

2018 Project Abstract

For the Period Ending June 30, 2023

PROJECT TITLE: Chronic Wasting Disease targeted outreach engaging culturally-diverse hunting communities

PROJECT MANAGER: Tiffany Wolf

AFFILIATION: University of Minnesota

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FUNDING SOURCE: Environment and Natural Resources Trust Fund

LEGAL CITATION: M.L. 2018, Chp. 214, Art. 4, Sec. 02, Subd. 10 as extended by M.L. 2020, First Special Session, Chp. 4, Sec. 2 as extended by M.L. 2021 First Special Session, Chp. 6, Art. 5, Sec. 3, Sub 19b.1 [to June 30, 2023]

APPROPRIATION AMOUNT: \$270,468

AMOUNT SPENT: \$188,581

AMOUNT REMAINING: \$81,888

Sound bite of Project Outcomes and Results

Our project advances inclusive chronic wasting disease (CWD) management through collaboration with Tribal, southeast Asian, and Amish communities. Insights from surveys and interviews inform culturally-attuned CWD outreach, endorsing thriving deer populations while honoring cultural heritage. Our efforts promote community-engaged CWD response strategies to protect Minnesota deer health and community well-being.

Overall Project Outcome and Results

The success of Minnesota's efforts to control chronic wasting disease (CWD) hinges on the ability of government agencies, researchers, policy makers and stakeholders to work together, particularly as this issue relates to deer hunting as a CWD management tool. Yet, special outreach efforts are needed to better engage diverse stakeholders, such as Minnesota Tribal Nations and southeast Asian and Amish communities. Accordingly, our team connected with these communities through grassroots efforts to 1) learn more about community-specific hunting behavior and perceptions of CWD management and 2) engage in culturally-appropriate CWD outreach and education, with an overall goal of achieving more inclusive, community-based CWD management. Thus, we worked with community partners to collect interview data on CWD knowledge, perspectives, and impacts, as well as trusted sources for CWD information. Using these data we worked (and continue to work) further with community partners on the development of culturally-appropriate strategies for CWD outreach. Because of expressed interest by tribal natural resource managers for the development of CWD response plans for Tribal Lands, our team also conducted a quantitative survey of 140 tribal hunters from 16 midwestern Tribal Nations to understand hunting practices and CWD management preferences. Survey results demonstrated that cultural preservation and subsistence are the most important reasons tribal members hunt. Tribal hunters generally agreed that they have a key role in keeping the deer population healthy and most report they would test their deer for CWD if there was no cost. Most reported that CWD information has been limited but preferred to receive information from tribal natural resource agencies. Collectively, these data have informed the development of new CWD outreach materials and strategies for engagement of these diverse communities on CWD, as well as identified next steps for assisting tribal partners in the development of community-informed CWD response plans.

Project Results Use and Dissemination

Our project prioritizes dissemination efforts that enhance chronic wasting disease (CWD) awareness and education. We have crafted CWD factsheets, CWD Transmission and Progression booklets and coloring books, and translated materials that cater to Native American, southeast Asian, and Amish groups. We've engaged graphical artists to document real-time discussions, fostering accurate and interactive knowledge sharing. The [MNPRO website](#) serves as a comprehensive repository for CWD outreach and educational materials, complemented by print media and community event exhibits (e.g., Powwows, Earth Day, Filmore County Fair). Discussions with community partners have led to ongoing action plans for CWD outreach and education co-creation.



Environment and Natural Resources Trust Fund (ENRTF)

M.L. 2020 ENRTF Work Plan Final Report

Today's Date: 8/15/2023

Final Report

Date of Work Plan Approval: 3/17/2020

Project Completion Date: 6/1/2023

PROJECT TITLE: Chronic Wasting Disease targeted outreach engaging culturally-diverse hunting communities

Project Manager: Tiffany Wolf

Organization: University of Minnesota

College, Department, or Division: College of Veterinary Medicine, Veterinary Population Medicine

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Location: Statewide

Total Project Budget: \$270,468

Amount Spent: \$188,581

Balance: \$81,888

Legal Citation: M.L. 2018, Chp. 214, Art. 4, Sec. 02, Subd. 10 as extended by M.L. 2020, First Special Session, Chp. 4, Sec. 2 as extended by M.L. 2021 First Special Session, Chp. 6, Art. 5, Sec. 3, Sub 19b.1 [to June 30, 2023]

Appropriation Language: \$439,000 the second year is from the trust fund to an emerging issues account authorized in Minnesota Statutes, section 116P.08, subdivision 4, paragraph (d).

M.L. 2020 - Sec. 2. ENVIRONMENT AND NATURAL RESOURCES TRUST FUND; EXTENSIONS. [to June 30, 2021]

PROJECT STATEMENT: Chronic Wasting Disease (CWD) is a 100% fatal, contagious neurological disease of wild and farmed cervids, such as deer, moose, elk, and other deer species. It is caused by a prion, which is an infectious, misfolded version of a normal protein that is found in all mammals. Since first discovery in Colorado in 1960, CWD has spread to 26 states, including MN. In heavily affected areas like Wyoming, Colorado, and Wisconsin, more than 40% of free-ranging cervids are infected; and managers and researchers have documented CWD-associated population declines in several cervid species, including white-tailed deer. Although transmission to humans has never been confirmed, the risks for human infection remain unclear. Thus the best approach we have to protecting wildlife and human health is controlling further spread.

The success of Minnesota's efforts to control this disease hinges on the ability of government agencies, researchers, policy makers and stakeholders to work together, particularly as this issue relates to deer hunting as a CWD management tool. However, in December 2019, our team became aware that culturally-diverse hunting communities had not received critical information regarding CWD biology, management and potential human health risks. Special outreach efforts are needed to reach diverse stakeholders, such as our Minnesota Tribal Nations and southeast Asian and Amish communities. Additionally, the Grand Portage Band of Lake Superior Chippewa and our team have secured funding from US Fish and Wildlife Service to support the creation of a Tribal CWD Surveillance Network. A critical, yet unfunded need is simultaneous community engagement on Tribal Lands leading up to and during CWD surveillance in the 2020 hunting season. Our team has connected with these groups through grassroots efforts and is uniquely poised to engage them on CWD. Our goals for this project are to 1) engage in culturally-appropriate CWD outreach and education, and 2) learn more about community-specific hunting behavior and perceptions of CWD management, with an overall goal of achieving more inclusive, community-based CWD management.

