

Gary Dukes

Comments on MPCA Draft Water Quality Standards Work Plan 2025-2027

Ammonia and Nitrate – Aquatic Life; Human Health Standards for Sources of Drinking Water

I spent years of my boyhood living on a farm. My father and I went out to collect eggs from turkeys we had. My father, brother and I went out camping in the camper that my father had made and put on the back of his pickup truck. We roasted sweet corn in the fire and fished in trout streams. Quite a few trout were caught. Now trout, other fish, and other aquatic life are threatened by ammonia and nitrates. When farm manure washes into streams it can kill fish and other aquatic life due to high concentrations of ammonia which rob the water of dissolved oxygen. A direct shock of ammonia can even fatally burn the gills and respiratory system of fish. The ammonia in farm fertilizer, ammonium nitrate, is especially toxic.

The Minnesota Pollution Control Agency reviewed the results of 110 scientific studies and determined that high nitrate concentrations can harm aquatic insects and other aquatic life. Nitrates in drinking water even threaten human health. Research has shown "an increased risk for colorectal cancer and adverse birth outcomes from exposure to nitrate levels as low as 3-5 mg/L," according to the Minnesota Center for Environmental Advocacy. The ideal level for nitrates is zero mg/L. Since there is an increased risk as low as 3 mg/L, in no case can there be a combined nitrate level greater than 2 mg/L, including but not limited to ammonium nitrate. When farm manure washes into streams, lakes, and wetlands, it threatens both aquatic and human life.

I am a North Star Sierra Club member, and I am working on legislation to decrease nitrate pollution in the waters of Minnesota and to decrease nitrous oxide pollution that results from nitrate pollution from fertilizer and manure used in agriculture.

Sincerely,
Gary Dukes