

**Feedback/Responses**  
**Chippewa County Land & Water Resource Management Plan Revision**

**Focus Question #1: (Natural Resource Conditions)**

**A. Does the existing information, as contained in Section 5.1 of the existing plan and the additional information that has been compiled, offer an adequate overview of natural resource conditions, and provide a reasonable assessment of current trends that may be expected to affect the natural resource base?**

**Reponses**

Yes, this is a big, big area to get one’s head wrapped around. Information & ever changing issues.

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Yes, the existing information of the existing plan, along with the additional information, is adequate.

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When reviewing the plan, I noticed that a lot of the information goes back to farming. There has been a decrease in alfalfa/hay with an increase in soybean and corn. There has also been a decrease in farms being monitored. With the planting trends, more focus could be put into farmers crop rotation plans, as alfalfa is a nitrogen fixator and there has been an increase in nitrogen in the groundwater. With the increasing amount of water bodies becoming impaired, it could be beneficial to the county to oversee more farms and be more involved in that industry.

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\*1. Some of the data noted is not recent and requires updating.

2. There is little to no data on a more recent development in Chippewa Co.: extreme industrial sand mining in bedrock (silica sand or frac sand mining and the implications of extraction in destruction of land and water) . How much land (sand) is being removed? How much water is consumed in the process of extracting, washing and processing of the sandstone/silica? How much land is destroyed as farm land as a result of this extreme extraction? How much water is contaminated in the mining processing including the extraction, the processing and the trans- load of the process? How many incidences of erosion/blowouts/ drawdowns during drought etc. have occurred? How many trees have been removed from the hills before extraction occurs? How many acres of land have been successfully reclaimed? At what cost to the companies? At what cost to the County and its taxpayers? How many people are employed during the duration of the extraction? How many people have lost their jobs during the down times? How much soil has been lost to the winds? How much soil has been lost due to erosion into the rivers, streams, lakes and creeks since this extractive industry first started operating throughout the country.

Data regarding other questions of this nature should be retrieved as needed and as questions are asked.

3. Water usage continues as more people move into the county and draw upon wells for their businesses, commercial and other industrial areas and personal uses, farm land usage increases, frac sand mines are opened and expanded, high cap wells are added, and irrigation increases to produce food, crops, and particularly corn for the fossil fuel industry (ethanol).

4. There is no data available on how much water is contaminated by erosion, chemicals, blue- green algae and other naturally occurring plants, wild animals and humans that could be controlled by more restrictive ordinances.

5. There is little in the way of document pictures, videos, films and other digital information that is available to the public to show the injustices being done to land and water.

6. There seems to be no data on the impact of heavy rainfall or snow or drought and how these factors impact upon Chippewa County. It would be good to extract that information from weather services so as to be able to project future impacts and more adequately make decisions regarding particular areas of the county and in various departments impacted by these changes.

**B. Is any of the information that is presented regarding natural resource conditions incomplete, inaccurate, or unclear? If so, where could improvements be made?**

**Reponses**

I don't think so.

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\*Changes that could be made.

- GIS tracking needs to start tracking drain tile/ditching efforts.
- Invasive species need to be more clearly emphasized. Specifically, reed canary grass and spotted knapweed.
- Soil condition – plan should reflect the change of dairy to cash crop conversion and the effects of larger and heavier equipment on soil quality.

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\*The data covers land being converted out of agricultural use, but it would be beneficial to see data included on land coming out of CRP and going into agriculture again. It could also have the groundwater data included directly in the plan as this topic becomes more relevant in the communities.

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1. If you look at the above question, it is obvious that there is a lack of information and data available to the public and the decision makers at the county level regarding frac sand mining so that appropriate discussions can occur and appropriate decisions about the past, current and future operations that are destroying land and water can be approached, discussed and then considered for change in regulatory matters can occur. Information is critical, particularly visuals. Development of these resources should begin immediately and decision makers shown the impacts in the country so they can see for themselves. A picture or a video is worth more than a thousand words in order to allow change occur.
2. Graphs, charts, figures could be used to make information more vivid to the visual learner. It may be important to invest in equipment and supplies or use current staff to more deliberately be collecting this valuable information if it not being done currently. The collected visuals must be shared with the public and elected officials.

**C. Is there additional published data or scientific information that is readily available, that should be considered by the County to better define the current condition of natural resources or trends that may affect the natural resource base? If so, what is this information and what is its source?**

**Reponses**

I am not aware of anything....are there any universities doing any research projects that might have more data for us?

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EWG (Environmental Work Group) has extensive data from public record. These data sets could be used to further investigate the state of agriculture in Chippewa County.