II. OVERALL PROJECT STATUS UPDATES:

Amendment Request to extend project to June 1, 2022 is pending approval by Legislature as of 3/17/20

Amendment approved by the legislature and governor 6/29/21

Amendment Request August 20, 2020

Due to COVID-19 social-distancing guidelines, which has resulted in the cancellation of community events in much of 2020 where outreach and education was going to be conducted, as well as further consultation with MN Tribal natural resource agencies over the past several months, we are proposing a modification to Activity 1 for the duration of this project. Our new goal for this activity will involve working through community liaisons in a community based participatory research approach to gather relevant community data, including existing CWD knowledge, cultural influences of risk perceptions related to wildlife disease, and societal trust. The newly proposed Activity 1 will allow the project to move forward through additional data gathering among communities, which will further inform outreach materials, while ensuring health and safety during the COVID-19 pandemic. This work will be conducted with all three communities: tribal, Southeast Asian, and Amish. In addition, further discussion with our Minnesota Department of Natural Resource colleagues, they feel that Southeast Asian and Amish communities have been adequately reached through their own hunter and landowner surveys and that efforts would best be directed toward tribal hunters, which have not yet been surveyed. Thus, Activity 2 has been revised to focus hunting survey efforts specifically on tribal hunters and communities.

Accordingly, minor modifications to budgeted items have been made to more accurately reflect activity-related expenses. Additionally, funds for personnel support have been shifted from outreach material development support (reduced from 2yr staff support to 1 yr) to provide more support for coordination of data collection activities across all communities over both project years (M. Schwabenlander effort shifted from 10% over 1 yr to 10% over 2 years).

Amendment Approved by LCCMR 9/16/20

First Update January 4, 2021

The focus of the past 6 months of the project has been establishing new community partnerships across tribal, Southeast Asian, and Amish hunting communities in our effort to meet project goals. In some cases this has involved building on existing partnerships, whereas in most cases it has involved working through existing connections and resources to generate new project partner relationships. During this process we have taken time to introduce the project, identify individuals in each community who are willing and interested in joining our team as research partners, assess community interests and needs related to CWD, and assemble the resources our partners need for project success. This has been an exciting time as our team and community partners get to know each other, our collective capabilities, and new perspectives that better inform our approach and processes related to the proposed Activities. We have made good progress with tribal and SE Asian partners; whereas progress in moving our project forward with the Amish communities has been more complicated due to cultural differences and challenges associated with COVID-19 safety. Due to the pandemic, we have reevaluated our approach and ultimately have a richer community engagement plan in place, though we anticipate potentially slower progress associated with COVID-19 restrictions, particularly within the Amish communities. Finally, ahead of and throughout the 2020 deer hunting season, we successfully distributed 375 CWD factsheets and CWD Transmission and Progression booklets to tribal partners, 250 to Amish communities, and 100 to SE Asian communities.

Amendment request January 4, 2021

As the project has progressed and we have learned more about partner needs for project success, we have identified project expenses that we would like to make explicit in the project budget. We do not anticipate that these expenses will impact the funding amount associated with each line item. We are requesting the following amendments to the project budget:

1. Since we are working through community partners to collect the data we need to inform outreach materials, we are providing them with supplies to facilitate data collection, which includes electronic tablets. The tablets are crucial for uploading, storing and transferring data between partners and our team, particularly for community partners that do not have personal computers or similar devices sufficient to accomplish the work. These will be included in row 29 of the budget, under survey supplies and equipment. We have recently purchased (i.e., within the project period) six tablets at \$250 each for this project, which we will assign and send to specific community partners to do the work. We intend for tablets to be returned to the university at the conclusion of the project for future use in similar studies.
2. We want to explicitly include shipping costs to send supplies and outreach materials to community partners. This will be included in row 29 of the budget, under supplies, equipment, and shipping costs. Shipping expenses are estimated at \$20/shipment for up to 15 shipments (totaling \$300) between the university and project partners.
3. We are also requesting approval to include participation payments for interviews conducted as part of our study in our project budget. These participation payments will be provided at the discretion of project community partners and will not exceed \$15 per interview. Community partners will be reimbursed for these expenses through their contracts, thus this is included in Line 22 of the Budget.
4. We want to also explicitly include reimbursement for travel to conduct interviews by community partners in Budget Line 22. We expect the current Line 22 budget will accommodate these additional expenses (along with participant payments), given we have fewer community partners with less direct funding support needs than originally expected (e.g., related to accommodations for COVID safety).

Amendment Approved by LCCMR 2/3/2021

Second Update May 18, 2021

The focus of the past several months of the project has been supporting community partners across tribal, Southeast Asian, and Amish hunting communities in their efforts to gather information on CWD knowledge, perspectives, and responses to management. Since our last update, we are coordinating with partners from five Minnesota tribes (including the addition of White Earth Band as a partner) and a partner from the Hmong community. This is in conjunction with parallel work with two additional Ojibwe tribes in Wisconsin and Michigan, whose participation will add to the richness of information gathered. During this period we have worked to get University-tribal agreements in place to protect data and confirm scopes of work, as well as obtain research approval by tribal review boards on the agreed upon work plans. Importantly, our partners have been conducting interviews with community members during this period; the next steps are to work with them in the participatory analysis of these data over summer 2021. The biggest challenge has been in connecting with the Amish community, although during this period our team made two trips to southeastern Minnesota to meet with Amish community leaders and members. Despite slower progress in connecting with this community on a large scale and some reluctance by the community to engage on CWD, we are learning a lot about community perspectives and knowledge of CWD through rich, engaging individual conversations, as well as different ways we might engage further with the community.

