

Conclusions and Recommendations

This Draft Anishinaabeg Cumulative Impact Assessment has attempted to apply Anishinaabeg values as an analytical tool. This has required extensive explanation of Anishinaabeg Worldviews, Indigenous Science, and Traditional Ecological Knowledge. This attempt is an effort to level the negotiation table between the Anishinaabeg and the Enbridge Corporation. For too long, US Federal policies have value corporate rights over indigenous rights and abiding by treaties. This situation can never be rectified without the use of Indigenous Methodologies.

When US Federal and State agencies have the power to make development decisions that affect Indigenous populations, those populations need to be sufficiently involved in the decision making process. These same agencies also need to understand the full implications of their actions and use a framework for analysis that better includes indigenous values. Tribal governments are at the disadvantage in most project planning processes for a number of reasons. These governments must push for the utilization of international standards in planning processes. Tribal governments must also work to train their members (both government and tribal) on indigenous science and restoration activities.

As Anishinaabeg people, it is the responsibility of the Minnesota Chippewa Tribe and the affiliated and unaffiliated Bands to protect Anishinaabe Akiing. The prophesied time of the eighth fire is now, and it is time to chose between the scorched path and the new, green path. To move to this new path, the best in international standards, sustainable technology, and innovative financing must be utilized.

Anishinaabeg: Akiing; Traditional Cultural Properties

Indigenous worldviews (and the Anishinaabeg particularly) emphasize the importance of place to their people's health and identity. These worldviews also describe a reality where all elements of creation are interconnected, related, and important. Anishinaabeg are tasked with protecting their lands, their culture, and unborn generations. It has been shown that disruptions to land, place, or culture can have a harmful effect on Anishinaabeg health and wellness. This negative impact may persist for generations.¹

In 1987, Raine Eisler published a book dedicated to two major statements: 1) human society and history has not always been defined by strife and gender inequalities and 2)

¹ Walters et al. 2002: 166

human evolution and history is not linear. Eisler's reexamination of Western European evolution shares common threads with the works of Vine Deloria Jr. (1997) and Barbara Mann (2000). Deloria and Mann are both prolific Indigenous writers who work to counter the negative, false, and commonly held images of Indigenous peoples as savages. They re-explore the American mythos surrounding contact and the march of civilization on this continent. Mann and Deloria's works define the differences between Indigenous cultures and the colonizing Western cultures. The differences between the two cultures are reflected in Eisler's comparison of the early inhabitants of Western Europe and the more aggressive culture that came to dominate them. Eisler gives these two clashing cultures the monikers partnership and dominator. Eisler, a trained anthropologist reexamines historic records and describes how long before the rise of Greek culture, highly complex equitable societies existed in Western Europe. This is exactly contradictory to the mythos of Greece and Rome being the seats of culture and civilization. Eisler's work bears a startling resemblance to Mann's work on the pre-contact Haudenosaunee culture. Specifically, in the description of the textured and complex partnership political and social structures that existed before the law of the written word.

Eisler uses chaos and transformation theories to counter the linear view of history. She describes human history as consisting of a series of interlocking "s" curves. At the point of connection of the "s" curves, there exists a bifurcation point that affects the evolution of the system. In Eisler's view, the shift from partnership cultures to dominator cultures was a systematic regression. Eisler contends that our global system is at another bifurcation point, and we have the opportunity to grow in a partnership direction. Eisler's descriptions of the barbaric Kurgan invaders effects on the partnership cultures of ancient Europe reflect the history of the Anglo invasion of this continent. Eisler identifies three Kurgan waves that eventually transformed ancient European cultures from Goddess worshipping partnership cultures to God worshipping dominator cultures. The Haudenosaunee, and other Indigenous Turtle island cultures, have also undergone three waves of invasion in the form of 1) warfare, both mechanical and germicidal, 2) assimilation policies and 3) Western-centric histories. Mann, while not using the same terms as Eisler, also sees the possibility of a return to more harmonious times.

There has been legal precedences set in Minnesota regarding rights to off-reservation treaty resources. These rights need to be recognized for all treaty areas. Beyond just that, the regulatory jurisdiction over these areas needs to be acknowledged and claimed. Some of the specific instruments to strengthen this claim have been discussed in the Treaties and International Law section, and will be summarized in the following section. Rights and regulatory jurisdiction are only two aspects of the restoration of Traditional Cultural Properties. These rights must also be exercised. The application of these rights also needs to include a resurgence of Indigenous Science and Traditional Ecological Knowledge.

