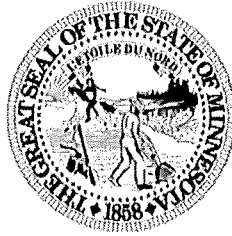


**STATE OF MINNESOTA**  
Executive Department

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President of the Senate

**Governor Tim Walz**

**NOTICE OF APPOINTMENT**

**Seth Moore**

Because of the special trust and confidence I have in your integrity, judgment, and ability, I have appointed you to the office of:

**Citizen Member**

**Legislative-Citizen Commission on Minnesota Resources**

Effective: March 7, 2022

Expires: December 31, 2025

This appointment carries with it all rights, powers, duties, and emoluments granted by law and pertaining to this position until this appointment is superseded or annulled by me or other lawful authority or by any law of this State.

Signed and sealed February 28, 2022.



Handwritten signature of Tim Walz in black ink.

Tim Walz  
Governor

Handwritten signature of Steve Simon in black ink.

Steve Simon  
Secretary of State

Replacing: Della Young

Filed February 28, 2022  
Office of the Minnesota  
Secretary of State  
Steve Simon

# Seth A. Moore

Director of Biology and Environment  
Grand Portage Band of Lake Superior Chippewa  
27 Store Rd. Grand Portage, MN  
55605

Day Phone: 218-475-2022

Cell: 218-370-9310

Email: samoore@boreal.org

## EDUCATION and FORMAL TRAINING:

*PhD.*

2008. University of Minnesota  
Minneapolis, MN US  
Major: Water Resources Science  
Minor: Statistics

*Master of Science.*

1998. University of Minnesota Duluth  
Major: Environmental Biology  
Minor: Computational mathematics

*Bachelor of Science.*

1994. Northland College  
Dual major: Biology and Environmental Studies  
Minor: Chemistry

## DESIRED WORK ENVIRONMENT:

Academia; Executive leadership; Experienced Professional

## INTERNET SEARCH TERMS:

Dr. Seth Moore, Grand Portage, Moose, Climate Change

## CURRENT POSITIONS

1: **2010 - present.** Director of Biology and Environment, Grand Portage Band of Lake Superior Chippewa.

2: **2013 – present.** Adjunct Faculty, Integrated Biological Sciences, University of Minnesota-Duluth.

3: **2016- Present.** Adjunct Faculty, College of Veterinary Medicine, University of Minnesota - St. Paul.

4: **2012-present.** Instructor, Climate Change Adaptation Training, Institute for Tribal Environmental Professionals, Northern Arizona University.

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**SELECTED NATIONAL OUTREACH AND MEDIA COVERAGE:** President of the Senate  
Grand Portage Ecosystem Research You Tube Channel  
[https://www.youtube.com/watch?v=opFWankQXOQ&list=PLnC4yTjRBxQeDnfIW1Oxd2BIHnBKc4\\_bY](https://www.youtube.com/watch?v=opFWankQXOQ&list=PLnC4yTjRBxQeDnfIW1Oxd2BIHnBKc4_bY)

*PBS Nature, one hour documentary:*

<http://www.pbs.org/wnet/nature/moose-life-of-a-twig-eater-brain-parasite-turns-moose-into-zombies/13781/>

*New York Times Video:*

<http://www.nytimes.com/video/us/100000002727083/death-of-a-moose.html>

*NBC Nightly News Video: Where have all the moose gone?*

<https://www.nbcnews.com/nightly-news/video/where-have-all-the-moose-gone-46366787783?v=railb&>

*NBC Nightly News Video: Losing moose is like losing Christmas*

<https://www.nbcnews.com/nightly-news/video/losing-moose-is-like-losing-christmas-46326851873?v=railb&>

*NBC Nightly News Video: Tracking moose is no easy task.*

<https://www.nbcnews.com/nightly-news/video/tracking-moose-not-an-easy-task-46327875809?v=railb&>

## **SELECTED REGIONAL AND LOCAL MEDIA COVERAGE**

*WTIP Biweekly radio program :* <http://www.wtip.org/content/dr-seth-moore-grand-portage-wildlife-biologist>

*Minnesota Public Radio:* <http://www.mprnews.org/story/2016/06/02/minnesota-moose-population-endangered-species-protection>

*Minnesota Public Radio:* <https://www.mprnews.org/story/2016/03/11/moose-collaring>

## **CURRENT RESEARCH INITIATIVES**

### Wildlife

- Investigations of the effects of climate change on moose Grand Portage Indian Reservation (with T. Wolf, College of Veterinary Medicine, University of Minnesota).
- Maternal and neonate cortisol levels are predictors of survival in calf survival (with T. Wolf, College of Veterinary Medicine, and D. Janz, University of Saskatchewan)
- Neonate health and adult health effects on moose calf survival (with T. Wolf, College of Veterinary Medicine, University of Minnesota),

- Population status of gray wolves in Grand Portage Indian Reservation
- Effects of deer intrusion into moose habitat (with J. Forester and T. Wolf, University of Minnesota)
- Understanding the zoonotic risk of echinococcosis for a northern Minnesota tribal community. (with T. Wolf, S. Sokolik, D. Travis, College of Veterinary Medicine, University of Minnesota).

Fish

- Chemicals and pharmaceuticals of emerging concern in subsistence fish, waters, and sediments in the 1854 Ceded Territory (with UMN: T.Wolf, M.Convertino, D. Travis, N. Phelps, A. Primus, Minnesota Pollution Control: M. Ferrey, U.S. Environmental Protection Agency: M. Jankowski.
- Methylmercury levels in fillets of wild caught fish used for subsistence (with P. McCann, Minnesota Department of Health).
- Sustainability of cisco (*Coregonus artedii*) stocks in Grand Portage Zone of Lake Superior (with D. Yule, U.S. Geological Survey)

Climate Change

- Cross disciplinary climate change adaptation planning for the Grand Portage Indian Reservation
- Loss of brook trout thermal habitat with increased lake temperatures on Grand Portage Indian Reservation.

