



SALTED LANDS COUNCIL



Salted Lands Council endorses “REINVEST IN NORTH DAKOTA” ----

Is a North Dakota Private-Public Partnership to Stimulate Economic Development, using Nature-Based Solutions to Improve Land, Well Being of its People, and Stabilize its Future?

Introduction

ND has a \$7.5 billion fund (Legacy Fund) and many landowners, including the Salt Contaminated Land and Water Council (SCLWC) have called for the State to use this fund to attract out of state investors to invest in the future of ND.

North Dakota’s Economic transformation from oil and gas to the restoration economy, with remediation/restoration/reclamation of salt impacted lands, should inspire the nation and the world.

In the 1970s North Dakota, led by Republican Senate Majority Leader Robert Stroup and Democrat Governor Art Link, united the State, and their determination to reclaim strip-mined lands to 100% of pre-mined productivity, inspired the nation. The Federal Surface Mining Control and Reclamation Act of 1977 became the law of the land.

After 70 years North Dakotans expect the Dead Lands created by the oil industry will be as faithfully restored to maximum productivity as were strip-mined lands. Now is the time. Never in the centuries of industrial utilization of natural resources has soil science been more competent. Applied Ecological Services, Inc. (AES) leads the nation in aerial assessment and welcomes aboard ND’s expertise in drone and ground-level electro-conductivity assessment.

The EERC has engaged Kerry Sublette, Bert Fisher, and Ken Carlson in characterizing the poisoned Water and Soils of Bottineau County. The standard of care in this proposal will observe pre-reclamation assessment protocols of each site as well as post reclamation monitoring with corrective responses when reclamation fails, most frequently because of climate events or untimely resumption of grazing or cropping.

Not only AES, but the entire community of ecological service providers have innovative approaches to remove subsurface brines.

The oil-producing states of the nation will watch and cheer the increased success, as occurred with strip-mined land reclamation’s steady cost reductions. A transformation of the carbon industry can restore respect for the oil industry within our nation’s youth.

AES staff has been closely involved at other locations in the US whereby public/private partnerships have resulted in the transformation of a century-long mining economy to vibrant and diversified economies based on restoration and conservation (e.g., Upper Clark Fork River in the Butte, MT area).

SCLWC Coordinator, Fintan Dooley has had his feet on the ground in problematic oil industry poisoned sites in ND, MT, WY, OK, and LA on and offshore. His study of the restoration of mined lands has taken him to Nigeria and Kazakhstan.

We believe ND could use our insights and the same strategies AES used to accelerate the conversion of brownfields to future productivity.

The SCLWC engaged AES to sort adversely impacted land into four categories, severely, moderately, slightly, or not impacted.

AES has begun to develop a predictive technology to preliminarily identify and sort salt impacted lands in Bottineau County.

What if a private-public investment program could fund an array of approaches all of which observe the same high standard of care in pre-reclamation assessment protocols of each site and post reclamation monitoring?

1. **Reclaim salt damaged land from oil production,**
2. **Restore productive use of hundreds of thousands of acres of croplands and pastures damaged by oil- process brine solution,**
3. **Stimulate new nature-based and other innovative economic development opportunities** where banks increasingly devalue corrupted land that has been essentially long dead, where faltering oil and natural gas revenues challenge the viability of small towns, townships, counties, state coffers, and frustrate private landowner's and public trust officer management operations.

We propose an innovative strategy by leveraging private and public funds to accomplish the first two outcomes directly and for this joint investment, and additional public funding to address thirds of the objectives.

Over-Arching Goal

ND is an exceptional place with fantastic people, history, natural resources that draw in significant revenues from tourism, hunting, drawn to several national parks, and cultural and historic places. The investments in these durable draws have been overshadowed by those made in oil and natural gas over the last thirty years.

Now, however, a major new Teddy Roosevelt National Library renewed and burgeoning interest in ND as a national example and hot-bed of regenerative agriculture and ranching, a location on earth with some of the best remaining native prairie grasslands and associated increasingly rare wildlife, and a burgeoning interest in wildlife viewing, canoeing on the Missouri River (and others), and the renaissance in Native American culture motivate many from around the world coming to these sacred places just as did La Verendrye, Lewis and Clark, Sublette, Audubon Prince Maximilian, and Theodore Roosevelt. Now then more than ever, ND's leadership can inspire wise stewards of the world to visit North Dakota.