Finally, where and when necessary, there needs to be ecological restoration as well. The history of the Anishinaabeg people and Anishinaabe Akiing is a story of strength, resistance, and increasingly- renewal. A shared vision of a regenerative future and a plan to get there must be developed by those who belong to this land.

Treaties and International Law; Consultation vs Consent

While this document's main focus is the Enbridge Line 3 Expansion and Abandonment proposals, behaviours and processes that underlie this permitting process have historic roots and precedents. Even by the standard of "consultation" this process has been lacking. The term consultation, and the activities it implies are patronizing and robs indigenous peoples of true involvement. The permitting process for the ENB project has also seen a dramatic disenfranchisement for non-native people, including state employees. Never before has there been a time with such well documented global environmental and climate change occurring. The ability to respond and adapt to this new reality requires a re-evaluation of planning policies. As indigenous people have a covenant to protect creation and all worldly relations, their involvement in global (and local) planning processes must be ensured. This can only be accomplished by strengthening and global application of the UNDRIP standards, the use of FPIC, and a recognition of the rights of nature.

Numerous state agencies and politicians have submitted letters against this proposed project. They include the MPCA, the MN DNR, Minnesota Senators Steve Dribble, John Marty and Representatives Frank Hornstein and Jean Wagenius. The DOC's Tribal Liaison Official has resigned and the the Department's press release of September 2017 seems to indicate a general recognition of the fallacy of this project.

advocates. Internationally, since the 1970's there has been a growing acceptance of the fact that Indigenous Peoples need separate and additional protection. This recognition did not spring up from the minds of international government leaders, but rather from the persistent work by indigenous leaders. The road to true equality is still long, but it is a necessary journey. In recent years, there has also been a growing movement that recognizes the legal rights of nature. This is a legal tool designed to level the playing field and turn the concept of individual rights on its head. While it is important to push the US State and Federal governments to adopt and hold true to these international standards, it is unnecessary to wait. Tribal governments must work to adopt and enact UNDRIP and the Rights of Nature in their own decision making processes. Even if the tenants of these standards are inherent in Tribal governments, they must be codified in Tribal law and regulations.

Methodology; Traditional Ecological Knowledge for Regulators

Often times, policies of Euro-western governments are based in reductionist science and ignore the connections between parts. There has been a shifting away from reductionist science and a gravitation to ecological science methods. These methods more closely resemble indigenous science methodologies, but still contain one major difference. In indigenous science, there is a strong element of morality and responsibility- to community and creation. In western ecological science, “objectivity” is still seen as the pinnacle of scientific understanding. This can often result in euro-western scientists not taking a stand, *even when their research clearly indicates a need*. In indigenous science, the deep spiritual connection between people and their environment defines the choices they make. Through the permitting process for the Sandpiper and Line 3 projects, former and current state agencies employees have spoken out about these projects. Numerous concerns have been brought up by both the Minnesota Pollution Control Agency and the Minnesota Department of Natural Resources. Former employees of the MN DNR have been some of the best allies in the fight against this project. However, they are still constrained in their ability to completely object to the project on moral grounds, *because there is no room for morality in western science*.

Euro-western regulators may never truly understand manitou, but morality and ethics has always been part of Euro-western cultures- even when they have been misapplied. Ethics in science is a growing issue, and some STEM colleges and universities have started to include ethical training as part of their coursework. Tribal education programs must also include a study of ethics and morality, not just of indigenous ethics and morality, but also of Euro-western ethics and morality. The only way to incorporate mino bimaadiziwin into US State and Federal policies is by having Tribal people speak both “languages”. If it left up to Euro-western regulators to translate indigenous values into policy, the resulting policies and regulations will always be insufficient.

Overview of Projects; Infrastructure for profit or people?

Enbridge and other large oil companies have been permitted to develop expansive networks of pipelines and refineries across the country in the last 50-60 years with minimal regulations. Five decades is the average lifespan of most of that infrastructure, after this time period the integrity levels drastically decrease. The “need” for this most recent round of pipeline projects. Not that demand has gone up, but that infrastructure has decayed and markets have shifted. Domestically urban areas continue being the largest consumers of fossil fuels; Metropolitan areas are making shifts to sustainable development one example is bigger commitments to public transportation. Often these vehicles do not rely on fossil fuels. Why should we invest in an infrastructure our grandchildren will not

need? Long story short, if Enbridge was run by intelligent, thoughtful people, we would be discussing the expansion of a regional public transportation network.

