or you can paddle downstream to the confluence with the West Branch of the Susquehanna and take out at Jersey Shore.

## Moshannon Creek

Commonly known as the "Red Mo," this stream will delight a wide range of paddlers with smooth water, nice scenery and novice to intermediate whitewater. It is conveniently located in the center of the state. It is a wilderness stream with a mine drainage pollution problem from abandoned coal mines, which has turned the stream bed reddish-yellow.

- Osceola Mills to Munson, 16 miles; Class I water; scenery good. Put in at the bridge between routes 970 and 53. The Red Mo wanders on a plateau before it cuts into canyons and creates some small, easy rapids. The creek is smooth, deep and swift. Before Phillipsburg, the stream loses itself in an almost swamp-like forest. Then the mountains start to rise and the only eyesores are a railroad, a few strip mines and buildings. Take out at the township road 864 bridge.

- Munson to Peale, 13 miles; Class I, II water; scenery good. The put-in is the same as the take-out in the previous section. Below Munson, a gorge begins to form and except for an occasional strip mine, the gorge is wild. Riffles become more and more frequent. As the trip continues, the gradient increases. Smooth but fast-flowing sections alternate with relatively easy rapids. Take out at the Peale bridge on a small dirt road between Grassflat and Moshannon.

## Juniata River

The Juniata has over 100 miles on which to canoe. This slow-moving river provides beautiful touring opportunities for the novice. It is easily accessible from routes 22/322 and is free of just about anything—fences, strainers and no big rapids. Boulders, shoals and eel traps can be a nuisance during low water. The Juniata offers year-round canoeing. This is the perfect river to kick back, soak up some rays and forget about the civilized world. Pack your guitar and shades, and take your dog.

- Raystown Branch to Newton-Hamilton, 19 miles; Class I water; scenery good. Put in at the Fish and Boat Commission access, located just below Raystown Dam. The river flows through mountains in a twisting, lazy way. Riffles lie far apart. Take out at the Fish and Boat Commission access at Newton-Hamilton.

- Newton-Hamilton to Lewistown, 22 miles; Class I water; scenery good. Put in at the Fish and Boat Commission access at Newton-Hamilton. Take out at the Route 103 bridge just east of Lewistown.

- Lewistown to Mifflintown, 10 miles; Class I water; scenery good. The put-in

is the same as the take-out in the previous section. Take out at the Commission access at Mifflintown.

- Mifflintown to Thompsettown, 10 miles; Class I water; scenery good. The put-in is the same as the take-out in the previous section. Take out at Thompsettown.

- Thompsettown to Millerstown, 10 miles; Class I water; scenery good. The put-in is the same as the take-out in the previous section. Take out at the Route 17 bridge in Millerstown on the left side.

- Millerstown to Susquehanna Junction, 18 1/2 miles; Class I water; scenery good. The put-in is the same as the take-out in the previous section. Exercise caution in lifting your boat over eel traps along this section. Several small, eroded ledges make great playing spots. Take out at the Amity Hall access (just before the routes 11/15 bridge) or continue downstream to the main branch of the Susquehanna.

## Main Branch, Susquehanna River

The Susquehanna River basin stretches through central Pennsylvania, flowing over 440 miles from Cooperstown, NY, to Havre de Grace, MD. The Susquehanna provided the main north-south travel route for six Iroquois nations, and even today, the river basin is still a major corridor of travel for cars, trucks, trains and migrating waterfowl.

- Sunbury to Halifax, 37 miles; Class I water; scenery good. Put in at the undeveloped Commission access along Route 147 at the south end of Sunbury. This section is pretty, surrounded by mountains, rocky cliffs and valleys. The river is gentle and forgiving, but the most interesting spot is below Liverpool. A series of ledges, rocks and chutes, known as McKee Half Falls, breaks the trip up and makes a good place to play. Take out at the Commission access in Halifax.

- Halifax to Harrisburg, 24 miles; Class I water; scenery good. Put in at the Fish Commission access in Halifax. About seven miles below Halifax, the Juniata merges with the Susquehanna, at Clarks Ferry. The river then passes through heavily populated areas. About five miles below the junction of the two rivers you approach a section known to the locals as "the Narrows." Stick to river left and you will have no problem. Along the way, you will see mountain valleys, islands with nesting herons and the skyline of Harrisburg. Take out on City Island, on the west side of the southern end of the island.



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