In addition, free data sets from NASA, US Gov, & USDA could and should be used to keep tabs on cover crop and soil tillage practices in the county using remote sensing.

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Dr. Ted Auch from FracTracker has been visiting Wisconsin regularly and is acquiring data about land use, water usage, pollutants in the air and water, the impacts upon people living near and far from the mines, and a wealth of other information.

He has taken many photographs and videos of frac sand mines. He is able to calculate the land usage, the land carried away, and the impacts on the environment including those related to land, water, people, and wildlife as well as the contributions this area is making to climate change through emissions and carbon issues with the cutting of trees and other resources that can help reduce carbon emissions and contaminants in the air and soil and water.

See: <http://www.mdpi.com/1660-4601/15/9/1858/pdf>

The Human Right to Water and Unconventional Energy is one example of some of the work he has done. However additional work has been done specifically on frac sand mining data. I would be happy to connect him with the department.

**Focus Question #2: Land and Water Issues of Priority Concern (Sec. 5.2)**

**A. Do the existing issue statements, as contained in Section 5.2 of the existing plan and the additional information that has been provided in updating Sec. 5.1, accurately depict the issues of concern as they affect the resource base?**

**Responses**

Yes, realistic but are they strong enough to alert the public to what problems are present or future? These seven issues need to be circulated to Chippewa County residents to inform them of what lies ahead.

Again, there is a big, big need to provide education and allow for citizen interaction on these seven issues. Awareness is so key, if people know, perhaps they will want to help in planning the future of the use of soil and water in our county.

Thoughts on future growth and land use....brainstorming question sessions:

“Should everyone be able to live on a lake?”

“Should everyone be able to live in the country on a 5 acre lot (or larger)?”

“Living in “urban areas” with water and sewer should be a consideration.”

“Moving into town has advantages (or staying in those communities has advantages)”.

“What’s right with living in town?”

“When our agricultural land is gone or misused, where will we grow our good and fiber?”

“Our County Forest is an asset that we don’t want to lose.”

“Managing our County Forest – it’s many uses?”

“How the County Forest benefits our citizens.”

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Yes.

Issue 1 – An emphasis on climate change and its effects needs to stay at the forefront of conversation.

Issue 3 – Discussion and research needs to continue on the impacts of development of land with high densities of wells/septic systems.

Issue 6 – Continued research on sulfide process in disturbed bedrock of Eau Claire/Wonewoc formations and the impact of those surfaces/heavy metals on groundwater.

Issue 7 – Recreational trails for silent sports (walking/biking/skiing) needs to continue to develop for safety and opportunity.

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Issue 6 only gives a negative look on nonmetallic mining. We would encourage the county to add in some of the benefits associated with successful mine planning and restoration.

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The issue statements are a good beginning but do not encompass that massive change that is and could occur in the County.

A. Climate change is not just trending. It is happening before our eyes and worsening. Those denying it are looking for increasing their income at any expense to themselves and their families and the public in general all over the world. Numerous and extreme wildfires, floods, tornadoes, temperatures, rainfalls, snowfalls, and hurricanes have been occurring more frequently in the past number of years. Along with that we find more invasive plants, more invasive insects that do multiple damages, more illness on the part of humans, animals, and life surrounding us accompanied by the loss of animals and increase in endangered species.

B. There is an increase in wind generation and the use of solar although at a slower pace (particularly in WI) because of political divisions on the issues of climate change. I am not sure about the viability of the use of biomass as a solution to the energy crisis. More land use is required that may result in nutrient loss and burning may actually produce more damage to the air and surrounding sites than needed to stop climate change. The development of other alternative energy sources should be encouraged by the County, not only for the County's use, but the nation's use. While land may still be used for solar and wind generation, our careful concern about what we do with the land could make a great deal of difference for future generations. To encourage the growing of corn, for instance, to make ethanol, only encourages the fossil fuel program to continue its production. In a sense, Chippewa Co. by increasing corn production, will increase the use of a precious resource: water.....and the generous use of fertilizers which contribute to the growth of algae on our lakes and other water bodies.

C. Whereas increased rural populations around water bodies developing homes in unsewered subdivisions normally occupied by agricultural lands do contribute to heavy nitrates and phosphorus running in the drinking water, it is absolutely critical to take a look at what opening up frac sand mines for extraction does for water. Natural occurring phosphorous and nitrates from the formations as well as from various sources besides sewage systems can and will pollute the water and water sources. The sale of fertilizers for home and commercial use for the purpose of beautifying lawns and grounds is also a contributor and yet we continue to not only add more and in greater amounts than ever before to keep up the status of the property without considering what we are doing to water supplies everywhere, including adjoining counties and the state and nation.

