

DATE: August 16, 2012

FILE REF: 3600

TO: Eric Ebersberger

FROM: Brad Eggold

SUBJECT: Water return to Root River from Waukesha

The Root River does provide a significant fishing opportunity for thousands of anglers in the densely populated area of southeast Wisconsin. In the spring there are spawning runs of steelhead (Chambers Creek and Ganaraska strain rainbow trout) from Lake Michigan and in the fall there are spawning runs of coho salmon, Chinook salmon, steelhead (Skamania strain rainbow trout) and brown trout. Because of these strong spawning runs observed in the Root River, the department, in 1994, constructed a facility to collect eggs for our hatcheries named the Root River Steelhead Facility. Eggs are collected from these spawning fish so that we can rear the correct number for stocking in subsequent years. These young fish are subsequently stocked back into Wisconsin's Lake Michigan Harbors and tributaries. In addition, this facility was constructed to enable us to regularly monitor the salmon and trout entering the Root River and collected in the facility. In peak years, we have experienced runs of over 10,000 salmonids providing angling opportunities which at times exceeded 100,000 angling hours. In addition, movements of these fish in the lake provide many thousands of angling hours for both sport and charter boats fishing off-shore near Racine.

Because the upper reaches of the Root River lie in heavily urbanized areas, the upstream hydrology has been significantly altered by development and stormwater sewer construction. This has had an impact on the total stream flow to the extent that in dry years, particularly during the fall, the average stream flows in Racine can drop below 10 cubic feet per second. These low flows have a very negative impact on the fishery. Understandably, this also results in a significant decrease in the department's ability to collect adequate supplies of eggs for our hatcheries. Further, the angling opportunities are greatly diminished downstream of the Horlick Dam. In short, no water means few fish, inadequate or hard to obtain egg collection and a decreased number of anglers. As a result we believe that increasing the total stream flow by about 15 cfs (the average return flow from Waukesha) would be beneficial to our fisheries program goals for the Root River and for Lake Michigan. Not only would increased flows have a positive impact on the number of fish entering the river and thus into our facility, it is also likely that the angling experiences would be expanded because with more water, there could be more places to fish below the Horlick Dam. Further, with higher flows, fish may enter the river earlier and stay in the river for longer periods thereby extending the angling "season" for these anadromous fish.

At our Strawberry Creek Weir facility in Door County, we have constructed a water pipeline to take water from the Sturgeon Bay ship canal and pump it to the water right above that weir. This has increased the water flow into Strawberry Creek and has allowed us to collect sufficient Chinook salmon eggs for our production needs. We have considered this method to augment flow in the Root River, however the department would incur significant construction and ongoing energy costs to pump water from the Lake to augment the total stream flow in the river. The future discharge of the highly treated wastewater from Waukesha could provide a flow augmentation solution without any new investments needed at our facility.