Enbridge's main stated needs for the XL3 and L3A projects is that the existing Line 3 is corroded to a state of uselessness and that they do not want the expense of replacing it in place. Starting an entirely new corridor also shifts more land into their control and begins the shifting of liability of the existing corridor away from Enbridge. In the process, they also get a larger diameter pipe and delays their transition from the tar sands for a few more years. As stated above, scientific evidence points to the fact that the planet is at the precipice of drastic change. This impending change requires a restructuring of the systems that support humanity- infrastructure, food, and policies. Across the US, minority and low-income communities routinely suffer from subpar infrastructure. From Flint, Michigan to Pine Ridge, South Dakota communities lack adequate clean water access, face fuel poverty, and suffer from limited transportation and job opportunities. The XL3 and L3A projects cross and impact many of these minority/low-income communities. The infrastructure they require is not a crude oil pipeline that is part and parcel of a global export economy, but rather renewable energy grids, water and sewage, and other elements of a restoration economy.

In nature, ecosystems go through cycles. Basically, these cycles include growth, epoch, decay, and regeneration. After 500 years of decay, it is time for regeneration. As discussed above, this regeneration must include changes in policies, a resurgence of Indigenous Science and Traditional Ecological Knowledge, and ecological restoration. This regeneration also requires a restructuring of the built environment. For too long, Turtle Island has been scarred by development that serves industry and the war machine. Interstate highways, the electrical grid, petroleum infrastructure, and massive mining projects were designed to move troops, electrify industries, fuel military equipment, and extract wealth. Benefits to local communities has always been an afterthought, or a post-justification of greed. Public transportation; local, renewable energy grids; and recycling centers are some of the elements of regenerative infrastructure. These elements are designed to serve communities and increase well-being- not monetary wealth. The technology to develop these projects exist, and often can be developed without massive investments. The key is coming together as communities to develop a vision for the future, and with experts, design the steps to get to that future. A regional Anishinaabeg development plan would be a groundbreaking undertaking, and one that could shift the region to the green path.

Cumulative Impacts

Just as the Enbridge pipeline projects cannot be taken out of context, Tribal response to the projects is part of a larger story. Since 2014/2015, there has been a growing international unified indigenous resistance to extreme extraction. At the same time, there has been a

growing global call to limiting greenhouse gas emissions. Resistance and regulation are necessary actions, but must also be coupled with restoration. The planet needs to be healed, as well as humanity's relationship to creation. Indigenous peoples are the holders of the knowledge of how to live in balance with nature, and must be at the forefront of this healing.

Land Impacts

This document has shown through oral histories, reviews of scientific studies, and the use of GIS data that there has been a significant loss of traditional cultural properties since the signing of treaties. Despite this loss, there is much that has been retained. Most significantly, the concentration of high-quality lakes, rivers, and streams in the heart of the 1855 treaty area. This area contains a high number of manoomin waterbodies, historic manoomin camps, and is crisscrossed by historic trade and migration routes. This area represents an important repository of traditional cultural properties, the loss of which would deeply impact the indigenous people of the region.

Honor the Earth strongly advocates that existing Line 3 needs to be removed from service, and no new pipeline built. The abandonment of the existing Line 3 must be done in a way that strengthens Tribal sovereignty, rather than diminishing it. The Bands/MCT have the power to regulate abandoned pipelines. In particular, they have the authority to develop regulations that govern what actions a pipeline company takes to minimize risks posed by old pipelines, particularly when they cross reservation lands. Since Line 3 is the first major crude oil pipeline to be abandoned in the state, it is critical that this regulatory authority is used now. Included in as an appendix is the full text of a proposed abandonment regulations. Below are issues that should be considered in the drafting of these regulations:

- ***The Bands' and MCT policy and regulatory framework needs to be responsive to the evolving statutory context and the likelihood of additional large decommissioning and abandonment applications in the future. Band control over abandonment processes must be clarified to prevent future lawsuits.***
- Enbridge should be required to make additional filings and studies before commencing decommissioning activities. These include Tribally approved detailed Final Abandonment Plan and a Minimally-Invasive Procedure Evaluation Report. Elements of an abandonment plan should include:
 1. Education about the full range of mitigation options available, including removal, plugging, and filling abandoned pipe;
 2. A survey for contamination and remediation plan
- Due to the uncertainty regarding the long-term impacts of decommissioning the Existing Line 3 Pipeline in-place, Enbridge needs to develop a plan to completely

remove the existing line, remediate any and all contamination and restore the corridor to its pre-installation condition.