Third Update October 1, 2021

We continue to support community partners in collecting qualitative data from their community members on their knowledge and perspectives related to deer and chronic wasting disease. Among the seven tribal and Hmong community partners on the project, half have completed interviews with community members on CWD, and half are in various stages of the process. The interviews that have been completed have now been transcribed from audio to written format in preparation for analysis, and the UMN project team is in the process of coordinating with interested community partners to begin participatory analysis (an approach to analysis that involves community partners in the process). Simultaneously, we have been coordinating with tribal natural resource managers to distribute a tribal hunter survey (piloted in the spring) in electronic and print formats to community members as hunting season begins. This quantitative survey instrument will provide additional data on hunter behaviors, perspectives on CWD and responses to management related to CWD. Both of these activities (i.e. the qualitative interviews and quantitative surveys) will be part of graduate research training of graduate student, Roger Faust, a tribal member of the Winnebago Tribe of Nebraska. He recently had an abstract describing our community engaged participatory project accepted for presentation at the Pathways 2021: Human Dimensions of Wildlife Conference, co-hosted by The Washington Department of Fish and Wildlife and Colorado State University and to be held on May 1-4, 2022, after postponement. We also wanted to note, although an amendment is not required, we are shifting funds within the personnel funding category of the budget from administrative support staff to a veterinary public health veterinarian to facilitate additional outreach and educational initiatives through the end of the grant period.

Amendment Request as of October 7, 2021

We are requesting a 1-yr, no cost extension to June 30, 2023 to more fully meet the goals of each of the activities associated with this project. While we are making positive progress in our diverse hunting communities, the COVID-19 situation continues to slow progress, particularly in relation to staff shortages in both the communities we work with as well as the UMN team. We are optimistic that a 1-yr extension will not only allow us to more fully accomplish our objectives, but will demonstrate to our communities our collective dedication to addressing this complex issue even during some of our most challenging times.

Amendment Approved by LCCMR 10/21/2021

Fourth Update April 1, 2022

Over the past reporting period we worked with community partners to finalize and transfer interview data collected through their efforts in their communities, processed those data into a format suitable for analysis, and initiated preliminary analyses. At this stage, we received data from 6 communities (5 Tribal communities and 1 Hmong community); two other Tribal communities that expressed interest in participation early on were unable to complete interviews. Tribal hunter surveys were also disseminated through the Tribal CWD Network (consisting of 8 MN Tribal natural resource agencies and 2 outside of MN); 41 survey responses were received, representing hunters from 9 Tribal Nations in the Midwest. We continue to work with partner Tribal natural resource agencies to identify additional opportunities for collecting more survey data. Finally, in early 2022, we hired a new Veterinary Public Health resident who will focus on engaging and collecting additional qualitative data from Amish communities in southeastern Minnesota over this final year of the project. We are utilizing our early preliminary data collected from key informants in multiple Amish communities to design an interview instrument. Interviews will key in on perspectives and decision-making related to harvest and consumption of venison and the perceived impacts CWD makes on those practices. These new data will inform future outreach and education efforts specific to these communities.

As of 3/11/22, the project manager confirms that Dr. Seth Moore is not deriving any direct personal financial benefit from this project

Fifth Update October 1, 2022

Over the past reporting period our team has continued in the collection of new data, while also embarking on data analysis to understand CWD knowledge, perspectives and information needs. In particular, we have made important progress in the qualitative analysis of tribal and Hmong interviews, where our UMN team is currently summarizing these analyses in preparation for engaging our community partners in further discussion and feedback on key themes emerging from the interviews. We also spent more time in the Amish communities of southeastern Minnesota where a team member (a newly hired Veterinary Public Health resident) conducted one-on-one interviews with Amish members from the three southeastern Minnesota communities. These data are also currently being analyzed for themes related to harvest practices, consumption of venison and the perceived impacts CWD makes on those practices. Finally, we continue to collect data on tribal hunter perspectives through our Tribal hunter survey, working alongside our tribal biologist partners to recruit participation at community events, such as pow wows and veterinary service clinics. We anticipate ongoing administration of the survey through the end of 2022, with analysis beginning in early 2023.

Sixth Update April 1, 2023

In the previous reporting period, we completed all data analyses associated with Activity 1 and began reporting results back to community liaisons and gathering final perspectives from partners on the integration of findings into new outreach materials and methods. We anticipate that by the end of the project we will have outlined strategies for ongoing CWD outreach in tribal, Hmong, and Amish communities. We are in the process of analyzing survey responses received through the Tribal Hunter survey, which closed at the end of the 2022 hunting season. We will be using findings from this project to plan a series of workshops to be held in May and June for the development of strategies for the co-management of CWD between state and tribal partners in and around tribal lands. This project was the focus of a presentation to members of the Society for the Advancement of Chicanos/Hispanics and Native Americans in STEM in October 2022 and three new additional abstract submissions for presentations at national conferences in 2023.

Final Report between project end (June 30) and August 15, 2023

The success of Minnesota's efforts to control chronic wasting disease (CWD) hinges on the ability of government agencies, researchers, policy makers and stakeholders to work together, particularly as this issue relates to deer hunting as a CWD management tool. Yet, special outreach efforts are needed to better engage diverse

stakeholders, such as Minnesota Tribal Nations and southeast Asian and Amish communities. Accordingly, our team connected with these communities through grassroots efforts to 1) learn more about community-specific hunting behavior and perceptions of CWD management and 2) engage in culturally-appropriate CWD outreach and education, with an overall goal of achieving more inclusive, community-based CWD management. Thus, we worked with community partners to collect interview data on CWD knowledge, perspectives, and impacts, as well as trusted sources for CWD information. Using these data we worked (and continue to work) further with community partners on the development of culturally-appropriate strategies for CWD outreach. Because of expressed interest by tribal natural resource managers for the development of CWD response plans for Tribal Lands, our team also conducted a quantitative survey of 140 tribal hunters from 16 midwestern Tribal Nations to understand hunting practices and CWD management preferences. Survey results demonstrated that cultural preservation and subsistence are the most important reasons tribal members hunt. Tribal hunters generally agreed that they have a key role in keeping the deer population healthy and most report they would test their deer for CWD if there was no cost. Most reported that CWD information has been limited but preferred to receive information from tribal natural resource agencies. Collectively, these data have informed the development of new CWD outreach materials and strategies for engagement of these diverse communities on CWD, as well as identified a next steps for assisting tribal partners in the development of community-informed CWD response plans.

III. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1 Title: Through community-based participatory research, gather information on community CWD knowledge, perceptions of risk, and societal trust for Native American, southeast Asian, and Amish communities in Minnesota.

Description: In December 2019, our team became aware that culturally-diverse hunting communities had not received critical information regarding CWD biology, management and potential human health risks. In response, our team mobilized and performed outreach events for both the southeast Asian and Amish hunting communities, which included the development of culturally-appropriate, translated fact sheets. Our goal with this activity is to transition to a more formalized, intentional approach, where we also gather data on how members of these diverse communities access CWD information, what CWD knowledge is currently lacking, best strategies for filling those gaps. This information will be used to inform the development of culturally-appropriate and community-specific outreach materials on CWD.

