

Testimony of Richard M. Jordan, Machiasport, Maine 04655
In favor of LD 800

West Grand Lake is one of Maine's four original homes of native landlocked salmon. Its landlocked salmon have provided eggs for Maine's hatchery stocking program since around 1868. Charles Atkins (Fisheries Commissioner) took 1.8 million salmon eggs at West Grand in 1884. So, this lake has a long-term hatchery program of 146 years, and it is now being threatened if alewives gain access into 14,000-acre West Grand and the additional 14,000 acres of lakes above it.

For many decades the Maine Department of Inland Fisheries and Wildlife has operated a highly important salmon hatchery in Grand Lake Stream. Every fall, hatchery staff takes an average of 200,000 salmon eggs to grow in various Maine hatcheries. Those eggs represent the beginning for each year's salmon population for about 75% of Maine's landlocked salmon stocking program. It is highly important to protect and continue this practice. Here are the reasons why.

Salmon fishing in Maine is highly popular with Maine anglers. 200 Maine lakes have principal fisheries for salmon. 140 of these must be stocked to maintain their salmon fisheries. Maine stocks 90,000-95,000 landlocked salmon in those 140 waters every year.

Without stocking, there is not enough natural spawning and nursery habitat in those lakes, and those salmon fisheries would disappear. Maine would no longer be a good salmon fishing state. The economics of healthy salmon populations are highly valuable and contribute to more than \$300-450 million economic gain from sportfishing in Maine annually. If alewives get into West Grand and the 6 large lakes above it, the future of Maine's landlocked salmon stockings and fisheries would likely be very adversely impacted.

Smelt importance

From Maine Inland Fisheries and Wildlife's Landlocked Salmon Management Plan for Maine, 2012

“Rainbow smelts are the principal forage species for salmon in Maine lakes. Without adequate numbers of smelts, salmon growth and condition can become poor, markedly reducing their value as a sportfish. Therefore, maintaining adequate numbers of smelts for forage is the most important element of salmon management in Maine. Insects and other invertebrates are the second most important food items utilized by adult salmon. Fish other than smelts are frequently consumed but their contribution is usually minor.”

During my 38 year career with fisheries in eastern Maine working on 25 salmon lakes, our staff noted a long-term, consistent pattern of substandard salmon growth in 5 lakes having runs of sea-run alewives and whose outlets flowed only a short distance before emptying into the ocean. These lakes were Toddy Pond, Lower Patten Pond, Long Pond, Donnell Pond, and Gardner Lake. We fear that a similar pattern of poorer growth will occur if alewives get into West Grand, yielding problems with future egg take operations.

Currently, the West Grand Dam is undergoing the Federal Energy Regulatory Commission (FERC) re-licensing process, potentially getting a new license this summer. The draft Environmental Assessment has been published. One recommendation is that the West Grand Lake fishway be operated 365 days a year to pass any and all fish upstream into the lake. Not only will sea-run alewives enter West Grand annually, but the landlocked form of alewives and an expanding population of largemouth bass are already established in Big Lake, Long Lake, Lewy Lake, and Grand Falls Flowage. If the fishway is open, both these invasive species are expected to colonize W. Grand and the 6 lakes above, creating additional competition with smelts. To show how seriously Maine wants to control introductions of invasive species, the illegal introduction of any fish into any Maine water is a Class E crime, punishable by fines up to \$10,000! This fishway operating protocol could be disastrous to the ecology of West Grand and its sportfish species, especially salmon. I feel we need to stop alewives from any chance of entering West Grand; the way to accomplish this is to pass LD 800 and keep alewives below Grand Falls Fishway.

Here is the explanation for the adverse impacts that would likely occur. The presence of sea-run alewife adults and juveniles would prey upon huge quantities of large zooplankton, thus competing strongly with smelts. Some alewives will prey upon smelts, reducing what is left for salmon. Without abundant populations of smelts, the salmon growth will be poorer, and fewer eggs will be produced by females. In addition, salmon will feed on juvenile alewives, as well as smelts. These juveniles will come from both sea-run and landlocked alewives. All alewives contain the enzyme thiaminase, which breaks down thiamine in salmon and their eggs, causing a deficiency, often resulting in early mortality syndrome. This can lead to poorer vision and less prey capture, poor growth, reproductive failure, a less immune fish, sometimes resulting in death of adults or juveniles. Clearly, this could pose disastrous problems to the hatchery's ability to get suitable healthy eggs, and Maine's salmon hatchery program and associated fisheries could dwindle. With a 146-year history, this would be a serious loss and improper. I hope you agree that it cannot be allowed to happen. I urge you to be a part of the solution rather than a part of potentially ruining Maine's landlocked salmon program. This is blunt, but true.

Please support and pass LD 800. Thank you. Richard M. Jordan, Machiasport