Educational

- Development of a University/Tribal Environmental Research Institute (with UMN: D.Travis, L. Minicucci, T.Wolf, and M. Means)

**GRANT MANAGEMENT 2005-PRESENT**

**Principal Investigator**

- **\$8.2M in total grants managed as principle investigator 2005-2016**
- **> \$12M in grants secured under my leadership 2005-2018**
- **Grants by year as principal (granting agencies):**  
 2018 \$684,000 (USFWS, USEPA)  
 2017 \$750,000 (USEPA)  
 2016 – \$400,000 (Legislative Citizen Commission for Minnesota Resources)  
 2015 - \$822,800 (USEPA)  
 2013 - \$915,280 (USEPA)  
 2012 - \$200,000 (USEPA/USBIA)  
 2011 - \$1,551,866 (USEPA, USDA)  
 2010 - \$240,400 (USEPA, USBIA)  
 2009 - \$219,999 (USFWS, USBIA)  
 2008 - \$214,999 (USFWS, USBIA)  
 2007 - \$269,000 (USFWS, USBIA)

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2006 - \$141,000 (USFWS)

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**COMPETITIVE RESEARCH GRANTS (Total \$2,168,993)**

1. **2018.** Wolf, T.M. **Moore, S.A.**, Escobar, L. Forester, J. Fountain-Jones, N. **\$400,000.** Next Step in Helping Minnesota's Moose: Understand Brainworm Transmission to Find Solutions. Legislative Citizen Commission for Minnesota Resources.
2. **2018.** **Moore, S.A.**, Wolf, T.M. **\$199,197.** Mooz (moose) habitat overlap with white tail deer: understanding the spatial and temporal risks of parasite transmission in a multi-species boreal system. U.S. Fish and Wildlife Service Tribal Wildlife Grants Program.
3. **2017.** Wolf TM and **Moore S.A.** **\$7,800.** Assessing Moose Calf Survival to Recruitment in Association with Maternal Health and Predator Management. Indianapolis Zoo Conservation Grants Program
4. **2016.** **Moore, S.A.**, Wolf, T.M., Primus, A., Travis, D., Ferrey, M, Jankowski, M., Convertino, M., Phelps, N. **\$400,000** Emerging Chemicals and Pharmaceuticals in Subsistence Species used by the Grand Portage Band of Chippewa. Legislative Citizen Commission for Minnesota Resources.
5. **2016.** **Moore, S.A.**, and D.L. Yule. **\$195,000.** Determining whether the roe fishery for cisco in the Grand Portage Zone of Lake Superior represents compensatory or additive mortality through a comparative approach between exploited and unexploited populations. EPA Great Lakes Tribal Initiative: Fishery Management.
6. **2016.** Isaac, E.J., **S.A. Moore**, and Y. Chenaux-Ibrahim. **\$285,000.** Native species restoration (moose, wolf, deer) and emerging contaminants of concern projects. BIA Great Lakes Restoration Initiative.
7. **2016.** Wolf TM, Sokolik S, Travis DA, **Moore S.**, **\$3000.** Understanding the zoonotic risk of echinococcosis for a northern Minnesota tribal community. Institute on the Environment Mini Grant, University of Minnesota.
8. **2015.** Travis DA, Phelps N, **Moore S**, Wolf T, Robinson S, Craft M, Wünschmann A. **\$20,000** Building a One Health Research Collaboration between UMN and Grand Portage Indian Reservation. Population Systems Signature Program Grant Award, College of Veterinary Medicine, University of Minnesota.
9. **2015.** Isaac, E.J., Y. Chenaux-Ibrahim, and **S.A. Moore.** **\$149,000.** Native species restoration (moose, wolf, deer) and air-mercury projects. BIA Great Lakes Restoration Initiative.
10. **2015.** Isaac, E.J., and **S.A. Moore.** **\$148,000.** Moose health, population dynamics and interactions with whitetail deer. BIA Endangered Species program.
11. **2015.** Isaac, E.J. and **S.A. Moore.** **\$105,000.** Lake Superior lakewide action and management plan (LAMP). U.S. EPA Great Lakes National Program Office Grant
12. **2015.** Wolf TM and **Moore, S.A.** **\$3,500.** Determination of cause-specific calf mortality in moose, Alces alces. U.S. Seal Fund.
13. **2014.** Able, C., **Moore, S.**, Isaac, E., Mensch, G, Wilson, T. **\$1,152,000.** Co-management of Lake Superior resources. BIA Tribal Management Lake Superior Co-management.

14. **2014.** Wolf TM and **Moore, S.A. \$3,500.** Determination of cause-specific calf mortality in moose, *Alces alces*. U.S. Seal Fund, 2014.
15. **2013.** Wolf TM and **Moore, S.A. \$3,500.** Determination of cause-specific calf mortality in moose, *Alces alces*. U.S. Seal Fund.
16. **2009.** **Moore, S.A** and Edwards, A. J. 2009. Moose climate change. **\$199,999** USFWS Tribal Wildlife Grant W-3-04-018.
17. **2008.** **Moore, S.A.,** Edwards, A.J., and Aarhus-Ward, A. **\$199,999.** Using pack size, territory size, and interstitial area of gray wolf --Ma'iingan--to estimate wolf density and determine predator/prey relationships with moose -- Mooz -- and white-tailed deer --Wawashkeshshi. USFWS Tribal Wildlife Grant W3 06-012.
18. **2007.** **Moore, S. A.,** Edwards, A.E. **\$249,999.** Continued Assessment and Rehabilitation of Native, At-Risk, Species in the Waters of Lake Superior and Adjoining Tributaries in and around the Area of Grand Portage, Minnesota including the Pigeon River and Bay. USFWS Tribal Wildlife Grant W-3-03-017.
19. **2006.** **Moore, S.A** and Edwards, A. J. **\$199,999.** Use of telemetry gear to delineate critical habitat for juvenile and sub-adult lake sturgeon--Ogimaa giigonh -- in the lower St. Louis and Pigeon rivers and associated nearshore areas on a seasonal basis. USFWS Tribal Wildlife Grant W-3-04-018.
20. **2006.** **Moore, S.A.,** and Moen. R.A. **\$141,000.** Identification of suitable habitat for Canada lynx -- Bizhiw -- in the Grand Portage area and northeastern Minnesota within 1854 Ceded Territories. USFWS Tribal Landowner's Incentive Grant L3-05-013.
21. **2005.** **Moore, S.A. \$178,000.** Wetland and Wild Rice Restoration on Grand Portage Tribal Lands, Grand Portage, Minnesota. Tribal Landowners Incentive Grant L-3-03-016.

**DETAILED WORK EXPERIENCE:**

DIRECTOR OF BIOLOGY AND ENVIRONMENT, GRAND PORTAGE RESERVATION  
TRIBAL COUNCIL 11/2005 - Present

**Administrative Duties Include:**

- Grant writing and grant management of numerous federal grants and federal work plans (USEPA, USFWS, USDA USBIA) totaling nearly \$1 million annually
- Supervision of nine full time professionals (plus seasonal employees, interns, and mentor students)
- Serving as direct liaison with federal, state, and non-governmental natural resource agencies
- Program creation and development
- Negotiating and drafting reimbursable contracts and memoranda of agreement with partnering agencies (and ensuring accountability of all parties)
- Managing numerous budgets to meet federal standards
- Setting priorities to accomplish department goals
- Determining science needs for resource management issues
- Report writing to meet federal requirements
- Collaboration with federal, state, and academic institutions
- All duties required for successful operation of a Tribal Natural Resources Department

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FISH AND WILDLIFE BIOLOGIST 2005-2010, GRAND PORTAGE RESERVATION  
TRIBAL COUNCIL