ACTIVITY 1 ENRTF BUDGET: \$135,734

Outcome	Completion Date
1. Work through community partners to gather data on CWD knowledge, cultural influences on perceptions of risk related to wildlife disease, and societal trust.	<i>May 2021</i>
2. Characterize cultural perceptions of risk related to CWD, knowledge gaps, and societal trust across communities.	<i>September 2021</i>
3. Validate the translation of new knowledge into outreach materials with community partners.	<i>October 2021</i>

First Update January 4, 2021

Since project commencement, we have completed interviews with natural resource managers from 9 of 11 Minnesota Tribal Nations to assess tribal needs in relation to CWD outreach and management. Working through our established connections with natural resource managers and conservation officers among tribes and the MNDNR, we've identified and established community partners to advance the goals of this Activity in 4

Minnesota tribes (1 additional partnership pending) and the SE Asian community of the Twin Cities metro area. Over the past several months, this has involved further assessment of community needs and goals related to the project partnership, the creation of memoranda of understanding with each partner, establishment of data collection methods, and distribution of resources, supplies and training for partners to conduct interviews and focus group meetings within their respective communities, beginning January 2021. Proceeding with this approach has been more challenging with Amish communities, primarily due to some perceived reluctance to being directly involved in the research. However, our team's understanding is that the Amish communities are open to discussing CWD with our team, thus we are revising our approach for data collection within these communities, but recognize there may be some delays in progress due to the need for in-person meetings while abiding by MDH and University guidelines on COVID-19 safety. Lastly, we have successfully recruited a graduate research assistant to the project. As a member of the Winnebago Tribe of Nebraska, the graduate student, who begins in January 2021, will bring more background and perspective to the team that is highly relevant to the project.

Second Update May 18, 2021

Since the last project update, we have worked with each of our community partners (tribal and Hmong) to put in place agreements on data sharing, scopes of work, and tribal research approvals to ensure transparency, trust, and a smooth work flow with our community partners. We've hosted group meetings with all community partners twice per month during this period to conduct training in interview and focus group facilitation, to provide support and feedback as partners embarked on participant recruitment, and to make collective decisions on approaches to engage study participants, facilitate interviews, or manage data. We've also had two additional tribal partners (White Earth and Bad River) join the project. We anticipate that most partners will have completed interviews by the end of May-early June 2021, at which time we will begin data transcription and participatory analysis. Completion of Outcome 1 may be a few weeks behind the anticipated schedule, but accommodates delays associated with other demands on our partners' time and/or delays in obtaining research clearances/data sharing agreements (e.g., many administration bodies – both university and tribal – have been experiencing COVID-19 associated delays). Proceeding with a community-based participatory research approach has been met with more reluctance by the Amish communities, and so we have worked to adopt our approach in these communities. However, our team made two trips to southeastern Minnesota during this period to engage directly with community leaders and some community members. We have not been successful in organizing small group meetings with community members, although we have learned through several individual conversations with leaders and members that CWD itself is not a concern for the community (e.g. sick deer are not observed and people have not gotten sick), whereas there is more concern about how CWD is managed. We are learning about how we can better engage with the community and build on these ongoing conversations, as well as enhance our outreach for the approaching hunting season (using preliminary information learned thus far from the community).

Third Update October 1, 2021

We have been working with project partners over the last reporting period to collect qualitative data from community members on values around deer, knowledge of CWD and perceptions of risk and impact on the community through interviews conducted by our community partners. At this stage, approximately half of our seven tribal and Hmong partners have completed interviews in their community, those interviews completed have been transcribed from audio to written formats for analysis, and we continue to facilitate progress in the remaining communities through support of our community partners. Our UMN team is also coordinating a transition to the data analysis phase, in which we are working to create opportunities for our community partners to participate in analysis. This approach has come highly recommended by others working in community engaged participatory research as a way of ensuring accuracy and rigor in the analysis. For example, the analysis by outsiders of the community (e.g. UMN team) of statements made in interviews may fail to recognize the inherent relevance or importance of those statements, whereas such statements may be much

more apparent to community members (e.g., project community partners). In partnering UMN team members with community partners in the analysis and interpretation phase, we can ensure a richer and more culturally valuable product. Thus, over the next several months as we assemble and transcribe all interview data, we will also be working with community partners through an iterative process to analyze the data. This work will be an important aspect of Roger Faust's (PhD student) graduate training in the UMN Conservation Sciences graduate program. Overall, this part of the project is moving more slowly than originally projected, however, we continue to make good progress while also respecting the time and energy of our community partners, many of which are dedicated to the project, but also balancing responsibilities related to employment or personal life.

Fourth Update April 1, 2022

Community partners have completed all interviews for the collection of qualitative data related to CWD knowledge and perceptions of risk. We received qualitative data from 6 communities (5 Tribal communities and 1 Hmong community); two other Tribal communities that joined the project late were unable to complete this portion of the project as originally expected. The UMN team has worked over the past several months to process these data into a format suitable for analysis and are in the midst of analyzing these data through qualitative data coding methods and thematic analysis. As analysis is completed for each community, we will meet again with community partners to share findings and solicit initial feedback. This Activity has taken longer than originally anticipated to allow community partners to work at their pace. We have also spent some time revising our approach in engaging the Amish community on this issue. We have learned from key informants that CWD is of little concern to their communities; these observations were substantiated by little interest in our efforts to host focus groups on the issue and for the community members to lead interviews as was done in the Tribal and Hmong communities. However, after further discussions with some community members, the DNR social scientist, and others who have worked with Amish communities on health issues, we are revising our strategy to collect more information related to how community members make decisions on harvest and consumption in the context of wildlife disease, the perceived impacts of CWD, and sources of CWD information. We hired a new Veterinary Public Health resident in 2022 to lead these new efforts in our final year of the project.

