

This is a cbc podcast i will to proceed as you will see are you a cookie is not just a guy who takes that it's now an award for the second annual cbc bookies are here and forget the pronouncements of literary jurors were turning to the leaders of canada and asking them to choose the best established in two thousand eleven for details go to cbc books sees my lake in the name of the nature of things documentary on lake winnipeg is going to be screening tonight to mark world water day after spring of intense flooding last year followed by drought like conditions without checking on the state of lake winnipeg and doctor greg mccullough is our guest is one of the leading scientists are studying the lake in fact his just published a brand-new paper on the impact of flooding and nutrient loading only winnipeg is maligned important to you and solidify notable what's what's new in terms of what's happened blake will sign an extra half hour flooding is related to stipulate and what we find is that i think people are beginning to understand that a lot of people begin to recognize now that fighting except mobilizes a lot of phosphorus is on land and carried it down like so that when you have a flood you have of course a lot more water going later than noon on five-year and you also have a higher concentration of phosphorus in the water than is normally or so view you as you get a kind of a double whammy when you have a flood will is a tipping point illegally began to change more rapidly looking at what was a very dramatic change in the mid- nineteen nineties we saw that we begin with we found that when we began to look at old satellite image is actually much where you can actually see surface blooms on lake in those old satellite images we looked at three or four or five of them each year for about twenty five years of record we can see all to the eighties and into the early nineties very few blows there were a couple of fairly large one but then after after nineteen ninety six or so there's a bloom every year i surface the valves either the inaccessible of square kilometers for sheri s nomine them are fifteen or seventeen thousand it's something that they were selling like a threshold was crossed and that caused us to look back at other data on the lake and we can see that at the same time as the switch appeared to take place in blue and there was a sudden change in the amount of the concentration of nutrients particularly phosphorus village green in the mid- nineteen nineties and only a five year the phosphorus almost doubled in the late and it it surprise us because for years before that we been looking at concentrations in the rivers knows well gradually over thirty or forty years to begin measuring the phosphorus malignity will gradually change suddenly everyone was beyond analyzer when we don't look at that way we realized that the other the other big thing changed in the mid- nineteen nineties is the red river as all of you who live there that it starts to flood more frequently than in ninety six there was a big flood and ninety seven networks will call the fun of the sensory seeking and that was last at the lake this summer while last year 's floodwaters are almost certainly brought in very high load of of nutrients into the lake and they also brought a lot of sediment is like this is something we've known for some time on the lake that when that happened although you get tremendous surge of nutrients in the year of the flood you also get some settlement once clay and silt carried in the living on enough light at least in the failed lake for algae to really grow healthily and produce these blooms but very often in the year after a flood when the river is low and it is bringing a lot of settlement in the sediment to settle out a lot over the winter over the intervening the nutrients is still there so i think based on our experience that a big flood year like last year will almost certainly lead to severe severe algal blooms this year let's go to you on your recent sense however when we look at controlling floodwaters about something i heard much about you not only independently until the same same methods as some people advocate storing water on farmland right and only releasing it back into the river you're a proponent of that one out i am not against except i suppose i would tweak it a bit it could it's a problem to store water on the land for a very short not that's exactly what happened during flood during floods during the spring melt the water floods over the lan pools from what used the old wetland areas and behind the roads behind culbertson things and then gradually released and it's that time that it sits on the land that is busy absorbing a lot of lower phosphorus in particular what i would say is that if we are going to store water on the land we really need to store it for long periods of time and that probably means that we need to think seriously about restoring some of the old wetlands on certainly will never do that with all of our landscape but in some parts we have to begin to look at places where we store water on the land long enough so that it is used up either by evaporation or possibly even better by irrigation of the land around them in some way that it doesn't actually float down the river in the same year with a much higher charge of the transfer what if it hadn't thought one for a few week 's loss to lease a very intimate headset rather ) mention your talk on thursday its people can talk in more detail at greater length doctor michael think is a times one the subject and the color professor of geography and the department of environment and geography university march twenty second is world water dates to mark this week there are two events happening tonight at anchor to halt the university of winnipeg the nature of things documentary mentioned save my link about our lake winnipeg is going to be screened at seven o'clock and is # testable reflecting can go listen to that watch it if you care to also does a similar event enough for doctor mccullough will be speaking it's happening in gimli waterfront center on thursday looking for more cbc podcasts go to cbc podcasting