**Administrative**

- Grant writing and grant management of numerous federal grants and federal work plans (USEPA, USFWS, USDA USBIA)
- Supervision of two full time fish and wildlife technicians (plus seasonal employees, interns, and mentor students)
- Serving as direct liaison with federal, state, and non-governmental natural resource agencies
- Negotiating and drafting reimbursable contracts and memoranda of agreement with partnering agencies (and ensuring accountability of all parties)
- Managing numerous budgets to meet federal standards
- Setting priorities to accomplish natural resource goals
- Determining science needs for resource management issues
- Report writing to meet federal requirements
- Collaboration with federal, state, and academic institutions
- Equipment procurement and maintenance: Acquisitions, Vessel purchases and upgrades, supervise repair activities

**Tribal Natural Resources Department Fisheries and Wildlife Management**

- Assessment and monitoring of fish and wildlife populations
- Management recommendations and season setting
- Collecting and analyzing harvest data
- Cold water fish hatchery management
- Reporting to fulfill treaty obligations
- Reporting to executive leadership
- Monitoring and managing fisheries and wildlife populations of harvested and unharvested species: Moose, Deer, Bear, wolves, other furbearers, lake trout, walleye, brook trout, lake sturgeon, lake cisco, conducted nuisance animal damage control
- Management recommendations such as season length and harvest setting, harvest reporting to fulfill treaty obligations.

**Fish Hatchery Management**

- Designed and built cold water fish hatchery
- Operated and maintained hatchery for cold water fish production

**Wild Rice Monitoring**

- Develop management strategy, conduct planting per management plans, on-water monitoring, aerial flight surveys

**U. S. GEOLOGICAL SURVEY, GREAT LAKES SCIENCE CENTER, ASHLAND  
BIOLOGICAL STATION 6/2002 - 11/2005 Ashland, WI US**

**Fishery Biologist GS-0482-9/11, 048**

- Conducted research to determine critical lake habitat for coaster brook trout.
- Conducted research to identify nearshore fish community structure and relationships with habitats at large and small spatial scales.
- Generated hypotheses, determined experimental design, applied statistical analyses, and researched published literature.

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- Assumed co-principal investigator status (and cemented funding through substantial revision of original proposal) for >\$120,000 funded interagency agreement F6310010002 titled: Inventory of near shore fish population densities and community structures at Apostle Islands National Lakeshore and Isle Royale National Park.
- Collaborated with agency and university scientists to design sampling framework for monitoring nearshore fish communities.
- Served as researcher for coaster brook trout habitat research at Isle Royale National Park. Studied nearshore fish communities and habitat relationships in the Apostle islands and Isle Royale National Park units.
- Assisted the Field Station Supervisor in meeting research goals and reporting elements of contracted studies for the National Park Service. Collaborated with the Field Station Supervisor and outside partners to develop updated study plans and required agency reports.
- Ensured scientific validity of experimental designs associated with monitoring projects.
- Planned and executed extended field data collection trips in remote locations.
- Applied modern principles of fishery biology, aquatic ecology, community biology, and statistical analysis to fish assemblage and habitat data from Lake Superior.
- Monitored population dynamics of fish stocks in Chequamegon Bay, and Apostle Islands region of Lake Superior.
- Used data to determine community organization and structure, assess the status of fish stocks, and to test hypotheses in community ecology.
- Performed studies and reported on fish population dynamics, including annual measures of relative abundance and distributions of coaster brook trout, and analysis of stock structure to derive age- and size-specific attributes.
- Provided statistical and analytical support for nearshore and brook trout projects.
- Used data to assess the ecological status and developed models to determine the population status of fish species within a biological community context.
- Collected data from large vessels and performed duties aboard research vessel on extended cruises.
- Worked collaboratively with staff and scientists to ensure rigorous and integrated collection of quantitative data.
- Entered and analyzed habitat and fish data, prepared for and conducted fieldwork, collaborated with USFWS/NPS to discuss scheduling/work plans for funded studies, determined sampling protocol for nearshore fish community and habitat data collection, completed data collection design for funded projects, aided as needed in preparation for technical committee meetings and scientific conferences, wrote pre-proposals for funding to conduct research. (Supervisor Name: Jason Stockwell, Supervisor's Phone: 207.228.1658)

**NATURAL RESOURCES RESEARCH INSTITUTE, UNIVERSITY OF MINNESOTA,**  
6/1996 - 7/2005 Duluth, MN US

**Research Assistant**

- Conducted research to understand critical habitat and landscape features that described presence and growth rates of Coaster Brook trout.
- Designed, planned, approved, and implemented field studies to assess populations and evaluate habitat for Lake Superior fishes; executed and supervised field work;



collected data, analyzed results, generated reports, recorded data, maintained written records, and published scientific documents.

- Evaluated and reported fish populations including determining distribution, abundance, and habitat use.
- Used SAS, SYSTAT, CANOCO, SPLUS, EXCEL, ACCESS, ORACLE, POWERPOINT software packages for: statistical analysis (SAS, SYSTAT, CANOCO, SPLUS), database management (ACCESS, ORACLE), data entry, spreadsheet applications (EXCEL), and graphical presentations.
- Mapped aquatic habitats using GIS, used GIS software (ARC INFO/ ARC VIEW) for data analyses and mapping of fish distribution, quantified available aquatic habitat (e.g., depth, substrate, and velocity) and determined habitat use by stream and lake fishes within a GIS framework.
- Wrote programs to statistically summarize and analyze data (using SAS, Splus); prepared talks and presentations of scientific data, and gave guest lectures.
- Maintained highly effective working relationships with project personnel, trained less experienced personnel in performing field and computer related tasks, functioned as the leader of a research field crew, supervised seasonal scientific technicians, and promoted a diverse work environment.

Other duties included: set up, configured, and operated computerized temperature data loggers, operated global positioning system units to map fish habitats, mesocosm construction for studies on ruffe/perch interactions, trawling for Ruffe in St. Louis River, data collection for numerous limnological studies, passive integrated transponder (PIT) tag insertion and scanning in river ruffe, helicopter surveys and gillnetting in arctic lakes to sample the fish community, maintenance and repair of sampling gear and related equipment, water filtration and use of lab equipment such as Mettler balances, muffle furnace, microscopes etc. (Supervisor's Name: Carl Richards, Supervisor's Phone: 218-529-5010)

### **PROFESSIONAL PUBLICATIONS**

An electronic dossier of successfully completed projects, publications, letters written for leadership, and the products of media contacts (magazine and newspaper articles etc.) will be provided upon request.

### **PEER-REVIEWED PUBLICATIONS**

#### 2016

In Review. Wolf, T.M., **S.A. Moore**, E.J. Isaac, Y.M. Chenaux-Ibrahim. Assessing neonate health and causes of calf mortality in a declining population of North American moose (*Alces alces americanus*). *Journal of Wildlife Diseases*.