- It is important that a robust monitoring plan be in place to ensure that remedial actions and adaptive management measures will be taken if required. Tribal members should be trained in monitoring and be at any future digs or other maintenance activities.
- Enbridge should also be required to fund a training program for Tribal members to undertake remedial actions or adaptive management measures that are required after the Existing Line 3 Pipeline has been decommissioned
- If there is a current restriction (other operating pipelines) on Enbridge's ability to complete removal of aboveground facilities at shared facility sites. Enbridge should disclose abandonment plans for the remaining active lines. The Bands and MCT should assess and approve these remaining activities before they are carried out. This should be accomplished by way of a future abandonment applications, not merely through the approval of a plan.
- The Bands/MCT should require Enbridge to report every five years on the status of the corridor. This information will help the Bands/MCT regularly assess the ongoing status of the corridor, including the continued restoration process.
- Any and all decommissioning/abandonment/remediation/restoration activities should be undertaken by contractors approved by the Bands/MCT or by Tribal members.
- Requirement for development of a fund to cover the costs of future abandonment of pipelines on reservation, trust, and treaty areas. Common law liability must be established, any future nuisance or hazardous incidents resulting from the abandoned line should be resolved by Enbridge, not to the landowners or tribal members.

The remediation and restoration activities that would need to be undertaken to fully restore the existing corridor has the potential to jump-start the regenerative economy for the region. Training of Tribal members in these technologies and processes should start now, *regardless of the outcome of this pipeline issue*. The reality is, however this process is resolved there is existing contamination throughout Anishinaabeg Akiing. As with the adoption and enactment of UNDRIP/RoN, waiting for State and Federal agencies to address this contamination is futile. Cataloging and prioritizing sites can be part and parcel of the other recommended educational programs. The process of identifying sites can be used to train tribal citizen scientists and develop a community database.

Abandonment regulations are not the only place to strengthen regulatory authority. Any existing US State or Federal permitting process should have a matching Tribal process. This includes (but is not limited to): construction permits, including building codes and stormwater permits;

water withdrawal permits; national pollution discharge elimination permits; clean water permitting processes; tribal public utilities; etc. All regulations and limits should be based on indigenous science, and should be pursued regardless of current acknowledgement by US State and Federal agencies. This is proactive step that will strengthen Tribal positions in the next battle.

Tribes should also develop other policies and programs to proactively address land degradation, legacy contamination, and climate change. These policies and programs can include:

- Carbon credits- developing incentive programs for soil building and other natural carbon sequestration activities
- Tribal response and restoration corps- First responder training programs for Tribal members, including firefighting, HAZWOPER, and emergency containment practices. This program could also include training on remediation and restoration practices.
- Regional indigenous assessment for endangered species and habitats. This would help to inform regional restoration plans
- Tribal wetland protection and mitigation policies. Bands should explore these policies with or without Treatment as a State from the USEPA
- Creation of High Consequence Areas/Unusually Sensitive Areas delineation practices and identification
- The development of Indigenous Citizen Scientists (ICS). This program would train Tribal members on the principles of citizen science, indigenous science, and environmental monitoring. These ICSs could contribute to regional air and water monitoring.

In addition to these programs, there should be additional ACIAs developed. Potential topics include:

- The Pineland Sands conversion/RDO expansion
- Mining expansion/the industrial powergrid
- Other industrial activities that impact Anishinaabeg Akiing

Health Impacts

The indirect and cumulative effect of this loss, in addition to direct impact of pipeline construction, operation and potential release, would have a significant and adverse economic, social, medicinal and religious impact on the Band members, other tribal communities and low-income communities.

The scope of oil projects, combined with large scale mining projects will cause significant additional stress on these already under duress communities. The pipeline corridor as it is

proposed, it will run through major manoomin beds and would make the Tribal communities of Minnesota “victims of progress”.

Tribal communities Rice Lake and East Lake are under stresses of socio-economic conditions creating conditions of higher health risks. This is placing significant additional stress on these communities, which will only increase these health inequities and cause additional harm. The Tribal community members testified at the Bands’ pipeline hearing that this pipeline will cause them additional harm through environmental degradation and potential spills. This feeling will increase stress which causes Tribal members additional health issues, psychological and physical. The pipeline is opposed in the tribal community, communities that value the way of life, and the cultural and spiritual connections to the manoomin beds.