D. We need to support the small dairy/crop farmers perhaps even subsidizing them with funding and additional education to allow them to become more efficient in what we do. Educational programs on new strategies and techniques based upon the nature of the land is critical. This is not the time for exchanging ignorances when people get together, but it is the time for all to begin to look at all contributing factors and making "smart" changes that not only benefit the soil and the water.....and land, but also create clean and healthy living for the farmer but for the people or animals which consume the food produced. The large CAFO industries must be discouraged from operation because we know they are destroying large volumes of water that may never be "fixed" for consumption again.

E. While we can visit about the increase in invasive plants and invasive insects and the like, there is no mention of the impacts on health as a result of the increase in insects that cause illness: the Zika virus, caused by the bites of some mosquitos can cause big time developmental delays in children (as the weather warms, as there are more places for mosquitoes to breed with increasing rainfalls and storms of increasing intensity, there will be more opportunity for the spread of disease as well as injury. Health professionals must become involved increasingly with management of these potential life threatening issues.....and we can't forget that added PM2.S's in the air are carcinogenic and cause silicosis.....and heavy metals in the water also cause serious illnesses in children and elderly adults who are much more susceptible to severity than other adults. It is the county's responsibility to protect human and animal health so it makes it even more critical that land and forest management join forces with health officials who can at least warn people of potential harms to themselves and their families as we head into a time of great uncertainty until we make important changes in the way we as humans make change in order to exist comfortably with Mother Earth.

F. The County can begin the process by working together with all stakeholders on committing themselves to collaboratively working on Climate Change and the development of sustainable practices as a general way of life. One way is to ban the use of plastics for example. Many will no longer be recyclable. What do we do then? Put more in our landfills which are already creating more pollutants that we would like to know?

G. While people need to use land/water for recreational purposes, it seems to me that they may have to take some time to personally make changes personally in their lives in order to make the earth a livable space for all again. While recreation is important, it is also critical that we teach people how to make good choices, that they know how to create livable spaces for themselves and their families, and that they realize that the more they contribute to the increasing development of the fossil fuel industry, the greater the time it will take this earth to recover, if ever.

H. We need to focus on teaching people how to become self- sustaining creatures and leading different lives that don't depend upon fossil fuels by encouraging them to be putting their time instead into self-sustaining actions vs. encouraging "recreation" .

**B. Are any of the issues of priority concern that have been listed incomplete, inaccurate, unclear, or no longer relevant? If so, where could improvements be made?**

**Responses**

No.

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Please see answers above.

Yes.

Issue 1 – An emphasis on climate change and its effects needs to stay at the forefront of conversation.

Issue 3 – Discussion and research needs to continue on the impacts of development of land with high densities of wells/septic systems.

Issue 6 – Continued research on sulfide process in disturbed bedrock of Eau Claire/Wonewoc formations and the impact of those surfaces/heavy metals on groundwater.

Issue 7 – Recreational trails for silent sports (walking/biking/skiing) needs to continue to develop for safety and opportunity.

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On 162<sup>nd</sup> Street in Anson County, there is a wonderful example of a reclamation benefit. This land would have only been agricultural land but is now a beautiful residential area with a golf course. Since the mining operation and reclamation by American Materials, the land value has gone up. Allowing for completed reclamation plans also allows residential homes in the future. Issue 7 discusses the County's need for more recreational areas. With most mines being reclaimed to passive recreation, this presents a wonderful opportunity for all. Communication between the County and the company doing the reclamation could result in unlimited benefits to the public.

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1. Combine the expertise of health professionals in reaching desirable goals for building self-sustainable living among all people in the county. Work on team building, common causes, networking, action teams, connecting the dots between current practices and the top issues identified.

2. Look at other self-sustainable practices and forms of energy besides fossil fuels.

3. Include solar and wind; study the viability of biomass and the drawbacks regarding the use of trees and other resources as a clean source of energy.

**C. Is there additional published data or scientific information that is readily available, that should be considered by the County to better define or update the current issues of concern as they may affect the natural resource base in Chippewa County? If so, what is this information and what is its source?**

**Responses**

Not that I am aware of.

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The Wisconsin DNR, one for the agencies that regulates the nonmetallic mining industry, has a lot of good information on their page called Nonmetallic Mine Reclamation Plans.

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1. Refer to the source from Science and Policy for People and Nature: See the important portions of this release in RED below.