2016. Street, Garrett M., John Fieberg, Arthur R. Rodgers, Michelle Carstensen, Ron Moen, **Seth A. Moore**, Steve K. Windels, and James D. Forester. "Habitat functional response mitigates reduced foraging opportunity: implications for animal fitness and space use." *Landscape Ecology*: 1-15.

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2016. Miller, Loren, Schreiner D., Blankenheim, J., Ward, M., Quinlan, H., **Moore, S.** Effects of restrictive harvest regulations on rehabilitation of coaster brook trout in Minnesota's portion of Lake Superior. Journal of Great Lakes Research

2015

2015. **Moore, S.A.**, E.J. Isaac, and A. Moore. Climate Change vulnerability assessment and adaptation strategies for the Grand Portage Band of Lake Superior Chippewa. 90 pg.

2015. Verma, S., Carstensen, M., Calero-Bernal, R., **Moore, S.**, Jiang, T., Su, C., Dubey, J.P. Seroprevalence, isolation, first genetic characterization of *Toxoplasma gondii*, and possible congenital transmission in wild moose from Minnesota, USA. Parasitology Research. 115:687-690.

2014 and prior

2013. Daniel L. Yule, **Seth A. Moore**, Mark P. Ebener, Randall M. Claramunt, Thomas C. Pratt and Lorrie L. Salawater. Morphometric variation among spawning cisco aggregations in the Upper Great Lakes: are historic forms still present? Advances in Limnology Volume 64, p. 119 - 132

2008. Gorman, O. T., **Moore, S. A.**, Carlson, A.J., Quinlan, H.R. Nearshore habitat associations of brook trout and other fishes of Isle Royale, Lake Superior. Transactions of the American Fisheries Society. 137:1252–1267.

2008. **Moore, S. A.**, Predicting coaster brook trout distribution based on landscapes, habitats, fish communities, and life history traits. Dissertation. University of Minnesota. pp.143.

2007. Bronte, C. R. and **Moore, S. A.** Morphological Variation of Siscowet Lake Trout in Lake Superior. Transactions of the American Fisheries Society 136:509–517.

2006. Stockwell, J.D., Yule, D. L., Gorman, O. T., Isaac, E. J., and **Moore, S. A.** Evaluation of bottom trawls as compared to acoustics to assess adult lake herring (*Coregonus artedii*) abundance in Lake Superior. Journal of Great Lakes Research 32(2).

2001. **Moore, S. A.** and C. R. Bronte. Delineation of Sympatric Lake Trout Morphotypes in Lake Superior Based on Whole-Body Morphometrics. Transactions of the American Fisheries Society. 130:6:1233-1240.

1998. **Moore, S. A.** Morphological Variation in Lake Superior Lake Trout Based on Whole-Body Morphometrics. Thesis, University of Minnesota, Duluth.

WHITE PAPERS

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2008. Green, P., Cochrane, T., Krumenaker, B., **Moore, S.A.** Northrup, J. Viral Hemorrhagic Septicemia Prevention and Response Plan. National Park System Units and the Grand Portage Indian Reservation within the Lake Superior Basin. pp.141.

2006. Wiland, L. **Moore, S.** Hewitt, L. The Coaster Challenge: Restoring a Native Brook Trout Fishery to Lake Superior. Trout Unlimited special publication. Trout Unlimited National Office  
1300 N. 17th Street, Suite 500, Arlington, VA 22209. pp.71.  
<http://www.tu.org/atf/cf/%7B0D18ECB7-7347-445B-A38E-65B282BBBD8A%7D/CoasterChallenge1.pdf>

#### TECHNICAL REPORTS

- numerous quarterly, semiannual, and annual technical reports covering the diversity of projects and grants described above.

#### TEACHING /LECTURE EXPERIENCE

Instructor, Climate Change Adaptation Training, Institute for Tribal Environmental Professionals, Northern Arizona University. 2012-present

Guest lecturer for various ecology and natural resource management courses (UMN)

#### GRADUATE STUDENT ADVISING

##### Update

1. 2018 Joe Serviado. PhD student. University of Minnesota, School of Public Health.
2. 2017. Sokolik Sarah, J. DVM/MPH. Understanding the zoonotic risk of echinococcosis for a northern Minnesota tribal community.
3. 2017. Jessica Deere. PhD student. University of Minnesota, College of Veterinary Medicine. Impact of contaminants of emerging concern on the health of wild fish exposed to variable levels of anthropogenic pressures.
4. 2017. Alex Ritz, M.S. Student Lakehead University, Thunder Bay, ON (advisor: Brian McClaren). Use of drones and thermal imagery for estimating moose populations.
5. 2016: Angela Les, M.S. Student, University of Minnesota (advisor: James Forester) Individual-based models of moose movement.
6. 2015. Yvette Chenaux-Ibrahim, M.S. Student, University of Minnesota Duluth (co-advisor with R. Moen). "Seasonal Diet Composition of Gray Wolves (*Canis lupus*) in Northeastern Minnesota Determined by Scat Analysis.
7. 2015. Hunt A. DVM/MPH University of Minnesota/College of Veterinary Medicine. Assessment of environmental contaminants in subsistence species & the associated ecosystem of Grand Portage Indian Reservation.
8. 2014. Juliann Terry, M.S. Student, University of Minnesota Duluth (co-advisor R. Moen). "The Habitat of Winter Ticks (*Dermacentor albipictus*) In The Moose (*Alces alces*) Range of Northeast Minnesota.

#### PRESENTATIONS AT PROFESSIONAL MEETINGS:

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INVITED PRESENTATIONS

2018. **Moore S.A.**, Wolf T.M., Ferrey, M., Jankowski, M. Convertino, M., Phelps, N., Primus, A., Travis, D. Chemicals of emerging concern in waters, sediments, and subsistence fish used by the Grand Portage Band of Chippewa. International Association of Great Lakes Research, State of Lake Superior Conference. Houghton, MI. October.

2018. **Moore, S.A.**, Wolf, T.M. Moose Health Research in a Minnesota Tribal Community. Indianapolis Zoo. Grand Portage State Park, Grand Portage, MN. September.

2018. **Moore, S.A.**, Wolf, T.M. Moose Health Research in a Minnesota Tribal Community. Indianapolis Zoo. Chikwauk Museum, Grand Marais, MN. September.

2018. **Moore, S.A.**, Wolf, T.M., Parasitic zoonoses in pets, subsistence species, and wildlife in Grand Portage, MN. Grand Portage Food Sovereignty Program, Grand Portage, MN. September.

2018. Wolf, T.M., **Moore, S.A.** What might our pets be sharing with us? Grand Portage Food Sovereignty Program, Grand Portage, MN. August.

