CAA Gill Lice Response
December 30, 2019

The Colorado Aquaculture Association (CAA), an organization comprised of fish producers, researchers, educators, and consultants/brokers, learned of a fishing guide who published an opinionated article pertaining to gill lice being spread within Colorado by private aquaculturists. This information was posted across social media sites, fishing blogs, as well as the Winter Park Times in January 2019, encouraging the public to contact the Colorado Wildlife Commission, Colorado Parks and Wildlife (CPW) Aquatic Nuisance Species program, and the Fish Health Board (FHB) in favor of banning the transportation of gill lice in our state. However, "Gill Lice: More Than Just a Nuisance" contains false statements and accusations, therefore, initiating the CAA to provide a unified voice for its membership refuting these baseless claims.

Private aquaculturists are active stakeholders of Colorado's, and surrounding states, waters' who have a vested interest in keeping them free of disease, aquatic nuisance species, and bacterium that may be harmful to fish communities or the environment. Gill lice, a parasitic copepod, have been historically documented across the US, including Colorado, since the early 1900's. According to the November 2018 CPW fact sheet, only one species of gill lice has been identified in Colorado, *Salmincola californiensis*, and is considered native to the western US infecting Kokanee salmon, cutthroat trout, and rainbow trout. It has been scientifically recognized that gill lice are exacerbated by environmental conditions and management strategies. Gill lice infestations are typically found in stressed fish during drought conditions such as low water flows, increased water temperatures, reduced food supply, and high fish densities.

Free-ranging fish populations have been observed with mild to extreme gill lice infestations across many of Colorado's river basins. Of the five reservoirs referenced in the article, only Green Mountain Reservoir and Williams Fork Reservoir reports mentioned gill lice and their possible impact on fish loss and/or low egg collection. According to CPW, Green Mountain Reservoir has not been stocked since 2015 due to the presence gill lice, Lake trout, and Northern pike and that the reduction in Kokanee salmon is due to a combination of the lice, restricted food supply, and high predation. CPW also states that the Kokanee population crash and low egg counts at Williams Fork Reservoir in 2011-2012 were attributed to low water levels, proliferation of predators, and the explosion of gill lice.

The belief stated in this article that the spread of this parasite is caused by private fish hatcheries is false. It is possible for *both* private and public hatcheries to become infested with gill lice; however, it is not in either's best interest to keep or stock sick fish. Private farms have huge repercussions when fish quality is poor ranging from inefficiencies and profit loss to total client loss. In addition, both private and public aquaculture facilities in Colorado are regulated by the *same* set of rules. Annually, a CPW trained and certified fish health inspector visits each facility to collect fish tissue, as well as examine the animal thoroughly looking for anomalies such as gill lice that may be attached to the gills, mouth or fins. Adult gill lice have been documented within the state hatchery system since the mid 1990's, as well as sporadically in a couple private aquaculture facilities.

At this time, neither CPW nor the FHB have seen enough evidence to suggest or advocate a ban on gill lice, but ongoing research will allow a better understanding of lice distributions, spread, prevention, control, and treatment ultimately leading to healthier fisheries across our state. Our membership appreciates the collaborative efforts between private and public entities for the protection of Colorado's wildlife.

Sincerely,

The Colorado Aquaculture Association *representing Colorado's Private Fish Farmers*