Just as an harm on the land harm an indigenous community, the act of restoring the land can have a restorative impact on indigenous communities. The act of healing and caring for the land can also heal communities. The processes a community must go through to heal the land - awareness, education, action - can also signal to the manadoo that the people have awoken from their slumber. Even in non-indigenous communities, research has shown that gardening activities can create a positive health outcome. Remediation activities will also physically remove toxins from the land, water, and air, reducing or eliminating exposure risks. The existing health status of Anishinaabeg people- the diet related diseases, the high rates of suicide and drug use - are not signs of a healthy community. For a people whose identity is intimately tied to their relationship with the land, the loss of that intimacy can leave people without an identity, or a sense of self/community. This loss can never be addressed through programs developed for non-indigenous people. It can only be healed through a healing of the land and one’s relationship with the land.

Economic Impacts

While this Anishinaabeg Cumulative Impact Assessment does not necessarily purport to complete a full needs assessment, the cost/benefit analysis requires a full cost accounting analysis of this project and the required infrastructure, raw materials, waste materials and diseconomies which would result if the Enbridge Line 3, and attendant and expected infrastructure proposals are actualized.

Among the weakness of the state prepared reviews of these is projects, is the temporal nature of the review. This reviews tend to look at only the immediate impact of the project, and do not look at how the impacts will play out over the lifetime of the projects. This reviews also do not include a review of how long these impacts may remain, or increase. In Anishinaabemaadiziwin, the impacts of these projects on future generations can not be ignored.

In full-cost accounting, the negative impacts an activity has on the environment and society is included in cost/benefit analysis. The oil industry has repeatedly claimed to be a major economic driver, but internationally, the industry receives \$775 billion to \$1 trillion in subsidies annually.² Fossil fuels are also a finite resource and are getting harder and harder to extract. The extraction (and refining) processes has numerous impacts on local and global communities that are not adequately addressed in conventional economic analysis.

Carbon Costs

The most widely recognized cost of the oil industry is carbon costs. This is usually factored as “social cost of carbon”. This is the estimated cost of carbon emission in a given year. There are a variety of numbers used by various federal and international agencies to calculate this cost. This document utilizes a cost of \$210/ton.³ There is another cost of carbon that is not captured in the social cost calculation. This is the cost of removing that carbon from the atmosphere. As the global atmospheric carbon concentrations exceed “safe” levels, actions to reduce these concentrations must also be undertaken. This cost is currently trending at \$1,000.00/metric ton⁴. To reach the carbon measurements for the XL3 project, the capacity of the line is converted to carbon production. This results in a cost of over \$211 billion, annually.

Ecosystem costs

Atmospheric carbon production is not the only negative externality of the oil industry. The extraction, refining, transportation, and combustion all have landscape level impacts. Through the destruction of boreal forests and wetlands through tar sands mining and pipeline corridor creation, humanity is losing valuable ecosystem services. These services can vary and include such benefits as water filtration, flood protection, food source, carbon storage, and recreational benefits. There is also the spiritual value of land and functioning ecosystems, but it is inappropriate to put a monetary value on this aspect. To put a number on these impacts, a process known as “ecosystem services valuation” is used. This process looks at the various services a particular ecosystem provides and attempts to place a number on those services. While there is debate about the methods of valuation, it is still recognized as a useful tool for understanding environmental impacts.

² <http://priceofoil.org/fossil-fuel-subsidies/>

³ <https://www.greenbiz.com/article/governments-social-cost-carbon-could-be-increased>

⁴ House, K. Z.; Baclig, A. C.; Ranjan, M.; A, v. N. E.; Wilcox, J.; Herzog, H. J. Economic and Energetic Analysis of Capturing CO₂ from Ambient Air. Proc. Natl. Acad. Sci. 2011, 108(51), 20428–20433

The Canadian Boreal Forest, the ecosystem where tar sands are mined, is one of the best Carbon storages on the planet. To estimate the amount of boreal forests destroyed, we used the amount of tailings (mining waste) created per barrel extracted. These tailings are stored in pits for at least 40 years while they settle and compact. The volume of these tailings are converted to area represent the annual area of boreal forest lost from tar sands extraction.

The sources of the value of the lost ecosystem services come from Earth Economics report: **“The Value of Nature’s Benefits in the St. Louis River Watershed”** and the Pembina Institute's **“Counting Canada’s Natural Capital”** report.