2018. **Moore S.A.**, Wolf T.M., Ferrey, M., Jankowski, M. Convertino, M., Phelps, N., Primus, A., Travis, D. Chemicals of emerging concern in waters, sediments, and subsistence fish used by the Grand Portage Band of Chippewa. Bureau of Indian Affairs Partners in Action. Milwaukee, WI. July.

2018. **Moore, S.A.**, Wolf, T.M. Moose Health Research in a Minnesota Tribal Community. Indianapolis Zoo. Indianapolis, IN. June.

2018. **Moore S.A.**, Wolf T.M., Ferrey, M., Jankowski, M. Convertino, M., Phelps, N., Primus, A., Travis, D. Chemicals of emerging concern in waters, sediments, and subsistence fish used by the Grand Portage Band of Chippewa. Lake Superior Workgroup. Tofte, MN. June.

2018. **Moore, S.A.** Tribal Success: Great Lakes Tribal Initiative. Regional Tribal Operations Committee, USEPA, Pokagon, MI. April.

2018. **Moore, S.A.**, Isaac, E. Addressing Climate Change in Grand Portage, MN, Minnesota Tribal Environmental Committee. Duluth, MN. April.

2018: Cook, V. **Moore, S.A.**, Watkins, M., Isaac, E., Chenaux-Ibrahim, Y. Grand Portage Environmental and Biology Program Tribal Environmental Program Management Conference, USEPA, Region 5. Chicago. March.

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2018: **Moore, S.A.**, Chenaux-Ibrahim, Y., Wolf, T. Sokolik, S. Wolf Territory Size and Impact on Prey in Grand Portage. Northwestern Trappers Association. February.

2017: Matt Bootsma, Dan Yule, E.J. Isaac, **Seth Moore**, Eric Berglund, Fritz Fischer. Ensuring a sustainable cisco fishery in Grand Portage waters. Lake Superior Technical Committee, Grand Marais, MN. July 26, 2017.

2017: **Moore, Seth**, and Mark Ferrey, Mark Jankowski, Tiffany Wolf, Dominic Travis, Mateo Convertino, Nicholas Phelps. Chemicals of emerging concern in waters, sediments, and subsistence fish used by the Grand Portage Band. Native American Fish and Wildlife Society. September 2017.

2017: **Moore, Seth**. How the Great Lakes Restoration Initiative is advancing the principles of self-governance. Self-Governance Conference, Spokane, WA. 04/24/17

2017: **Seth Moore**, E.J. Isaac, Tiffany Wolf. Effects of climate change on subsistence species of the Grand Portage Indian Reservation, a case study in climate change science. Macalester College, Enviro Thursday. 04/24/17

2017: **Seth Moore**, E.J. Isaac, Tiffany Wolf . A case study in successful collaboration between Grand Portage and University of Minnesota. Invited seminar, University of Minnesota, St. Paul, 04/25/17

2017: **Seth Moore**, E.J. Isaac, Tiffany Wolf. Effects of climate change on subsistence species of the Grand Portage Indian Reservation, a case study in climate change science. Presentation at Boston Scientific, Arden Hills, MN – April 26, 2017

2017: March for Science, Grand Marais, MN: Gave speech on Great Lakes

2017: **Moore, S.A.** How the Great Lakes Restoration Initiative is advancing the principles of self-governance. Self-Governance Conference, Spokane Washington, 04/27/17.

2016: **Moore, S.A.**, Pratt, T. Yule, D., and Knight R. Making a case for Quantitative Fish Community Objectives. Council of Lake Committees, Erie, PA. October.

2016. **Moore, S.A.** Advancing Self Governance in the EPA. Regional Tribal Operations Committee, Webinar. Michigan. October.

2016. **Moore, S.A.**, Wolf T.M., Ferrey M., Jankowski M., Phelps N., Convertino M., Travis D. Webinar. Chemicals of Emerging Concern in Subsistence Species of fish on the Grand Portage Indian Reservation. National Tribal Science Council. September.

2016. **Moore, S.A.**, Wolf, T. M., Isaac, E.J. Climate impacts on moose populations on the Grand Portage Indian Reservation. Green Team, Goodwin House. Washington. D.C. September

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2016. **Moore, S.A.**, Isaac, E.J. Webinar. Climate Change adaptation planning in Grand Portage, MN. Institute for Tribal Environmental Professionals Climate Change workshop. Nebraska. September.

2016. Wolf T, **Moore S.**, Isaac EJ, Ibrahim Y, Armién A, Wunschmann A. Causes of mortality among collared moose in northeastern Minnesota from 2010-2015. International meeting of the Wildlife Disease Association, Cortland, NY, August.

2016. Isaac, E.J. and **S.A. Moore**. Climate Change Adaptation Strategies on the Grand Portage Indian Reservation and within the 1854 ceded territory. Institute for Tribal Environmental Professionals Climate Change workshop. Red Cliff, WI. July.

2016. Isaac, E.J. and **S.A. Moore**. Climate Change Adaptation Strategies on the Grand Portage Indian Reservation and within the 1854 ceded territory. Lake Head University, Thunder Bay Ontario, Canada. July.

2016. Isaac, E.J. and **S.A. Moore**. Evaluating Climate Change in Grand Portage, MN. Institute for Tribal Environmental Professionals Climate Change workshop. Red Cliff, WI. June.

2016. **Moore, S.A.**, Ferrey M., Jankowski M., Wolf T.M., Phelps N., Convertino M., Travis D. Chemicals of Emerging Concern in Subsistence Species of fish on the Grand Portage Indian Reservation. Great Lakes Fishery Commission Council of Lake Committees. Windsor, ON. May.

2016. **Moore, S.A.**, Wolf, T.M., Ferrey M., Jankowski M., Phelps N., Convertino M., Travis D. Chemicals of Emerging Concern in Subsistence Species of fish on the Grand Portage Indian Reservation. Environmental Protection Agency Tribal Environmental Professionals Meeting, Chicago, IL. April.

2016. Wolf TM, **Moore S.**, Ferrey M, Jankowski M, Phelps N, Convertino M, Middleton J, Hunt A, Travis D. Preliminary investigation into the presence of contaminants of emerging concern in aquatic subsistence species in northeastern Minnesota. 2nd International Conference on One Medicine One Science, Minneapolis, MN, April.

2015. **Moore, S.A.**, Wolf, T. M., Isaac, E.J. Climate impacts on moose populations on the Grand Portage Indian Reservation. Thunder Bay Field Naturalists, Thunder Bay, ON. November.

2015. **Moore, S. A.**, Isaac, E.J., Wolf, T.M. Climate impacts on moose populations on the Grand Portage Indian Reservation. Moose Madness weekend, Bearskin Lodge. November.

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2015. **Moore, S.A.**, Isaac, E.J. Wolf, T.M. Climate impacts on moose populations on the Grand Portage Indian Reservation. Ontario Ministry of Natural Resources, Thunder Bay, ON. October.

