My Turn: Excessive boat wakes: Why the fuss?

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As Avista closes the dam gates and water levels rise in the Spokane River, the boating season begins in earnest. You see people enjoying the river in many ways, from swimming and kayaking to water skiing, sometimes sailing, even landing a float plane, etc. The river, like all our waterways, is a precious resource, one we should value and respect.

We are engineers and longtime residents of Kootenai County. In concert with the U of I, we've gathered several years of data on boat wakes and turbidity in the Spokane River. We want to better understand how very large boat wakes behave on narrow and shallow waterways like the Spokane River. They're termed "excessive wakes" — some boat manufacturers advertise wakes 5 feet high or more.

A couple of recent letters to the Cd'A Press suggest excessive boat wakes are not really an issue, based on a computer simulation study they cited. The computer simulation study has been reviewed by several boat wake experts and a local expert on the simulation techniques. In summary, the reviewers consider the computer simulation study to be misleading, technically unsound, not validated nor verified, and in direct conflict with extensive scientific field tests of boat wakes.

You don't have to be a technical expert — just think about it. Does it make sense that the impact is minimal from boat wakes powerful enough to enable a 200-pound adult to surf the wakes without assistance?

The State of Idaho imposes restrictions on excessive wakes. Kootenai County has had a long-standing ban on excessive wakes on the Spokane River because it's so narrow and shallow. Two years ago, the Sheriff's Office provided good technical support to the Commissioners to help make the County's excessive wake rules more understandable and enforceable. We know they didn't do that on a whim (see Resolution 2021-63).

It takes only a few minutes watching boats on the Spokane River to see the significant difference between regular sport boats and boats specifically designed and/or operated to make very large wakes and to see the basis for safety and environmental concerns.

People minding their own boat wakes must be able to see the problems. Those seriously injured in an accident last summer due to excessive wakes and narrowly escaping death in another certainly understand those issues on the river.

If you want to learn more about excessive wakes, check out these sources:
https://youtu.be/GXF9vTPQw0Y. https://youtu.be/jaf-oYt6e-I.
https://spokaneriverassociation.org/news-and-resources (Spokane River wake analysis video)

It's not just about safety; it's also about erosion and the environment. There are heavy metals and other contaminants in Cd'A Lake and Spokane River sediments. As a U of Idaho professor studying the lake recent observed, "What's in the lake is in the Spokane River."

Data we collected for the U of I last summer show a link between the number of boats making excessive wakes on the river and increasing sediments being stirred up in the relatively shallow river. Shouldn't we be concerned about the quality of the water we're boating in, swimming in? Yes!

In the past five or so years, increasingly, many have seen dramatic shoreline erosion at levels never seen before, water is no longer clear much of the summer, near-shore property is being damaged, heavy objects and even people are being washed off their docks.

Yes, boat traffic is increasing, but the river and its shorelines are accustomed to high spring flows, normal sport boat wakes, fluctuating water levels. Boats on the river making wakes that are much larger than normal are the principal basis for the change — by direct observation, basic physics, extensive research.

So back to the technical studies. The U of Minnesota recently published a well-developed study of wakes from several types of boats. Their results shed more light on how large, excessive boat wakes behave and the energy and power they contain.

Under all conditions, wake/surf boats produced the largest waves in the tests (because, of course, they are designed to do just that). The six-week study clearly showed it takes at least 500 feet for the wakes from boats operating in wakesurf mode to attenuate in height/energy/power to wakes from typical sport boats.

The Spokane River is not wide enough, even if those boats are operating right in the middle. The U of Minnesota results align well with extensive field studies from around the world (e.g., studies published by the Australian Maritime College show surf boat wakes are nominally 2.5 times greater in height with 7 to 10 times more energy than sport boat wakes at the same distance. It's basic physics.)

Kootenai County is blessed with an abundance of waterways. We've heard from boaters who enjoy wake surfing and wakeboarding who never do so on the Spokane River because it's too narrow, too shallow and unsafe.

If you want to make big wakes, please take it to the lake, stay away from shore and other boats. Take "mind your wake" to heart.