To get the size of boreal forest ecosystem destroyed, total land lost to tailing ponds was calculated (as these are the most long-lasting impacts). Each barrel of oil creates approximately 16.9 barrels of tailings. These tailings are stored in pits for at least 40 years while they settle and compact. The volume of these tailings, converted to area represent the annual area of boreal forest lost from tar sands extraction. This is multiplied by the proposed volume in the pipelines, and converted it to hectares. The acreage of wetlands destroyed by the construction of the new corridor was estimated by placing a 1-mile buffer around the pipeline route. The total cost of the loss of ecosystem services for these pipelines is over **\$595 million, annually**. This method is a simplistic approach that generalizes impacts. To better reflect the impact on the boreal forest, more refined calculations of land impacts per barrel need to be created. Construction impacts can also be better estimated by more sensitive impact mapping.

An Incomplete Total

Taken together, these costs total over \$397 billion annually. These costs do not reflect the health impacts of increasing toxic exposure/burdens, or the costs of remediating contaminated land, water, and air. This annual cost also compounds over time as each years’ emissions add to the cumulative impacts. These calculations also do not adequately reflect the cost of continued investment in fossil fuels.

Opportunities forgone

Growing public objection to bomb trains, terminals and pipelines in general, shows that people are demanding a transition from fossil fuels. In their PUC submissions, Enbridge repeatedly declares the vast need for the pipeline due to rising production rates and the petroleum consuming public’s need for more oil, only production trends have been decreasing. As for the petroleum consuming public? What they really need is strong government leadership in the areas of public transportation, fuel efficiency, and investments in renewable energy infrastructure. To permit the development of this fossil fuel energy corridor would **achieve short-term goals to the disadvantage of long-term**

goals. Most products from the refinery will not be consumed by reservation communities. Highest user of gasoline is urban areas.

In reality, there are numerous ways to replace the petrochemicals currently in use. Vehicles can be made more efficient, mass transportation systems can be improved, plant-based plastics are already being developed. The use of pharmaceuticals could be decreased by proper nutrition, exercise, and community health programs. Recent studies have shown that the investment in these types of projects result in economic benefits that far outweigh the economic benefits resulting from the oil industry. Enbridge’s intense interest in expanding fossil fuel oil pipeline infrastructure will result in short term profits for the company, and long term liability and stranded assets for its’ investors.

Many of the assumptions of need for the XL3 are based on a projected need for continued consumption of fossil fuels. With the growing international consensus, on climate change, the need is rapidly shifting away from fossil fuels. The continued reliance on fossil fuels enabled by fossil fuel projects further delays in shifting away from dirty fossil fuels to more clean and sustainable energy systems.

Element of Anishinaabeg World View	Analytical Principle or Metric	Finding
Decisions for the 7th generation	Lifecycle and intergenerational analysis	The XL3 and L3A projects do not serve the needs of future generations
Historic Trauma	Existing stressors and current health conditions.	Continued degradation of Traditional Cultural Properties perpetuates historic trauma and will result in continued erosion of health and wellbeing
Use of Indigenous Science and Traditional Ecological Knowledge	Ecological assessment	The ecological wealth of the ROI could be permanently impacted by the XL3 project
Importance of the Manitous and the Intangible	Protection of sacred lands	There is no guarantee that Enbridge, the State of Minnesota or the US Army Corps of Engineers will protect Anshinaabeg Akiing. History has shown a great guarantee of destruction.

Intergenerational equity	Service-Acre-Years SAY, not Discounted Service-Acre-Years DSAY. The convention is to discount at 2 or 3% per year, making impacts beyond 30 years essentially worthless.	Continued investment in fossil fuels places an undue burden on future generations
Inseparability, reciprocity, and responsibility between humans and the rest of creation	Well to Wheel impact. Cumulative impact analysis, ripple effects, at least additive (as long as double counting is avoided). Ecosystem services, including the environmental, social, economic, and other costs. Life-cycle analysis (cradle to grave) impacts, including post-operational impacts of reclamation, contamination, and restoration. Current conditions in the existing pipeline corridor are used as the model for what the new corridor will look like over time.	The XL3 has significant impacts to upstream and downstream communities. Regardless of the potential impact on Anishinaabeg Akiing, these principles require opposition to this project. By extension, all tar sands projects and infrastructure needs to be opposed.
Healing landscapes. Place is part of Anishinaabe ancestral heritage, present, and future.	Landscape ecology, systems-level integration. Quantification of landscape impacts and health impacts from landscape disruption.	The XL3 project does not follow the principles of good land stewardship
Village, doodems, and other social structures	Health and quality of life given importance over nutrition and chemical-caused risk to individuals. Identifies cultural keystone species. Used to justify a multiplier of SAY impact.	Regardless of the risk of spills and leaks, the XL3 project represents an erosion of the wealth of the Anishinaabeg. This loss of wealth directly impacts quality of life. Existing health and well-being is at subpar levels. Development should support the improvement of health and well-being.
Historic gardening and landscape management practices	Access to land vital for food production and harvesting	US State and Federal regulatory policies limit Anishinaabeg Bands from practicing traditional land management practices. This limitation also