Fifth Update October 1, 2022

Since completion of all interviews by Tribal and Hmong community partners, our UMN team processed these data into a format suitable for analysis (transcriptions of audio files) and has worked over the past few months to complete qualitative coding of the transcripts, a method used to systematically assess qualitative data. Thematic analysis, which allows us to pull patterns of meanings out of our systematic analyses, is on pace to be completed for all communities within the next week. When thematic analysis is completed for all communities, we will meet again with community partners to share findings and solicit initial feedback. Community partner feedback will ensure that the UMN teams' findings and interpretations of interviews agree with what they heard from their interviews and know of their communities, so that future outreach, engagement, and management plans using these findings properly reflect community sentiments.

Early project efforts to engage the Amish communities in southeast Minnesota through focus groups and community partner-led interviews were met with little interest from the community. Thus, we shifted our strategy to an interview format similar to that used in the Tribal and Hmong communities, but conducted by our team members. In doing so, we successfully completed interviews in 3 Amish communities that included a total of 16 Amish community members. At this stage, the UMN team has completed data processing and is currently analyzing this data using qualitative data coding methods and thematic analysis. After analysis educational and outreach tools will be created for planned engagement with community members.

Sixth Update April 1, 2023

At this stage of the project all data analyses have been completed. Project reports summarizing our activities and key findings have been developed for each community. On January 6, 2023, our team hosted a meeting with

Tribal partners from each of the communities that directly participated in or expressed interest and support of the project; these included Red Lake Band of Ojibwe, White Earth Nation, Mille Lacs Band of Ojibwe, Shakopee Mdewakanton Sioux Community, Bad River Tribe, Grand Portage Band of Lake Superior Chippewa, and Keweenaw Bay Indian Community. At this event, key findings were shared, and additional information and perspectives gathered. Importantly, a sample outreach document was circulated for comment and opportunities for further dissemination were discussed. These discussions continue at ongoing meetings of the CWD Tribal Surveillance Network, leading to specific action plans for ongoing partnership in CWD outreach and education material co-creation. In the coming weeks we will meet again with Hmong and Amish community partners to do the same information sharing and results dissemination with intent to co-create a similar outline for ongoing outreach dissemination.

Final Report between project end (June 30) and August 15, 2023

Information sharing with Amish and Hmong partners was conducted over the past reporting period, following up on the previous information sharing events with Tribal partners. These conversations have identified additional avenues for outreach dissemination (e.g., through hunter training workshops for the Amish) and conversations with community partners are ongoing. In addition to sharing information back with partner communities, we are also working toward dissemination of this project and its outcomes through the drafting of at least two manuscripts for publication. Most recently we presented these efforts at the International Conference of the Wildlife Disease Association, generating much excitement and interest among participants in adopting similar methods of engagement to reach historically marginalized demographics on wildlife disease issues.

ACTIVITY 2 Title: Survey Minnesota tribal members on hunting activities and perceptions of CWD, as well as understanding of and responses to CWD management practices.

Description: The Minnesota Department of Natural Resources (DNR) has surveyed hunters and landowners across Minnesota on hunting activities and CWD management perceptions, but there is recognition of under-representation of culturally-diverse groups, particularly tribal hunters. This is in part due to the fact that traditional, paper-based surveys that are effective in reaching masses are ineffective for more diverse groups. Thus, we will work with the MN DNR, Tribal natural resource managers and community members to leverage existing connections with hunters and other opportunities within these communities to *directly* connect with and gather this critically needed data from community members.

ACTIVITY 2 ENRTF BUDGET: \$134,734

Outcome	Completion Date
1. Summarize survey responses from each group on hunting activities, perceptions and responses to management practices as they pertain to CWD.	<i>March 2022</i>
2. Provide recommendations on CWD management plans to Tribal natural resource managers that combine best scientific practices with culturally-relevant feedback obtained through tribal hunter surveys.	<i>April 2022</i>

First Update January 4, 2021

Over this reporting period, we have worked with project partners and social scientists on our team to develop a survey instrument to meet the goals of this Activity. The interviews conducted with tribal natural resource managers in this reporting period, as well as the MNDNR's hunter survey were used to inform the development of questions as well as methods for dissemination. The survey has been circulated among a small number of tribal natural resource managers and tribal hunters for validation and at this stage, we are in the process of updating the survey based on that feedback. Our current goal is to work with tribal natural resource partners to roll out the survey electronically shortly after the end of the current hunting season with paper-based or in-person delivery at the start of next season as hunters obtain their licenses.

Second Update May 18, 2021

Over this reporting period, we have worked with project partners to pilot a tribal hunter survey. The survey pilot was delivered electronically through Qualtrics. The survey consisted of approximately 50 questions that focused on hunting behaviors, perspectives on CWD, responses to different CWD management strategies, and information sources. It was shared with natural resources managers of 9 MN Dakota and Ojibwe Tribal Nations, the Great Lake Indian Fish and Wildlife Commission and 5 additional Ojibwe Tribal Nations in Wisconsin and Michigan. Natural resource agencies shared the survey with hunters through their Facebook pages or websites following the 2020/2021 hunting season. Responses were obtained from 23 individuals across 9 Ojibwe tribes in Minnesota, Wisconsin and Michigan. Our team qualitatively reviewed responses for indications of lack of clarity, poor response rate, or other issues suggestive of problematic question design. Subsequently, the survey has been revised for improvement and we are coordinating with tribal natural resource managers for a more intensive rollout with the start of the 2021 hunting season.

Third Update October 1, 2021

Over the past several months members of our team have met with tribal natural resource managers on a biweekly basis to prepare for CWD surveillance on reservations during the 2021 hunting season. Through this process, we have also worked to coordinate the delivery of a tribal hunter survey to better understand hunter behavior, knowledge and perceptions of CWD and responses to CWD management. Distribution of the survey began in September with the start of tribal hunting season. The survey is being delivered through paper and electronic-based formats, is being advertised through tribal natural resource management's websites and/or Facebook pages, and is available at hunter license and/or registration offices. At this time, twelve tribal natural resource agencies are distributing the survey and we have already received forty-one completed surveys from hunters. Over the course of the hunting season, we will continue to support natural resource managers in the distribution and advertisement of the survey to hunters to enhance participation. In association with survey distribution, we have also shared updated CWD outreach materials with natural resource managers for dissemination through their communities as hunting season takes off.