Media Release: Worsening Worldwide Land Degradation Now "Critical", Undermining Well-Being of 3.2 Billion People, pp. 7 & 8. <https://www.ipbes.net/news/media-release-worsening-worldwide-land-degradation-now-%>

### **"Highlights**

1. Avoiding, reducing and reversing land degradation and restoring degraded land is an urgent priority to protect the biodiversity and ecosystem services vital to all life on Earth and to ensure human well-being.
2. Land degradation through human activities is undermining the well-being of at least 3.2 billion people.
3. Land degradation through human activities is pushing the planet towards a sixth mass species extinction.
4. Widespread lack of awareness of land degradation as a problem is a major barrier to action.
5. Less than one quarter of the Earth's land surface remains free from substantial human impacts. By 2050 it is estimated that this will drop to less than 10% - and this will be mostly in deserts, mountainous areas, tundra and polar areas unsuitable for human use or settlement.
6. Wetlands are particularly degraded, with 87% lost globally in the last 300 years; 54% since 1900.
7. Habitat loss through transformation, and the decline in suitability of the remaining habitat through degradation, are the leading causes of biodiversity loss.
8. Between 1970 and 2012, the index of the average population size of wild land-based species of vertebrates dropped by 38% and freshwater species by 81%.

### **Projections**

1. The population in drylands will have increased from 2.7 billion in 2010 to 4 billion by 2050.
2. The unprecedented growth in consumption, demography and technology will roughly quadruple the global economy in the first half of the twenty-first century.
3. Unless urgent and concerted action is taken, land degradation will worsen in the face of population growth, unprecedented consumption, an increasingly globalized economy, and climate change.
4. Most future degradation is expected to occur in Central and South America, sub-Saharan Africa and Asia.
5. Land degradation and climate change are likely to force 50 to 700 million people to migrate by 2050.
6. By 2050, land degradation and climate change will reduce crop yields by an average of 10% globally, and up to 50% in certain regions.
7. The capacity of rangelands to support livestock will continue to diminish in the future, due to both land degradation and loss of rangeland area.
8. Biodiversity loss is projected to reach 38-46% by 2050. The strongest drivers of biodiversity loss to date have been agriculture followed by forestry, infrastructure, urban encroachment and climate change. In the 2010-2050 period, climate change, crop agriculture and infrastructure development are expected to be the drivers of biodiversity loss with the greatest projected increase.
9. In a middle of the road scenario, the reduction is projected to be equivalent to a complete loss of the original biodiversity of an area about 1.5 times the size of the USA.

### **Economics**

1. The estimated economic cost of biodiversity and ecosystem services lost because of land degradation is more than 10% of annual global gross product.

2. High-consumption lifestyles in more developed economies, combined with rising consumption in developing and emerging economies, are the dominant factors driving land degradation globally.
3. Studies from Asia and Africa indicate that the cost of inaction on land degradation is at least three times higher than the cost of action.
4. The benefits of restoration exceed the costs by an average ratio of 10 to one (estimated across nine biomes).
5. Benefits include increased employment, business spending, local investment in education, and improved livelihoods and gender equity.
6. The full impact of consumption choices on land degradation worldwide is not often visible due to the distances that can separate many consumers and producers.
7. The increasing spatial disconnect between consumers and the ecosystems that produce the food and other commodities they depend upon has resulted in a growing lack of awareness and understanding of the implications of consumption choices for land degradation.
8. Many of those who benefit from overexploitation of natural resources are among the least affected by the direct negative impacts of land degradation, and therefore have the least incentive to take action.

### **Climate Change Links**

1. Land degradation is a major contributor to climate change, and climate change is foreseen as a leading driver of biodiversity loss (along with crop agriculture and infrastructure development) through 2050.
2. The contribution of land degradation to climate change includes the release of carbon sequestered in soil. Between 2000 and 2009, land degradation was responsible for annual global emissions of 3.6-4.4 billion tons of CO<sub>2</sub>.
3. Over the past 200 years, soil organic carbon, an indicator of soil health, has dropped an estimated 8% globally (176 Gt C - equivalent to the carbon that would be lost from clearing an area of tropical forest approximately the size of Australia).
4. Without urgent action, further losses of 36 gigatons of carbon from soils - especially from Sub-Saharan Africa - is projected by 2050 (equivalent to nearly 20 years of emissions from the global transportation sector - all freight and passenger traffic by land, air, water and sea). The main processes include deforestation and forest degradation, the drying and burning of peatlands, and the decline of carbon content in many cultivated soils and rangelands because of excessive disturbance and insufficient return of organic matter to the soil.
5. Deforestation alone contributes approximately 10% of all human-induced greenhouse gas emissions, and can further alter the climate through changes in surface reflectivity and the generation of dust particles.
6. In mountainous and high latitude regions, permafrost melt and glacier retreat will result in mass land movements such as landslides and surface subsidence (cave-ins, sinking) and higher greenhouse gas emissions. In forests, the likelihood of wildfires, pest and disease outbreaks increases in scenarios where droughts and hot spells are projected to be more frequent.
7. The impacts of climate change on land degradation include accelerated soil erosion on degraded lands as a result of more extreme weather events, increased risk of forest fires, and changes in the distribution of invasive species, pests and pathogens.
8. Strong 2-way interaction between climate change and land degradation mean the issues are best addressed in a coordinated way.
9. Some activities aimed at climate change mitigation can increase the risk of land degradation and biodiversity loss - e.g. expansion of bioenergy crops. Planting trees where they did not historically occur (afforestation), can have an impact similar to deforestation, including the reduction of biodiversity and disruption of water, energy and nutrient cycles.
10. Avoiding, reducing and reversing land degradation could provide more than a third of the most cost-effective greenhouse gas mitigation activities needed by 2030 to keep global warming under 2°C, increase food and water security, and contribute to the avoidance of conflict and migration.