		reduces access to traditional cultural properties.
Spatial economics (those economies that are tied to use of land for the provision of food, medicine, and other goods) are tied to political boundaries	Limits to land access created by political boundaries negatively impact economic activity	The dichotomy between private/public land limits access to traditional cultural properties. The absence of co-management practices future limits this access.
Anishinaabe Mino Bizamoanin	Quality of life more important than product production	The State of Minnesota and the US Federal Government only measure economic impact through conventional jobs and concepts of “markets”. Traditional economies are more informal and emphasize contributions to community and social cohesion.
Cyclic nature of Anishinaabeg Economics	Limits to growth	Capitalistic economies do not recognize limits to growth. Even with the clear indicators of the death of fossil fuels the oil industry refuses to adapt.
Historic Theft	Remaining resources have increased in value in the contemporary baseline	Traditional cultural properties are increasingly rare and must be protected from further impacts
Value of Manoomin	Indigenous economics and natural capital impacts, cultural keystone species, ecological keystone species of particular ecological value, economic keystone species.	The XL3 project clearly presents a risk to manoomin. It must not be permitted. Additionally, the L3A project limits the ability to restore lost manoomin beds.
Use of wild plants for medicine	Edge effects- impact large game and forbs used as medicines.	The XL3 project will contribute to the fragmentation of the landscape and reduce core forest and increase the edge effect.
<i>Manido Nibi, anji bimaadisiyan</i>	Condition of waterbodies: pollution burden, morphology, and ability to flow freely	The construction of the XL3 could seriously endanger aquatic ecosystems and the water on which they depend.

Embodiment	Indigenous health includes healthy people in a healthy environment	This project would decrease the health of the environment, and as a result negatively impact the Anshinaabeg
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Recommendations; lighting the eighth fire

This time of change is an opportunity for Tribal governments and indigenous peoples. As evidenced by the global response to Standing Rock, people around the world are looking for a new path. As holders of a sacred covenant with creation, it is the responsibility of indigenous people to trailblaze this path. Indigenous people suffer unduly from the development of the infrastructure of industrialization; and without groundings in indigenous science and traditional ecological knowledge, no new infrastructure developments will ever be truly sustainable. The development of sustainable infrastructure will benefit both indigenous and non-indigenous people. An investment in ecological infrastructure will strengthen the economy and communities by creating jobs, new industries and protect future generations well being.

To grasp this opportunity, the Minnesota Chippewa Tribes, the affiliated and non-affiliated Bands should develop review and permitting processes for reservation and treaty/trust areas; invest and promote ecological infrastructure; support and promote citizen scientist initiatives; and strengthen collaboration between Bands and other Native Nations. Enbridge should also be required to establish a fund to fully restore their existing corridor.

This fund should be developed after a complete investigation into the human health impacts of the pipeline based on environmental justice issues, and disproportional burden to at risk communities. This project represents the potential build-out of a new generation of dirty energy corridors, it also represents the potential abandonment of a generation of old dirty energy corridors. This is a slap in the face of Native Communities that have serious existing infrastructure needs.

There are two aspects to this: restoring traditional economies and innovative financing. While it is impossible to completely return to the economic reality of pre-colonization, it is possible to develop economic systems that are framed by Gichi-Debwewin. These systems include activities that: improve the health and wellbeing of Anishinaabeg people and Anishinaabe Akiing; strengthen Anishinaabe Enawendiwin, and Anishiaabee Izhichigewin; and share the understanding and application of these concepts with the non-indigenous people that also inhabit Anishinaabe Akiing.