2015. Hunt A, **Moore S**, Wolf T, Phelps N, Convertino M, Jankowski M, Ferrey M, Middleton J, Sokolik S, Travis DA. Assessment of environmental contaminants in subsistence species & the associated ecosystem of Grand Portage Indian Reservation. University of Minnesota College of Veterinary Medicine Points of Pride Research Day. October.

2015. Wolf TM, **Moore S.A.**, Isaac E.J.. Preliminary investigations into neonate health and cause-specific calf mortality in a declining population of moose in northeastern Minnesota. International meeting of the Wildlife Disease Association, Sunshine Coast, Australia. July.

2015. Wolf TM, **Moore S**. Integrating Health into Studies of a Moose Population Decline in Grand Portage, MN. Invited Biology seminar, Minnesota State University. April.

2015. Yule, D.L., A. DeRose, W. Stott, J. Adams, R. Claramunt, M. Ebener, **S. Moore**, and M. Connerton. Morphometric and genetic analyses of contemporary Great Lakes cisco (*Coregonus artedii*). Joint Great Lakes Meeting - Lake Superior Session. Ypsilanti, MI. March.

2014. **Moore, S.A.**, E.J. Isaac, and H. Fox. Effects of climate change on subsistence species of the Grand Portage Indian Reservation, a case study in climate change science. Native American Fish and Wildlife Society, Lac du Flambeau, WI. September.

2014. Isaac, E.J. and **S.A. Moore**. Coaster brook trout populations in the Grand Portage waters of Lake Superior. Native American Fish and Wildlife Society, Lac du Flambeau, WI. September.

2014. **Moore, S.A.**, Isaac, E.J. Plenary. US. EPA. Climate change Adaptation. Effects of climate change on subsistence species of the Grand Portage Indian Reservation, a case study in climate change science. Tribal Environmental Professionals Meeting, Chicago, IL. February.

2014. Chenaux-Ibrahim, Y. M., Moen, R. A., **Moore, S. A.**, and Windels, S. K. Seasonal Diet Composition of Wolves in Northeast Minnesota. Minnesota Fish and Wildlife Society Annual Meeting. Bemidji, MN.

2014. **Moore, S.A.** Minnesota Lake Superior Watershed Stream Science Symposium. MN Lake Superior Watershed Stream Science Symposium. January.

2013. **Moore, S.A.** Keynote. University of Minnesota Forestry Alumni 1960-1971. Grand Portage Moose population and climate change. Cloquet Forestry Center, Cloquet, MN. Sept. 7.

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2013. **Moore, S. A.** Plenary, Institute for Tribal Environmental Professionals, Tribal Lands Forum. Grand Portage Climate Change Adaptation. August.

2013. **Moore S.A.**, Isaac, E.J., Wolf, T.M. Cook County Higher Education. Grand Portage Moose population and climate change. Cook County Higher Education, Grand Marais, MN. August.

2013. **Moore S.A.**, Isaac, E.J. One health. University of Minnesota. Grand Portage Climate Change Adaptation. Minneapolis, MN. July.

2013. **Moore S.A.**, Isaac, E.J., Wolf, T.M. Minnesota Zoo. Grand Portage Climate Change Adaptation. Minnesota Zoo, Apple Valley, MN. July.

2013. Chenux-Ibrahim, Y. M., Moen, R. A., and **Moore, S. A.** Seasonal Diet Composition of Gray Wolves in Northeastern Minnesota. *Poster in* International Wolf Symposium: Wolves and Humans at the Crossroads. Duluth, MN.

2013. Chenux-Ibrahim, Y. M., Moen, R. A., and **Moore, S. A.** Seasonal Diet Composition of Wolves in Northeastern Minnesota. Minnesota Moose Research Meeting. Cloquet, MN.

2013. Chenux-Ibrahim, Y. M., **Moore, S. A.**, and Moen, R. A. Seasonal Diet Composition of Wolves in Grand Portage. Great Lakes Native American Fish and Wildlife Society Annual Conference. Mahanomen, MN.

2013. **Moore S.A.**, Isaac, E.J., Wolf, T.M. Plenary, US. EPA. Grand Portage Climate change Adaptation. Tribal Environmental Professionals Meeting, Chicago, IL. February.

2013. Isaac, E.J. and **S.A. Moore.** Moose research in Grand Portage, MN. MN Moose research and management meeting. Cloquet, MN.

2013. Isaac, E.J., **S.A. Moore**, A.E. Edwards, and R. Moen. Habitat use by moose in Grand Portage, MN; Implications for heat stress. Great Lakes Native American Fish and Wildlife Society. White Earth, Minnesota.

2013. Isaac, E.J., and **S.A. Moore.** Addressing climate change in Grand Portage, MN. Great Lakes Native American Fish and Wildlife Society. White Earth, Minnesota.

2012. **Moore S.A.**, Panel Discussion. Climate change impacts on the tribes in the United States. Institute for Tribal Environmental Professionals 20th Anniversary Ceremony, November.

2012. **Moore S.A.**, Drought: When Every Drop Counts. Public Health Implications of Extreme Weather Conditions in Tribal Communities. Grand Portage Climate Change Adaptation Plan, Impacts leading to Adaptation. Webinar: The Centers for Disease



Control and Prevention, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry, and the American Public Health Association, October.

2012. **Moore S.A.**, Isaac, E.J., Moose Research and Management in Northern Minnesota. Native American Fish and Wildlife Society. September.

2012. **Moore S.A.**, Isaac, E.J., **Moore S.A.**, Isaac, E.J., Grand Portage Climate Change Adaptation Plan – a tribal case study. Climate change adaptation planning training. Institute of Tribal Environmental Professionals.

2011. Yule, D.L., **S.A. Moore**, M.P. Ebener, R.M. Claramunt,, L.L. Salawater, , and T.C. Pratt. September 2011. Morphometric variation among spawning cisco aggregations in the Great Lakes: are historic forms still present? 2011 International Coregonid Symposium. Mondsee, Austria.

2011. **Moore S.A.** A medley of A medley of Federal-Tribal partnerships in fisheries management. 35th Annual National Indian Timber Symposium: Symposium Authorities and Processes for Tribal-Federal Partnerships to Meet Land Management Objectives. June.

2011. **Moore, S.A.**, D.L. Yule (Presenter), M. Ebener, R. Claramunt and T. Pratt. In search of albus, a morphometric analysis to determine the status of historic forms of cisco. International Association of Great Lakes Research Annual Meeting. Duluth, MN. May.

2011. Yule, D.L., T. Ahrenstorff, A.E. Gamble, O.T. Gorman, T.R. Hrabik, E.J. Isaac, **S. Moore**, and J.D. Stockwell. New knowledge of cisco and kiyi status and ecology in Lake Superior. Canadian Department of Fisheries and Oceans - Coregonid Workshop. Burlington, Ontario, Canada. February.

