With all due respect to the advertizing by Ducks Unlimited claiming drainage as the evil culprit in contaminating wetlands with excess nutrients, we are finding that new research is disproving their claims. In Manitoba where ongoing research has been monitored for over 20 years by various federal and provincial agencies in regards to Tobacco Creek Model Watershed, drainage has not been found to be the primary source of nutrient loading into the Red River water system. In Manitoba and in particular the Red River basin, organized drainage has been undertaken as early as the late 1890's. In the most current research undertaken by AAFC, Environment Canada, MAFRD and several universities have found that the edge-of-field run-off is generally quite low in nutrient loads. Currently researchers from the University of Manitoba are using DNA analysis on the sediments of the escarpment to determine where the loading begins. Work is ongoing but initial results are beginning to show that the majority of nutrient loading occurs as a result of stream bank erosion. The latest research has now indicated that only 18% of the total annual nutrient load of Lake Winnipeg can be directly attributed to agriculture.

Another multi studied Watershed in Saskatchewan is the Smith Creek Basin located near Langenburg, SK. Over the decades of studies done on nutrient loading it was found that once a drainage system was established the nutrient flow moving into the main water flow system became minor.

Modern agriculture in the prairies no longer relies on the old nutrient application strategies that were once utilized. Macro nutrients are now buried in the soil near or beside the seed at rates that at best would replace what is removed annually by the plant. As nutrients commercially applied are now approaching or exceeding $100/ac for most annual crops, all producers are focused on retaining the greatest majority of their input dollars and are not interested in letting them flush down the drain or into a water system. Manure application has been significantly reduced due to both the low levels of livestock being retained on the prairies as well as research that has proven that to maximize the nutrient capabilities of manure it should be tilled or injected at the time of application.

It is time to stop blaming agriculture for the majority of nutrient issues that the great lakes and other major water bodies are accumulating. Let's start to quantify the nutrient loading coming from urban fertilizer use, from urban dumping of raw sewage into open water bodies and from air pollution. Victoria BC dumps 82 million liters of raw sewage **daily** into the Strait of Juan de Fuca. This sewage contains significant amounts of nitrogen and phosphates. Dangerous levels of nitrogen are expelled daily from combustion type engines, coal burning power generation and large industrial complexes. A typical uncontrolled coal plant emits 10,300 tons of **Nitrogen oxides (NOx)** per year. A typical coal plant with emissions controls, including selective catalytic reduction technology, emits 3,300 tons of NOx per year.

Sask Farm Stewardship Association believes that responsible water management involves the cooperation of all stakeholders in surface water management. When water is controlled efficiently throughout the process, everyone including agriculture, conservationists, urban and rural residents will enjoy water quality and water quantity that can be utilized safely and effectively.

David Zerr

President

Sask Farm Stewardship Association

Box 147

Yorkton, SK

S3N 2V6

www.saskfsa.org