It is through this sharing with non-indigenous communities that innovative financing can be achieved. There is a movement to develop innovative funding structures for community

projects. Traditionally, most community projects have been funded through grants, or more recently, public-private partnerships. Examples of these would be community block grants or corporate sponsorship of non-profits. Increasingly, communities are looking for ways to leverage local resources to fund projects. One mechanism utilized to accomplish this goal is community-based financial institutions. These institutions include community foundations, community/economic development corporations, and micro funding organizations. These institutions can provide low-interest loans or other investments in community projects. Local governments also have several innovative funding mechanisms available to them to achieve social goals. Improvement districts and PACE financing districts can be set up to promote adoption of renewable energy systems through tax breaks. A community can sell bonds to various projects. These bonds would guarantee investors a modest interest rate, but could not be cashed out for a set period of years. They could be sized such that many local people can afford to purchase a piece. This model may require new regulations to be developed however the result is a financial system that is not a hand-out but a sustainable financial structure. Systems can also be funded through crowd-funding sites such as kickstarter or go fund me. Communities can also develop renewal zones and provide tax incentives for infrastructure improvements.

There are also a number of business structures that be used to for companies that want to undertake development projects. The purpose of establishing a corporate or other business structure is to control liability and pool resources. Typical incorporated businesses have profit as their primary driving force. More and more, alternative business/organizational structures have been developed for businesses seeking to utilize triple-bottom line reporting.

In typical business structures, the financial bottom line is the primary way the success of the business is evaluated. In triple-bottom-line reporting, businesses evaluate their success based on financial, environmental, and social impacts. There are many different indicators that businesses can use to evaluate their triple bottom line. Some municipalities have developed their own “green business” certifications and there are also national and international standards.

Business philosophies

Social Enterprises

A social enterprise is not necessarily a business model, so much as a business philosophy. The aim of a social enterprise is to achieve social goals through unique funding structures. Typically, social goals are addressed through the formation of a non-profit. While these structures are useful for tax-purposes, they are limited by how they can raise funds for their budgets. There are many different forms of social enterprises, but typically consist of a for-profit corporation that donates profits to a separate non-profit. Utilizing a LLC or Co-op structure is a potential way to combine both organizations under one structure.

B-Corporation

B-Corporation is a third party certifying and incubating organization for triple bottom line businesses. Information about the criteria can be found on the following [website](#).

Legal designations

Limited Liability Corporation (LLC)

LLCs differ from other forms of incorporation in how revenue and liability is distributed between the owners. In a typical corporation, revenue and assets are owned by the corporation, while in a LLC, revenue and assets are owned by the owners of the LLC. LLCs do not have to be organized for profit.

Non-profit

A non-profit (501(c)3) is an organization formed primarily to address social issues. A 501(c)3 is a legal, tax exempt status that allows activities undertaken by a non-profit to not be taxed. The registration of a 501(c)3 limits the fund raising and income-generating activities a non-profit can undertake. As a result, non-profits must rely on donations and grants to achieve their budgeting requirements. This results in a “non-profit treadmill” where more and more time of the staff is consumed by seeking funders rather than actually filling the organization's mission.

Cooperative

A cooperative (co-op) is a flexible business/organizational structure that seeks to pool resources to achieve a purpose. The co-op structure in America stems from rural electrification projects. Co-ops are funded by members and non-member users. In a co-op structure, profit goes back to the members. Typical examples are rural electric co-ops, grocery co-ops, and agricultural co-ops. Increasingly, the co-op structure is also being used for biomass/biofuels projects.

There are four basic Co-op models:

- Consumer Co-ops; where members benefit from combined buying power
- Producer or Marketing Co-ops; where members benefit through shared resources
- Worker Co-ops; where workers own their business
- Housing co-ops; where members share living spaces or community spaces

Co-ops are guided by seven principles (known as the Rochdale Principles):

1. Open, voluntary membership.
2. Democratic governance.
3. Limited return on [equity](#).
4. Surplus belongs to members.
5. Education of members and public in cooperative principles.
6. Cooperation between cooperatives.

7. Concern for community

There are many different organizations around the country that help interested parties in forming co-ops.

Sustainable design and planning has progressed to a level that is feasible for industrial practices to have a positive impact on environmental quality. The reason why these design practices are not more widely utilized is because there are not regulations that require industries to implement them. Often industries balk at the added expense of conducting their business in a positive ecological manner. Nationally and internationally, there is a growing movement to monetize ecosystem services, to better understand the economic benefit of environmental conservation and restoration. Traditional Indigenous Management techniques can increase the value of ecosystem services, and managers should be compensated for their regenerative activities.

In closing, the time of the eighth fire is now. The Enbridge Line 3 Replacement Project must be understood as an opportunity to strengthen sovereignty, and be treated as such. Working together, several large pipeline projects have already been delayed, or canceled. It is not enough to be reactive to each bad proposal that comes up. A proactive plan for addressing and eliminating bad projects needs to be developed and implemented, *jointly*.