Cal Boating and Waterways Revenue Proposals

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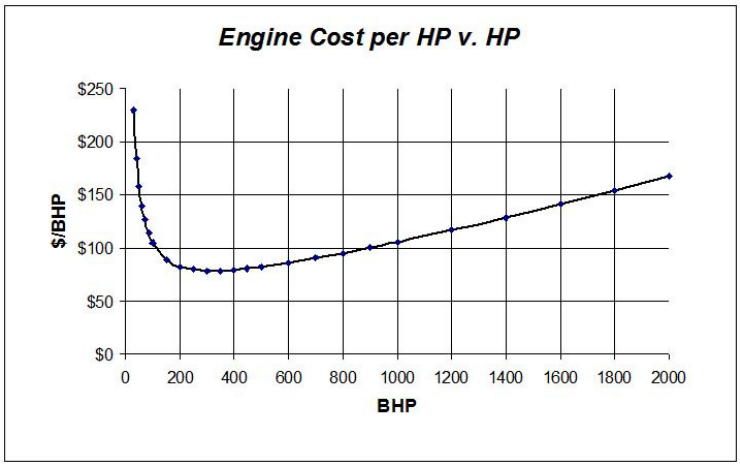
To follow up on our meeting of 12/17, here are two proposals for increasing revenue from boat registration.

## 1) Based on Horsepower

This is an attractive metric to use for revenue generation because it internalizes external costs, reflects use of CBW funded facilities, and scales very closely with ability to pay. Also, horsepower is already included in the registration database of powered watercraft.

As an example of how this could work, we propose no change to the current rate of $70 every two years for all boats with 140 HP or less. All boat with over 140 HP would pay $0.50 per horsepower every two years.

Consider the first cost of marine engines. This is a plot from my SNAME ferry paper from 2006.




**Barry, C. and Kamen, P, "Urban Passenger-Only Ferry Systems: Issues, Opportunities and Technologies"** SNAME annual meeting, October 2006 and SNAME Proceedings, 2006.

Prices have gone up since 2006, but even at low value of $100/HP, a registration fee of $0.50/HP is only half of one percent of the engine cost,

and does not include driveline, accessories or installation. $0.50/HP is a much smaller fraction of one percent of the total value of the vessel.

On the operating side: Estimating 0.55 galons per horsepower-hour for diesel fuel, and $5 per gallon, the proposed registration fee of $0.50/HP is equal to the cost of fuel for one hour and 49 minutes at rated diesel power. For a 4-stroke gas engine, It's the cost of fuel to run for only one hour and 15 minutes. And we are not considering maintenance costs and other consumables. The proposed $0.50/HP-hour is such a small number compared to operating costs, even RBOC could not possibly claim that this would cause a significant economic hardship to boat owners.

The per-horsepower registration fee is attractive because it charges in approximate proportion to the use of Cal Boating-Funded facilities, rescue resources, congestion, pollution, carbon footprint, ability to pay, and a host of external negative impacts connected to high-power vessels.

Examples: My 25 ft sailboat with a 2 HP outboard continues to pay $70 every two years. My 300 HP Sea-Doo would go from $70 to $150 – although most PWCs are much closer to the 140 HP threshold. A 70 ft yacht with 2,000 HP would be paying $1,000 every two years – but that's still less than the cost of fuel alone for less than two hours of operation.

## 2) Registration for Kayaks and Other Hand-launched Human-Powered Watercraft

As we discussed last month, mandatory registration for kayaks is problematic. They are often used with a pattern similar to skis: Stored in the garage for long periods of non-use, and only taken out for a few weekends each year, if that. Owners would be reluctant to register for this kind of use pattern. Enforcement will also be problematic: Boats that use ramps are easy to police – we observe California Fish and Wildlife, for example, checking fishing licenses at ramps. But a marina with only one ramp may have 30 good places to launch a kayak. And it would be a disaster for Cal Boating public relations, making kayak paddlers into registration fugitives as they easily evade the Cal Boating registration police.

However kayak registration would be feasible for kayaks stored more-or-less permanently at public marinas and waterfront parks. These would be easy to

inventory and compliance would be much more easily enforceable; Storage facility managers or clubs and co-ops with on-site storage would have difficulty avoiding the registration requirement. There would likely be far less political resistance, because kayaks stored on-site are usually owned by clubs, co-ops or recreation programs rather than by individuals.

As you know, my published article on the subject (*Latitude 38*, March 2018, p. 92-94) advocates on-site watercraft storage as a necessary element for opening up truly low-cost access to boating. So it may seem counter-intuitive to advocate selecting only this mode of storage for an additional fee. However I think the long-term effect will be beneficial for public access: This cost structure will elevate bureaucratic awareness of the on-stie storage mode, and ownership models other than indivicual ownership with boats stored at home. This will help put on-site storage at marinas, waterfront parks and other access points on the radar of waterfront land use planners and facilities operators.

My kayak friends are sure to resist, but I think it's an experiment worth implementing. If the kayak registration fee is, for example, $35 for two years, it adds $1.24/month to the cost of keeping a kayak near the water and available for group use – insignificant compared to the value of group access to boats stored at the waterfront.

Examples: Cal Sailing Club already registers all its small sailboats and would have to register its two or three kayaks.

Berkeley Racing Canoe Center would have to register 6 kayaks and 6 outriggers, but the 48 ft dragon boats are exempt as specialized competition equipment. It would not be a financial burden.

Comments and suggestions solicited.

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