## Human Health and Security

1. Four-fifths of the world's population now lives in areas where there is a threat to water security.
2. Every 5% loss of gross domestic product, itself partly caused by degradation, is associated with a 12% increase in the likelihood of violent conflict.
3. Transformation of natural ecosystems to human use can increase the risk of human diseases such as Ebola, monkey pox and Marburg virus, some of which have become global health risks by bringing people into more frequent contact with pathogens capable of transferring from wild to human hosts. Modifications in hydrological regimes affect the prevalence of pathogens and vents that spread disease
4. Land degradation generally increases the number of people exposed to hazardous air, water and land pollution, particularly in developing countries, with the worst-off countries recording rates of pollution-related loss of life higher than those in wealthy countries.
5. Land degradation generally harms psychological well-being by reducing benefits to mental balance, attention, inspiration and healing. It has particularly negative impacts on the mental health and spiritual well-being of indigenous peoples and local communities.
6. Land degradation, especially in coastal and riparian areas, increases the risk of storm damage, flooding and landslides, with high socio-economic and human costs.

## Remedial Options

1. National and international responses to land degradation are often focused on mitigating damage already caused. Policies are typically fragmented in nature, targeting specific, visible drivers of degradation within specific sectors of the economy, in isolation from other drivers.
2. Land degradation is rarely, if ever, the result of a single cause and can thus only be addressed through the simultaneous and coordinated use of diverse policy instruments and responses at the institutional, governance, community and individual levels.
3. Avoiding, reducing and reversing land degradation is essential for reaching the majority of the Sustainable Development Goals and would synergistically support nearly all of them.
4. Land managers, including indigenous peoples and local communities, have key roles to play in the design, implementation and evaluation of sustainable land management practices.
5. Proven approaches to halting and reversing land degradation include:
  - Urban planning, replanting with native species, green infrastructure development, remediation of contaminated and sealed soils (e.g. under asphalt), wastewater treatment and river channel restoration.
  - Better, more open-access information on the impacts of traded commodities.
  - Coordinated policy agendas that simultaneously encourage more sustainable consumption of land-based commodities.
  - Eliminating perverse incentives that promote degradation - subsidies that reward overproduction, for example - and devising positive incentives that reward the adoption of sustainable land management practices.

6. Examples of well-tested practices and techniques, both traditional and modern, to halt degradation of agricultural lands include:

- Rangelands:
  - Land capability and condition assessments and monitoring
  - Grazing pressure management
  - Pasture and forage crop improvement
  - Silvopastoral management
  - Weed and pest management
  - Rangelands with traditional grazing in many dryland regions have benefitted from maintaining appropriate fire regimes and the reinstatement or development of local livestock management practices and institutions. A variety of passive or active forest management and restoration techniques have successfully conserved biodiversity and avoided forest degradation while yielding multiple economic, social and environmental benefits.
- Combating land degradation resulting from invasive species involves the identification and monitoring of invasion pathways and the adoption of eradication and control measures (mechanical, cultural, biological and chemical).
- Responses to land degradation from mineral resource extraction include:
  - on-site management of mining wastes (soils and water)
  - reclamation of mine site topography
  - conservation and early replacement of topsoil
  - restoration and rehabilitation measures to recreate functioning grassland, forest, wetland and other ecosystems
- Effective responses to avoid, reduce and reverse wetland degradation include:
  - controlling point and diffuse pollution sources
  - adopting integrated land and water management strategies; and
  - restoring wetland hydrology, biodiversity, and ecosystem functions through passive and active restoration measures, such as constructed wetlands"

[See source of this information in the link above.](#)

**Focus Question #3: Resource Management Objectives (Sec. 5.3)**

**A. Does the listing of management objectives for land, surface water, groundwater, and wetlands provide a logical basis for local resource management and conservation efforts in Chippewa County.**

**Responses**

Yes.