Fourth Update April 1, 2022

Over this reporting period, we collected and aggregated Tribal Hunter surveys that were disseminated to Tribal hunters throughout the 2021/22 deer hunting season through their Tribal natural resource agencies (this included 8 MN Tribal natural resource agencies and 2 outside of MN). Surveys were self-administered either on paper or online via Qualtrics, an electronic survey system. Forty-one survey responses were received, representing hunters from 9 Tribal Nations in the Midwest. Preliminary findings have recently been reported to our partner Tribal natural resource agencies, at which time additional opportunities for survey data collection were identified. To further supplement these data, discussions with a subset of the Tribal natural resource agencies have been initiated to explore additional methods (e.g. focus groups, etc) to collect hunter perspectives on CWD management. The information gathered through these combined efforts, along with scientific resources on CWD best management practices, will directly inform a draft CWD management plan that will be co-developed by a working group of the Tribal CWD Surveillance Network.

Fifth Update October 1, 2022

Over this reporting period, we continued to solicit and collect tribal hunter surveys throughout the 2021/22 deer hunting season and into the 2022/23 deer hunting season. Surveys were self-administered either on paper or online via Qualtrics. In addition to working with tribal biologists, we've also leveraged community events, such as pow wows and veterinary service clinics to conduct outreach on CWD and solicit more participation from hunters in the survey. Through this additional effort, we have more than doubled the number of surveys completed since April 2022, having 93 survey responses received, representing hunters from 9 Tribal nations in the Midwest. We intend to continue to leverage opportunities through the 2022/2023 hunting season to further expand our sample size ahead of final analysis. The information gathered through these combined efforts, along

with scientific resources on CWD best management practices, will directly inform a draft CWD management plan that will be co-developed by a working group of the Tribal CWD Surveillance Network.

Sixth Update April 1, 2023

Since the last reporting period we have closed the Tribal Hunter survey, having maintained it through two hunting seasons through dissemination by tribal natural resource managers and direct community engagement at five community events. Two events were powwows: one with the Fond du Lac Band of Lake Superior Chippewa and the other with the Grand Portage Band of Lake Superior Chippewa. Three events were at UMN student-led veterinary clinics with the Red Lake Band of Chippewa, Leech Lake Band of Ojibwe, and Mille Lacs Band of Ojibwe. Through these efforts, we obtained 140 survey responses, representing hunters from 16 Tribal nations in the Midwest. We are currently analyzing these survey data to report to tribal natural resource managers in the coming weeks. Preliminary results show that cultural preservation and subsistence are the two most important reasons tribal members hunt. Tribal members generally agree that they have a strong role in keeping the deer population healthy and most report they would likely test their deer for CWD if there was no cost. Most respondents reported that they do not receive much CWD information, but expressed preference for receiving information from tribal natural resource departments. These results will be leveraged in the planning of workshops in partnership with several tribal natural resource agencies to solicit community perspectives on specific CWD management actions, their impacts on culturally embedded subsistence practices, and other considerations. Information from these workshops will be used to guide conversations between tribal natural resource managers and the state in the co-development of management actions for controlling CWD in and around tribal lands. Planning conversations with natural resource managers from White Earth Nation, Red Lake Band of Ojibwe, and Leech Lake Band of Ojibwe have begun with the goal of holding workshops in May 2023. Output from these workshops will be shared with other tribal natural resource managers across the Midwest.

Final Report between project end (June 30) and August 15, 2023

Results from the tribal hunter survey are being disseminated to all tribal natural resource managers, highlighting hunter responses to specific management practices that may guide CWD management decisions. In the last two months of this project, we took this effort further by working closely with tribal managers to outline CWD management priorities, leading into workshops with hunters and other community members in White Earth, Leech Lake, and Red Lake. These workshops were a great opportunity for CWD outreach, and we were also able to assess perspectives on barriers and opportunities related to management priorities identified by managers. A draft management plan will soon be circulated to the natural resource managers of these Tribal Nations for further consideration, adoption, and implementation by the tribes. The draft management plan may be used as a template by other tribes for the adoption of CWD management strategies. Further, this process for engaging community members in action planning is a model approach that is of interest to other tribes (e.g., Keeweenaw Bay Indian Community) in the drafting of their own management priorities and plans.

IV. DISSEMINATION:

Description:

An inherent part of this project is the sharing and dissemination of information pertinent to the successful control of CWD in Minnesota. Additionally, our grassroots and community engaged approach will establish a direct connection with leaders and members of our Native American, southeast Asian, and Amish communities for continued information sharing. We will utilize a number of resources to reach our intended audiences, which includes:

- The MNPRO website <https://mnpro.umn.edu/our-vision> – this website has been established as a scientific resource for the broader community, and includes the community-specific outreach materials that have been developed for CWD education.
- Local print media (e.g. articles in local newspapers)- this is a resource our team has successfully utilized to disseminate project-related information to Tribal members.

- Graphical recordings – we will utilize the services of a graphical artists who captures real-time information discussed in group meetings through a transparent process that both engages audience participation and ensures accuracy of discussion documentation. An additional benefit is that the resulting discussion charts are left with the community to facilitate information sharing with the broader community beyond the meeting event.
- Outreach materials – our team has been developing innovative outreach materials that can be shared with diverse communities, and includes 3-D visual representations of the CWD prion and deer anatomy (for CWD sampling), translated CWD fact sheets, as well as booklets that are a low-tech visual demonstration of prion spread through a deer's body.
- MNPRO community event booth – community events (e.g. Treaty Days, Pow-wows) are a great opportunity to connect with large numbers of community members. We will work with community leaders and liaisons to identify opportunities to engage at such events.

Because we are utilizing this project to also generate new information on the needs of these diverse communities related to CWD outreach and education, as well as responses to CWD management, we also have a plan for the dissemination of these results to natural resource managers and community leaders, as well as other scientific audiences engaged in CWD management and human dimensions research. These will include:

- Reporting directly to community leaders and tribal natural resource managers.
- Scientific presentations at Tribal natural resource conferences (e.g. through the Bureau of Indian Affairs).
- Dissemination through scientific journals (e.g. Journal of Wildlife Disease, Interdisciplinary Journal of Partnership Studies) as well as other wildlife and management periodicals (e.g. The Wildlife Professional).
- Dissemination to MN DNR human dimension research team.
- Scientific presentations and discussions through USGS Wildlife Health Center and the NCDC234 Multistate Research Coordinating Committee and Information Exchange Group, both of which are conducting multistate human dimensions research pertaining to CWD spread and control. Our team is coordinating research activities with USGS and the NCDC234 Committee to enhance the reach and impact of our work in Minnesota. In particular, Dr. Wolf has joined the subcommittee for human dimensions CWD efforts for the NCDC234 Committee, where the results of this work will be particularly relevant.

The Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications per the [ENRTF Acknowledgement Guidelines](#).

First Update January 4, 2021

Our team has distributed 375 CWD factsheets and CWD Transmission and Progression booklets to tribal partners, 250 to Amish communities, and 100 to SE Asian communities.

The project was also introduced to the Voigt Inter-tribal Task Force at their October meeting with a follow-up on the progress of the project at their December meeting. This Task Force includes representatives from the 11 Wisconsin and Michigan tribal members of the Great Lakes Indian Fish and Wildlife Commission (GLIFWC). This outreach garnered new interest in the project and resulted in additional support from GLIFWC to involve at least two additional tribal communities from their membership in our efforts.

Dr. Wolf and other team members have also shared current knowledge and efforts with the NC1209: North American interdisciplinary chronic wasting disease research consortium Human Dimensions Working Group,

supported by the State Agricultural Experiment Stations (SAES) from the Hatch Multistate Research Fund (MRF) provided by the National Institute for Food and Agriculture (NIFA), as well as a newly formed working group on the integrated socio-environmental system of CWD, coordinated by the USGS and US Fish and Wildlife Service. Through these collaborations we strive to represent the needs and interests of more diverse hunting communities, as well as share methods and approaches. In particular, the Tribal Hunter Survey instrument will be curated with the Human Dimensions Working Group for future use in data collection by other CWD research teams around the country.

Second Update May 18, 2021

Since the start of our project our team has distributed 375 CWD factsheets and CWD Transmission and Progression booklets to tribal partners, 300 to Amish communities, and 100 to SE Asian communities. The project has also been shared through tribal partner websites, Facebook pages, and word of mouth through the community. In particular, the project was discussed and promoted by the Keweenaw Bay Indian Community on their local radio station

(https://www.youtube.com/watch?app=desktop&v=ChLiZAnoHVI&fbclid=IwAR1VLFr0EjNvcbfQ19KKKRch34ZeOiGxqwGLIJQyP8s9-sQ0DgG_6kAqEU4).

The project was the focus of two presentations within this reporting period:

Wolf T. Engaging diverse hunting communities on Chronic Wasting Disease. Ecosystem Health Seminar Series, University of Minnesota, April 12, 2021.

Bernstein L. CBPR, professional identity, and building community partnerships. PUBH 6815 Community Based Participatory Research, University of Minnesota, April 3, 2021.

Third Update October 1, 2021

Graduate student researcher Roger Faust had an abstract describing this project accepted for presentation at the Pathways 2021: Human Dimensions of Wildlife Conference, co-hosted by The Washington Department of Fish and Wildlife and Colorado State University. I was originally scheduled to be held September 19-22, 2021, but due to COVID-19 surges has been rescheduled for May 1-4, 2022.

CWD factsheets and informational handouts were created to be shared with all community members participating in interviews with community partners. Early interviews revealed little knowledge of CWD among several tribal communities that had not yet been impacted by CWD, thus, factsheets were developed and assembled to 1) facilitate the interview process as well as 2) share additional, more detailed CWD knowledge following completion of the interviews.

We have been working through tribal natural resource agencies to distribute the tribal hunter survey in association with the start of hunting season, and in doing so created an informational flier on CWD, surveillance, and wildlife-safe ammunition. These fliers were distributed through 12 tribal natural resource agencies for dissemination at licensing offices, registration stations, and agency websites.

Fourth Update April 1, 2022

Abstract accepted:

Faust R, Wolf T, Bernstein L, Schwabenlander M, Landon L. Partnering with Diverse Hunting Communities to Tackle CWD. Pathways 2022: Human Dimensions of Wildlife Conference. May 2022.

Fifth Update October 1, 2022

As of this reporting period, our team has distributed 375 CWD factsheets and CWD Transmission and Progression booklets to tribal partners, 525 to Amish communities, and 100 to SE Asian communities. The

project has also been shared through tribal partner websites, Facebook pages, and word of mouth through the community. We've also engaged communities in CWD outreach at the following events:

- Iskigamizige-Giizis Pow Wow, Black Bear Casino, Hinkley, MN, April 16, 2022. Staffed a MNPRO booth to deliver CWD outreach and engage hunters and community members in discussions about CWD. Deeply engaged with 25 pow wow participants.
- Red Lake SIRVS Clinic, May 28-29, 2022. CWD outreach delivered to community members accessing clinic services as they entered the facility. 51 community members were engaged in discussions about CWD; 36 hunters completed the tribal hunter survey.
- Grand Portage Pow wow & Rendezvous Days, August 12-14, 2022. Shared an information tent/booth with the 1854 Treaty Authority and survey was distributed to hunters renewing licenses. 29 individuals from various tribal communities engaged in conversations on CWD; 12 hunters completed the tribal hunter survey.

Recent presentations:

Faust R, Wolf T, Bernstein L, Schwabenlander M, Landon L. Partnering with Diverse Hunting Communities to Tackle CWD. Pathways 2022: Human Dimensions of Wildlife Conference. May 2022.

Faust R, Wolf T, Bernstein L, Schwabenlander M, Landon L. Engaging Tribal Nations of the Great Lakes Region on Chronic Wasting Disease through a Community-Based Participatory Research Approach. North American Congress for Conservation Biology 2022. July 2022.

Recent publications:

Schwabenlander, M. D., Potts, N., Moore, S., Larsen, P. A., Bernstein, L. A., & Wolf, T. M. (2022). Upper Midwest tribal natural resource managers' perspectives on chronic wasting disease outreach, surveillance, and management. *Conservation Science and Practice*, e12710.

- Note: Communication from MN DNR leadership is that our recent publication Schwabenlander et al 2022 has been incorporated into their hiring process for wildlife managers who would actively cooperate with tribal nations in the management of CWD.

Sixth Update April 1, 2023

Scientific presentations:

Faust R, Wolf T, Fulton D, Bernstein L, Schwabenlander M, Landon L, Struck M. Engaging Tribal Nations of the Great Lakes Region on Chronic Wasting Disease through a Community-Based Participatory Research Approach. SACNAS National Diversity in STEM Conference 2022. October 2022.