2010. **Moore, S.A.**, Yule, D., Ebener, M., Claramunt, R. Has anyone seen Albus? Great Lakes Fisheries Commission, Lake Committee meeting. March.

2008. **Moore, S.A.** Tribal fisheries at risk – Again. VHS strategic planning meeting, Chicago, IL.

2004. **Moore, Seth**; Richards, C; Johnson, L; Gorman, O. Brook trout landscapes, a fish community perspective of Lake Superior brook trout populations. American Fisheries Society National Meeting. Madison, WI, August.

2004. Gorman, Owen; **Moore, S.**; Quinlan, H.; Carlson, A. Habitat associations of coaster brook trout in Isle Royale, Lake Superior. American Fisheries Society National Meeting. Madison, WI, August.

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2004. Carlson, Andrew; **Moore, Seth**; Huckins, Casey; Richards, Carl. Basin-wide habitat associations of young-of-year brook trout. American Fisheries Society National Meeting. Madison, WI, August.

2004. Mackereth, Robert; Carlson, Andy; Imhof, Jack; **Moore, Seth**. Stream habitat of Lake Superior coaster brook trout: a multi-scale review of features critical to protection and enhancement. Invited presentation. American Fisheries Society National Meeting. Madison, WI, August.

2003. **Moore, S. A.**, Richards, C. R, and Johnson, L. B. 2003. Presenting a habitat-based framework for the recovery of coaster brook trout. Invited presentation. American Fisheries Society National Meeting. Quebec City, CA, August.

2000. **Moore, S. A.**, Richards, C. R, and Johnson, L. B. 2000. Do Wisconsin streams have suitable habitat for Coaster brook trout in comparison with Ontario tributaries? Wisconsin Brook Trout Task Force, Ashland, WI, June..

#### OTHER PRESENTATIONS

2009. **Moore, S.A.** 2009. Lake Superior Fisheries Management and Sovereignty – where are we after two decades? Native American Fish and Wildlife Society, Lac Du Flambeau, WI.

2008. **Moore, S.A.** Tribal Fisheries at Risk – Again. VHS prevention efforts by the Grand Portage Band through partnership with the federal government. Native American Fish and Wildlife Society, Walker, MN.

2007. **Moore, S.A.** and Edwards, A.E. Assessing the effectiveness of radio telemetry to delineate critical habitat for juvenile and sub-adult lake sturgeon – Ogimaa giigohn. Native American Fish and Wildlife Society, Lac du Flambeau, WI.

2000. **Moore, S. A.**, Richards, C. R, and Johnson, L. B. Landscape influences on coaster brook trout distributions in Lake Superior tributary streams. 62nd Midwest Fish and Wildlife Conference. Minneapolis, MN, December.

1999. **Moore, S. A.**, Richards, C. R, and Johnson, L. B. Can Habitat and Landscape Variables Describe Coaster Brook Trout Distributions in streams in Southern Ontario, Canada? 61th Midwest Fish and Wildlife Conference. Cincinnati, OH, December.

1999. **Moore, S. A.**, Richards, C. R, and Johnson, L. B. Can Habitat, Landscape and Fish Species Variables Describe Coaster Brook Trout Distributions in streams in Southern Ontario, Canada? North American Benthological Society. Duluth, MN, May.

1998. **Moore, S. A.** and C. R. Bronte. Geographic Morphological Variation of Siscowet Lake Trout in Lake Superior Based on Whole-Body Morphometrics. 60th Midwest Fish and Wildlife Conference. Cincinnati, OH, December.

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1998. **Moore, S. A.** Geographic Morphological Variation of Siscowet Lake Trout in Lake Superior Based on Whole-Body Morphometrics. *Societas Internationalis Limnologiae*. Dublin, Ireland. August.

1997. **Moore, S. A.** and C. R. Bronte. Delineation of Lake Trout Morphotypes at Isle Royale, Lake Superior, Based on Whole-Body Morphometrics. Lake Superior National Parks Research Conference. Munising, MI. October.

1997. **Moore, S. A.** and C. R. Bronte. Delineation of Sympatric Lake Trout Morphotypes Based on Whole-Body Morphometrics. International Association of Great Lakes Research. Buffalo, NY. June.

#### **PROCEEDINGS OF CONFERENCES**

2017. Gilbertson MLJ, Isaac EJ, **Moore S**, Wolf T. Monitoring Field Anesthesia in Free-Ranging White-Tailed Deer (*Odocoileus virginianus*). University of Minnesota College of Veterinary Medicine Points of Pride Research Day, St. Paul, MN, October.

2017. Neher A, **Moore S**, Wolf T, Travis D, Convertino M, Phelps N, Jankowski M, Ferrey M, Knoll L, Deere J, Primus A. Comparative health assessment of wild fish and its use in evaluating the health of aquatic ecosystems across Northeastern Minnesota. University of Minnesota College of Veterinary Medicine Points of Pride Research Day, St. Paul, MN, October.

2017. Sokolik SJ, **Moore SA**, Boufana B, Wolf TM. Understanding the zoonotic risk of echinococcosis for a northern Minnesota tribal community. University of Minnesota College of Veterinary Medicine Points of Pride Research Day, St. Paul, MN, October.

2016. Wolf T, **Moore S**, Isaac EJ, Ibrahim Y, Armien A, Wunschmann A. Causes of mortality among collared moose in northeastern Minnesota from 2010-2015. International meeting of the Wildlife Disease Association, Cortland, NY, July 31- August 5.

2016. Wolf TM, **Moore S**, Ferrey M, Jankowski M, Phelps N, Convertino M, Middleton J, Hunt A, Travis D. Preliminary investigation into the presence of contaminants of emerging concern in aquatic subsistence species in northeastern Minnesota. 2nd International Conference on One Medicine One Science, Minneapolis, MN, April 24-27.

2015. Hunt A, **Moore S**, Wolf T, Phelps N, Convertino M, Jankowski M, Ferrey M, Middleton J, Sokolik S, Travis DA. Assessment of environmental contaminants in subsistence species & the associated ecosystem of Grand Portage Indian Reservation. University of Minnesota College of Veterinary Medicine Points of Pride Research Day, St. Paul, MN, October.

2015. Wolf TM, **Moore SA**, Isaac EJ. Preliminary investigations into neonate health and cause-specific calf mortality in a declining population of moose in northeastern

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Minnesota. International meeting of the Wildlife Disease Association, Sunshine Coast, Australia, July 26-30.

**AD HOC REVIEW:**

2009. Canadian Journal of Fisheries and Aquatic Sciences.  
2000. Transactions of the American Fisheries Society.  
1999. Journal of Great Lakes Research.