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Land management – logical and adequate.

Surface water – while environmental degradation continues, accelerated efforts towards TMDL and water management goals should be pursued.

Groundwater management – More research on high capacity well demands/impacts should be pursued.

Wetland management – Net gain, as said in plan, is very important – buffering of wetlands is also crucial.

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When looking at Objective 5 in 5.31, it could include working with companies for a successful mine reclamation. If the company and county work together to successfully reclaim a mine, and both parties are willing to compromise, the likelihood of the mine being abandoned decreases. This takes the pressure from the county and allows them to focus their resources in other areas of higher concern.

While the idea of Objective 2 in 5.32 is exceptional, it could include what the nonpoint sources are. If they are unknown, then it should be included in the plan to find them, so there is a better idea of where the county's resources should be directed.

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It appears that Chippewa Co. has regressed in terms of advancement of many of the management objectives over time. The advancement of frac sand mining in bedrock locations, the processing and transport of the processed silica out of the county has not only delayed the chances of pollution control but contributed to the demise of hills, wetlands, farmlands, water, forests, wildlife, clean water and clean air. In addition, the giveaways of land to individual parties has significantly taken away time, money, and significant resources that can never be replaced. By allowing what has occurred in this country over the past 10 years, we have opened up land and water to invasive plants, and invasive insects in addition to polluting water supplies with heavy metals. While there may be a few gains (i.e. creating stormwater ponds that can contain the 100 year storm event) we are not even sure those are enough given the propensity of climate change events that are occurring as the county plans.

While it appears there have been some effective reclamation projects in the county with frac sand mines, we don't know the costs involved on these experimental plots nor do we know how effective they will be over the long haul nor what it took in terms of special treatment to make them work. Whether the companies can replicate the sample reclamation projects or even make them work again, will no doubt be tested in time.

**B. Are any of the management objectives that have been listed incomplete, inaccurate, unclear, or no longer relevant? If so, where and how could improvements be made?**

**Responses**

No.

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Under surface water management, efforts should be made to somehow control/further limit manure spreading in frozen ground conditions or before large runoff/precipitation/melting events.

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In Section 5.32, Objectives 3 & 4 and section 5.33, Objectives 2 & 3, the objectives seem incomplete. They only include objective statements and do not have a clear plan on how they will be achieved.

In Section 5.3, the objectives have a solid foundation but could include a baseline. If a baseline of the objective is unknown, then it could be included in the sections as part of the objective process. A solid baseline would be helpful to assist the county in prioritizing areas of concern.

It could benefit the county to have educating the public on each of the objectives. Educating the public would have to potential to help the county and make more people aware of problems facing Chippewa County. There is also a need for education on the town boards. When problems occur, the boards should be aware of issues occurring in all department, on the county level, to help them make more informed decisions on the town board level.

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1. Form a small committee of experts to take a look at the management objectives and start over in terms of direction. Many are general and or perhaps basic or obsolete. Begin where we are at now, project into the future and re-write the objectives by looking where we are deficient today and what this county will look like in 10 years and then project a focus on correction, updating, and putting some money and time into creating protective ordinances that will hold up over time and enforcing them to the greatest degree possible.
2. Re-assess the objectives in a couple of years to see how remediation has taken place. Educate the county board about what you are doing to set standards and ask for support from them to work with state legislators and the governor to bring back standards this state has had for years.
3. Continue research by monitoring land restoration projects, wetland development and replacement, studying drinking water supplies of those people specifically living around frac sand mines, enlist the help of volunteers to rid the county of invasive species, both on land and water as well as invasive insects. Ask other committees to look at their role in assisting the land conservation and forest management department to assist (for example, the highway department should not be cutting down invasive plants and spraying with weed killer which impacts the butterfly and bee populations but they could be enlisting the efforts of volunteers to use best practices with removal such as pulling and destroying the weeds/seeds etc. at appropriate times of the year.)
4. It is critical that the county offices and committees work hand in hand with each other collectively and that county and other volunteers be sought out for their help. Chippewa Co. can become a model for other counties.

C. **Is there any published data, law changes, or scientific information that is readily available that should be considered by the County to better define or update the resource management objectives? If so, what is this information and what is its source?**

**Responses**

Not that I'm aware of.

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Not that I am aware of.

