

Sediment flowing down the Minnesota, Mississippi, St. Croix and Cannon rivers has turned the Mississippi River between the Twin Cities and the head of Lake Pepin into a "wet desert." Because of that, virtually no water celery and sago pondweed can grow along the river's main channel or river backwaters. But a massive effort could soon begin along hundreds of miles of rivers in a big part of Minnesota, in fields and cities, to slow down rainfall or snowmelt.

That, in turn, will clear water enough for the plants to grow. It's not for the sake of plants alone, however, that the Minnesota Pollution Control Agency is studying the cause of the turbidity, said Norman Senjem, who is leading the study on protecting the South Metro river. The plants provide food for ducks and swans and are a nursery and feeding area for fish and are also a biological indicator the the river's health, he said.

If plants begin to grow, it means land use is much better in the watershed that includes about half the state and parts of Wisconsin and South Dakota, he said at a public meeting in Red Wing this week. The meeting was to explain the project and get public input.

Also, about 100 million metric tons of sediment come down that stretch of river annually and much of it settles out in Pepin, a major recreation lake for fishing, sailing, and boating. A study found that at sedimentation rates before European settlement, it would take 4000 years for the lake to fill in with only a main channel through it. At today's rates, that would be compressed to about 300 years he said.

The biggest culprit is the Minnesota River, the study found. About a third of the sediment in that river comes from farmfields, a third from ravines between fields and the river, and a third from river banks. It relates to the change in the 19th century from prairie to fields. Before farming, about 90 percent of rainfall would stay on the land in wetlands or seep into ground water, Senjem said. Today, nearly all immediately runs off.

The study found the amount of sediment in the river that would still allow plants to grow would have to average 32 parts per million, Today it's as high as 60 parts per million at the Hastings Lock and Dam and 45 at the Red Wing dam, he said. But below the lake at Wabasha, it's about 11. The submersed vegetation does grow there. Because of that, the MPCA is suggesting changing the suspended solid standards from 64 parts per million to 32 parts per million. To reach that, the agency would do a study that would allocate which areas and uses, such as farming along the Minnesota or larger cities, could let how much sediment get into the river .

The first part of reaching that goal on the Minnesota as well as the other rivers, is to enforce regulations that require grasses and vegetation along streams and rivers, filling in or damming ravines and having cities slow their runoff. "It's all kind of connected - running water is what its all about," he said.

That alone, however, wouldn't be enough to meet that goal. Former wetlands might have to be restored and drainage systems changed in rural and urban areas. Some money could come from the Legacy Amendment passed in November 2008.