REINVEST IN ND starts with the goal of creating an innovative and durable future. This starts with repairing and revitalizing the land, the people, and natural resources, and in return – the actual returns – young families will be drawn to innovative economic developments, replenished land productivity and health, and land values that return to pre-damaged condition values once restoration and reclamation occur.

Program Outline:

1. **Private Investor delivers \$1 billion commitment** to the State of ND and State and private investors work together to address resources restoration opportunities detailed above.
2. **State of ND puts up a \$1 billion commitment** to the private-public partnership to work together to address resources restoration opportunities detailed above.
3. The state established standards for the Assessment of Historic Brine Spill Sites and post-reclamation monitoring.
4. **Private Public Investor Team puts in place reclamation team** to map and sort salt damaged lands, laterally and vertically electro conductivity, describe soil test at depth, and employ site appropriate ground-truthing.
5. AES has begun to develop multi-temporal, multi-spectral satellite imagery. Its accuracy may be as high as ~89% accurate in the detection of industrial salt impacted lands. It has often confused the oil industry brine with natural salt on the surface of continuously cropped lands. Ground truthing has not yet been undertaken in what The SCLWC called the Bottineau County's Big Four Townships.
6. A final step will be the use of hyperspectral imagery to discern sodium chloride brine impacts caused by oil process water spills from the unique chemistry of naturally occurring alkali seeps, dominated by other salt ions like sodium sulfate.
7. The team will be comprised of national and ND experts in science, finance, construction, agronomy, and land reclamation/restoration.

8. Private Investor Team oversees budget planning, the State's role is to assure science, planning, and construction oversight of all restoration, reclamation.
9. Private Investor Team with independent third-party validates results, will certify that the Standard of Care of all engaged observe pre-reclamation assessment protocols of each site as well as post-reclamation monitoring with corrective responses when reclamation fails, most frequently because of climate events or untimely resumption of grazing or cropping.
10. Not only AES and the SCLWC but the entire communities of the ag industry will be benefited by steady employment in the construction, restoration, reclamation, and monitoring results of the clean-up effort.
11. State of ND puts up an additional \$1-2 billion commitment to simultaneously stimulate innovation, nature-based tourism, new economic development around ND to transition from oil economy to new economy predicated on nature-based tourism, alternative energy, historical and cultural interpretation, and land conservation. The State of ND alerts the world to the good news of how the Williston Basin and the Bakken have begun the transition from 70 years of unresolved brine spills to this new economy.

Deal Framing:

1. Investment + returns are repaid/generated through state-backed bond (or other investment vehicles) purchases, and tax revenues generated by targeted geographic programs and more general statewide investments. Investment vehicles (e.g. reinvest in ND bond returns could provide non-taxable ND, long-tailed returns for both the state and private investors).
2. Investment + returns are repaid/generated from targeted State investments in a) "**Medora, ND, Theodore Roosevelt National Park and National Library**" revenue generation, b) "**Return the Prairie**" A program of expanded Land conservation, restoration, and protection with regenerative farmers and grazers in ND where bird-watching and others ways to develop an expanded program of ecotourism can occur, c) "**Hunt the Prairie**" program benefiting from the expanded Land conservation, restoration, and protection with regenerative farmers and grazers in ND.
3. Investment + returns are repaid/generated by replicating this program in other states such as OK, TX, SD, NE, (etc.) where the same salt impacted lands and economy revitalization, and faltering land condition exists. If the private-public partnership model works in ND, and if it can be replicated and deployed in other states, this ND proposed private-public partnership is proposed for consideration to be replicated in the other states to generate some percentage of the revenue back to this private-public partnership.

Fintan L. Dooley, Salt Contaminated Land and Water Council, Inc. October 27, 2020
findooley@gmail.com

Steven I. Apfelbaum, Applied Ecological Services, Inc. October 26, 2020
steve@appliedeco.com