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You may already have the resources but not the time to do this; with the addition of an agronomist, there may be extra time to set the standards. Ask people from the Watershed Institute at UW-EC and they may be able to supply some student support as well as faculty support to help achieve improved objectives. The issues with frac sand mining and corporate pressures affect everyone but by collectively working together we can overcome a great deal.

D. **Do you have any other comments that should be considered? If so, please provide.**

**Responses**

I thought Paul Laliberte's paper/presentation, the Chapter One Climate Post, and the Food, Land & Water: Can WI Find it's Way? were all just excellent sources of key information for us. All residents of the county ought to have the opportunity to read and discuss these issues and ideas. Great stuff to know!

I also thought tonight's discussion on land use, manure use, stream buffers concerning rural ag land was very informative to me. Agriculture has really changed as we have gone from cattle and livestock to crop farming! (I see it in my own life. I grew up on a dairy farm, then beef. I never saw a corn field or soybean field. Now the family farm is all crops – the fence rows are all gone – it's wide open. The only livestock are a few steers and 3 pigs. No pastures – no birds or butterflies – no small animals, less wetlands – it is all an eye opener.

Very interesting to lean about brownfields – mining as well as the sand and gravel business in Chippewa County – BIG BUSINESS.

And needs a WATCHFUL EYE. Because of the amount of forests and rivers and creeks in our County, as well as small lakes, we need to try to do things correctly for the future use of such resources. "Using out natural resources wisely" as Cal Kraemer would tell 5<sup>th</sup> graders at School Conservation Days.

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Outlined in Section 1 and B of this sheet.

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The objectives need to apply to current issues and the ways to correct past mistakes. Frac sand mining, processing and trans-load, CAFO development and expansion, advancing health issues and environmental issues that are developing as a result of climate change must be on the forefront as the objectives are revisited. Clean water, clean air, land to grow crops, natural wetlands to filter water, protected shorelines, hills to hold back water and other formations that are invaluable to our system.....should not be political issues. We need them for our existence!

**Focus Question #4: Program Goals & Objectives (Sec. 5.4)**

A. **Does the listing of major program goals and objectives provide a logical basis for local resource management and conservation efforts in Chippewa County?**

**Responses**

Yes

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Yes – you only have so much time and staff for a multitude of concerns.

\*\*\*\*\*

Yes. They are a logical basis for local resource management.

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Section 5.4 provides a local basis for local resource management and conservation efforts in Chippewa County.

\*\*\*\*\*

1. The listing is a good beginning and the objectives provide direction. They must be updated to reflect current issues of which there are many. Important is a timeline for attaining each objective. In some cases, maintenance of the attained objective might be needed or it will be lost. All are lofty, but time, energy and support from employees in addition to volunteers might make more of the attainable.

2. Exploration of solar energy must be included. I am not that aware of biomass as a sustainable clean energy tool. I would agree that pilot studies may provide more information. Digesters may be an alternative. Land use will require study for any of the options including solar, and homeowners should be encouraged to join solar groups or to individually install solar panels on their own properties using grants, subsidies etc. to attain some control over the large fossil fuel controversies that loom over our heads. Solid waste management is critical. However, with the changing markets, the non-acceptance of certain waste streams, objectives may need to change to deal with these issues on the horizon. It will be important to discourage the use of plastics at least of certain varieties at first and begin to phase out additional uses due to problems affiliated with their use.

3. Pilot projects, use of private, non-profit conservations organizations, and individual or small group organizations including state groups and other environmental groups must be encouraged and allowed to work on various objectives. Students at the nearby University should not be left out. Education is the key to change and many groups and individuals as well as school populations can assist with their cooperation and the county's direction. It is a matter of "wrapping our arms around" the issues faced and taking charge rather than letting the huge corporations lead the parade.

**B. Are any of the program goals or associated objectives that have been listed incomplete, inaccurate, unclear, unnecessary, or no longer relevant? If so, where and how could improvements be made?**

**Responses**

Not that I am aware of.

Education and awareness seems to be the biggest issues (awareness – then education. Perhaps that is the order).

\*\*\*\*\*

Goals are clear. Objectives are very aggressive – will the resources be there to accomplish them?

\*\*\*\*\*

All goals and objectives are complete, accurate, clear, necessary, and relevant.

\*\*\*\*\*

All goals and objectives listed are complete, relevant, and clear.

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I have made note of them above.

C. **Is there any published data, law changes, or scientific information that is readily available that should be considered by the County to better define or update the program goals and objectives? If so, what is this information and what is its source?**

**Responses**

Water will continue to be a large concern, with the Chippewa County Groundwater Quality Inventory, your department has a very strong leverage tool to use. Continue to push the envelope and continue the scientific monitoring.