**AWARDS RECEIVED:**

2018: Conservation Award. Northwestern Trappers Association: For the research and natural resources management activities conducted on the Grand Portage Indian Reservation, the Northwestern Trappers Association presented Seth Moore, PhD the 2018 Conservation Award at their 2018 annual convention.

2017. Climate Adaptation Leadership Award for Natural Resources. The Joint Implementation Working Group of the National Fish, Wildlife, and Plants Climate Adaptation Strategy (NFWPCAS) is delighted to inform you that the 1854 Treaty Authority, Grand Portage Band of Lake Superior Chippewa, Boise Forte Band of Chippewa, and Fond du Lac Band of Lake Superior Chippewabeen was selected as a recipient of the 2017 Climate Adaptation Leadership Award for Natural Resources for the 1854 Ceded Territory Climate Change Vulnerability Assessment and Adaptation Plan.

2013. William H. Eger Memorial Tribal Biologist Achievement  
Native American Fish and Wildlife Society, Midwest region.

2006 – 2008. Highly Cited Author Award

Journal of Great Lakes Research, Stockwell, J.D., Yule, D. L., Gorman, O. T., Isaac, E. J., and **Moore, S. A.** 2006. Evaluation of bottom trawls as compared to acoustics to assess adult lake herring (*Coregonus artedii*) abundance in Lake Superior. Journal of Great Lakes Research 32(2).

2006. Co-recipient, Time Magazine Person of the Year

2000. Trout Unlimited Dave Ewart Memorial Scholarship

1996: Summer research block award, University of Minnesota, Duluth.

1993: NASA Wisconsin Space Grant Consortium, Research grant recipient.

**MEMBERSHIP ON COMMITTEES**

2017 – Present, Vice Chair, Lake Superior Committee, Great Lakes Fishery Commission

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2016 – present, Regional Tribal Operations Committee, Region 5 Environmental Protection Agency, Minnesota Representative

2014- present, Council of Lake Committees (CLC), Great Lakes Fishery Commission Representative for 1854 Treaty Authority

2014 – present: Lake Superior Committee, Great Lakes Fishery Commission Representative for 1854 Treaty Authority

2014 – present: GREAT LAKES FISHERY AND ECOSYSTEM RESTORATION PROGRAM Project Review Committee

2012- present: Tribal Climate Change Adaptation Planning Committee: Steering committee for Institute of Tribal Environmental Professionals.

2005 – 2014 Lake Superior Technical Committee, Great Lakes Fishery Commission Representative to Grand Portage Band of Chippewa

#### **JOB RELATED TRAINING**

- Wildlife Immobilization and restraint University of Minnesota 2007
- Wildlife Tracking Skills Workshop, A Naturalist's World, December 9-10, 2006
- CPR / Basic First Aid /AED Training, National Wildfire Coordinating Group, 2006
- S-130 Basic Firefighter, National Wildfire Coordinating Group, March 21-25, 2006
- S-190 Introduction to Fire Behavior, National Wildfire Coordinating Group, March 2006
- L-180 Human Factors on the Fireline, National Wildfire Coordinating Group, Mar. 2006
- I-100 Introduction to Incident Command System, National Wildfire Coordinating Group, March 21-25, 2006
- Oracle database software training 16 hours Feb., 2003
- Medic basic first aid – CPR included 4 hours Mar. 2003
- AED (Automatic Defibrillator) Training 4 hours March 26, 2003
- Department of Interior Motorboat Operators Course (MOCC open water) 32 hours May 6-9, 2003

References: Furnished upon request

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## GRAND PORTAGE RESERVATION TRIBAL COUNCIL

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January 26, 2022  
Legislative-Citizen Commission On Minnesota Resources  
RE: Open commission appointments

MAR 7 2022

President of the Senate

Dear Review Committee,

I am applying for an open position on the Legislative-Citizen Commission on Minnesota Resources. Indian tribes have been historically underrepresented in LCCMR funding for a variety of reasons but will be disproportionately affected by environmental degradation and climate change due to historic and present-day reliance on natural resources, economic and infrastructural disparities compared with non-Indian communities, and the fact that Indian reservations tend to be in remote areas with limited access to food, services, and utilities. Additionally, Indian tribes are rapidly developing capacity and infrastructure to conduct leading environmental restoration and research work in Minnesota and really need to be at the forefront in decision-making on funding allocations within the state.

I direct the Grand Portage Band of Lake Superior Chippewa's department of Biology and Environment. I have been studying moose, ecosystem health, environmental contaminants, and educational opportunities for STEM development for nearly sixteen years.

Our tribe prides itself on leading natural resources and environmental work and was the second tribe in the country to develop a strategic plan to adapt to climate change. I led the development of our climate vulnerability assessment and the strategic plan to adapt to climate change.

I am experienced at large-scale, consensus-based decision making. I serve on several broad-scale decision making committees presently including the Council of Great Lakes Fisheries Agencies, the Council of Lake Committees, and the associated Lake Superior Committee. Additionally, I serve on the Great Lakes Fishery and Ecosystem Restoration review committee that serves a similar purpose in evaluating regional restoration projects and prioritizing funding for accomplishment of those projects.

For these reasons, I think I could serve on Legislative-Citizen Commission On Minnesota Resources to help to openly discuss and advance some of the challenges of environmental stewardship in Minnesota for the benefit of our citizens, both tribal and non-tribal. I have attached a recent CV. Please let me know if these qualifications and expression of interest are aligned with the intent of the council.

thanks,

*Seth Moore* 01/26/2022

Seth Moore, PhD (electronic)

Seth Moore, PhD  
Director of Biology and Environment Grand Portage Band of Chippewa  
27 Store Rd., Grand Portage, MN 55605  
PH. 218-475-2022 Cell: 218-370-9310 FAX:218-475-2615 email: samoore@boreal.org

**Application for the position Public Member - Governor Appt Application Date: 1/26/2022 3:39:42 PM**

**Part I: Position Sought**

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**Agency Name:** Legislative-Citizen Commission On Minnesota Resources  
**Position:** Public Member - Governor Appt

**Part II: Applicant Information**

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**Name:** Dr. Seth Moore  
**Phone:** (218) 370-9310  
**County:** Cook  
**Mn House District:** 03A  
**US House District:** 8  
**Recommended by the Appointing Authority:** True

**Part III: Appending Documentation**

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**Cover Letter and Resume**

| Type         | File Type       |
|--------------|-----------------|
| Cover Letter | application/pdf |
| Resume       | application/pdf |

**Additional Documents (.doc, .docx, .pdf, .txt)**

| Type                           | File Name |
|--------------------------------|-----------|
| No additional documents found. |           |

**Veteran:** No Answer

**Part V: Signature**

**EVO PDF Tools Demo**

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**Signature:** Seth Moore  
**Date:** 1/26/2022 3:39:42 PM

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**President of the Senate**