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Water testing results – surface & groundwater

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Not that I am aware of.

\*\*\*\*\*

1. See attachments

2. The DNR and or the Wheeler Report should be able to keep you up to date on the latest legislation.

D. **Are there any planned actions that have been listed to pursue the program goals and objectives unnecessary, unattainable, or no longer relevant? If so, where and how should improvements be made?**

**Responses**

Again, your department is limited in staff and time – and sometimes some programs will be changed or put on hold as more critical issues emerge.

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Nonpoint agriculture – very important as farms using only corn/soybeans rotation.

Point source – many piles of manure on hobby farms (generally horse enterprises) really needs to be tacked. The eastern part of the county has several – almost 1 per mile.

\*\*\*\*\*

All planned actions are necessary, unattainable, and relevant.

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In section 5.43, Goal 3, Objective 1, the plan could include an action that guides the county to figure out a baseline in the county's hydrology. From that baseline, they can prioritize different areas in the county based on impairment.

\*\*\*\*\*

I question the pursuit of biomass although pilot studies might be warranted.

E. **Are there other actions that should be added to pursue any current or revised program goals and objectives? If so, where and how should improvements be made?**

**Responses**

I missed the opportunity last night to weigh in on Youth Education Programs – 5<sup>th</sup> Grade School Conservation Days as well as the Conservation Speaking and Poster Contests were great ways to get education to students, teachers, and parents. Providing trees for students to plant. School curriculums used to have an agriculture/WI farming component for 4<sup>th</sup> or 5<sup>th</sup> graders. That is a must in the classroom. Tours to farms or FFA activities of getting agriculture information to younger youth is very important. Could youth help in studying well water testing on their properties or at a lake, river or stream for hands on work? Pat Popple is right, Gary Bergstrom is right – we need to involve youth in action things that involve critical thinking and problem solving....those youths are our future. On a larger adult picture, would group meetings presentation's help with citizen awareness and education about our soil and water? I think most people want quality places to live and raise a family, and would want to help keep it that way.

Brainstorming for session issues:

“Water....who is watching my water quality?”

“Water....why are some lakes so green? Streams/rivers so brown?”

“Water....is my septic system a problem for my/our water/My community’s water?”

One last thought(s):

When I think about our great people and county, I was NOT (and still am NOT) in favor of a “reduced” county board membership! I believe we need everyone involved – all towns (townships) ought to be “seated” (and “educated”) at the county level! I think knowledgeable county board members can and would help educate citizens back at their town. They could learn of land and water concerns and connect more people “back home”.

Lake association MUST come (bring) together more and more lake residents to help manage their lake(s). Action teams/education teams/work teams – if we want to keep and improve our waters!

We only “rent” the lake and water/we don’t “own” it. We are “renting” it from future generations – we owe it to them and ourselves to take very good care of it.

\*\*\*\*\*

Job well done. Lots of effort – excellent job by the staff!

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I am unsure where an action dealing with manure would be placed, but it could benefit the county by being included in the plan. There seems to be a lot of conflict dealing with manure that could be resolved with the plan.

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1. After working on frac sand mining issues for the past 10 years or more, I am convinced that the bigger issue is really that of climate change and the continued promotion of the fossil fuel industry and that is where we need to focus on a higher level. We need to be engaged in training and educating people about the dangers being caused to our earth by corporate industries and at the same time convincing people about making personal changes to their own lives about what to expect as a living style. We can keep tinkering around the edges of specific problems in the County, but we are connected globally. Thus, it is critical that county residents know that if they want to get rid of the problem, the key is education and their involvement in fixing the associated problems.

State the problem(s) to the people. Ask for their help. Many will begin to take action even if it is slowly. Inform them. Keep them up-to-date. Advertise the activities you plan to present. Involve the citizenry. Ask them to share with others. Get small groups to partake in action activities. Those that work well will grow in citizen action.

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Cropping Practices – Cost sharing for reduced tillage, cover crops needs to be further implemented.

\*\*Buffer Initiative – a county buffer initiative should be pursued. Maybe harvest nutrients from the sites??

Planting in near wetlands/stream corridors/hydric soils – keep farming away from streams, wetlands, hydric soils. Low yields in those areas anyway. Provide incentives?

Manure spreading – Work to limit the spreading of manure in frozen ground conditions or prior to large runoff events.

County Forest – Designate areas of forest that are very remote. Keep them that way. Foot access only.

Bike trail – work to facilitate connection of bike trail between Eau Claire and Chippewa Falls along Hastings Way.