Community engagement:

White Earth Community Outreach on Veterinary Education (COVE) event, March 14, 2023. CWD outreach delivered to community members accessing SIRVS clinic services as they entered the facility.

Legislative testimonies:

Dr. Peter A. Larsen. Minnesota Center for Prion Research & Outreach: Chronic Wasting Disease Update. Minnesota Legislature, Joint: House Environment and Natural Resources Finance and Policy and Senate Environment, Climate and Legacy. 7 Feb 2023

Final Report between project end (June 30) and August 15, 2023

Our project prioritizes dissemination efforts that enhance chronic wasting disease (CWD) awareness and education. We have crafted CWD factsheets, CWD Transmission and Progression booklets and coloring books, and translated materials that cater to Native American, southeast Asian, and Amish groups. We've engaged graphical artists to document real-time discussions, fostering accurate and interactive knowledge sharing. The [MNPRO website](#) serves as a comprehensive repository for CWD outreach and educational materials, complemented by print media and community event exhibits (e.g., Powwows, Earth Day, Filmore County Fair). Discussions with community partners have led to ongoing action plans for CWD outreach and education co-creation.

Engagement through Community Events

Focus Group Meetings with Tribal natural resource managers, hunters, and other community members, May 16, 2023 (White Earth), May 17, 2023 (Leech Lake), May 25, 2023 (Red Lake).

Public meetings held in White Earth, Leech Lake, and Red Lake to discuss the science and management of chronic wasting disease and solicit community feedback on the barriers and opportunities for CWD management.

Outreach/Follow up with Amish (June 13, 2023): Follow up with key community leaders in all 3 communities (Granger, Canton, St. Charles) to disseminate documents on the findings of thematic analysis in addition to fact sheets reflecting these concerns. 20 of each document were provided for distribution in each community. Identified 2 hunter safety instructors in communities to distribute additional materials during hunter education courses.

Filmore County Fair CWD Exhibit (July 18-21, 2023): Hosted an information booth on CWD over 4 days of the Filmore County Fair.

Recent Presentations

Faust, R. **A Community-Based Participatory Approach to Develop Chronic Wasting Disease Outreach with Tribal Communities.** 29 July - 04 August 2023, 71st Annual International Conference of the Wildlife Disease Association.

Yoder, C. **Let Nature Take its Course - Attitudes and Knowledge of Chronic Wasting Disease within Southeastern Minnesota Amish Communities.** 29 July - 04 August 2023, 71st Annual International Conference of the Wildlife Disease Association.

Faust, R. **Using a Community-Based Approach to Develop CWD Outreach with Tribal Communities** 31 May - 03 June 2023, Pathways: Human Dimensions of Wildlife Conference.

Faust, R. **Community-Based Efforts to Develop CWD Outreach with Tribal Communities.** Fond du Lac Tribal & Community College Earth Week Seminars, Cloquet, Minnesota. (April 19, 2023). Invited.

Manuscripts

Yoder et. al. Attitudes and Knowledge of Chronic Wasting Disease within Southeastern Minnesota Amish Communities. In preparation.

Faust et al. A Community-Based Participatory Research Approach to Chronic Wasting Disease Outreach Development in Upper Great Lakes Tribal Communities. In preparation.

V. ADDITIONAL BUDGET INFORMATION:

A. Personnel and Capital Expenditures

Explanation of Capital Expenditures Greater Than \$5,000: NA

Explanation of Use of Classified Staff: NA

Total Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation:

Enter Total Estimated Personnel Hours for entire duration of project: 3,827.2	Divide total personnel hours by 2,080 hours in 1 yr = TOTAL FTE: 1.84
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Total Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation:

Enter Total Estimated Contract Personnel Hours for entire duration of project: 1,920	Divide total contract hours by 2,080 hours in 1 yr = TOTAL FTE: 0.92
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VI. PROJECT PARTNERS:

Name	Title	Affiliation	Role
Veterinary Population Medicine; Veterinary and Biomedical Sciences; Fisheries, Wildlife and Conservation Biology		University of Minnesota	Lead project partner
Grand Portage Dept. of Biology and Environment – Seth Moore	Director	Grand Portage Band of Lake Superior Chippewa	Co-leading project partner

A. Partners outside of project manager's organization receiving ENRTF funding

Tribal/Community liaisons and survey personnel – estimated 11-12% FTE to facilitate and coordinate community engagement and outreach activities within each community.

B. Partners outside of project manager's organization NOT receiving ENRTF funding

NA

VII. LONG-TERM- IMPLEMENTATION AND FUNDING:

The proposed activities will help fill high priority outreach and research gaps in engaging culturally-diverse communities in the management of CWD. The goal of this research is to fill existing gaps in CWD-related outreach in diverse communities, as well as enhance understanding of community-specific needs in regard to CWD information and management perceptions. We expect to produce results on community-specific engagement on CWD that will facilitate MNPRO's ongoing outreach efforts, as well as those of MN state agencies. We also expect that successful work in these communities will reveal new perspectives and questions that will inform future research efforts. In that case, we will use data derived from this project in future proposals to NSF programs (e.g. Dynamics of Integrated SocioEnvironmental Systems, https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13681).

VIII. REPORTING REQUIREMENTS:

- Project status update reports will be submitted April 1 and October 1 each year of the project
- A final report and associated products will be submitted between June 30 and August 15, 2023.

IX. SEE ADDITIONAL WORK PLAN COMPONENTS:

A. Budget Spreadsheet

B. Visual Component or Map

C. Parcel List Spreadsheet

D. Acquisition, Easements, and Restoration Requirements

E. Research Addendum

Attachment A: Project Budget Spreadsheet
 Environment and Natural Resources Trust Fund
 M.L. 2020 Budget Spreadsheet

Legal Citation: M.L. 2020, Chp. xx, Sec. xx, Subd. xx

Project Manager: Tiffany Wolf

Project Title: Chronic Wasting Disease targeted outreach engaging culturally-

Organization: University of Minnesota

Project Budget: \$270,468

Project Length and Completion Date: 2 years; 6/30/2023

Today's Date: 08/10/23



ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET		Budget	Amount Spent	Balance
BUDGET ITEM				
Personnel (Wages and Benefits)		\$ 165,693	\$ 162,556	\$ 3,137
Veterinary Public Health Resident, \$47,270, 20% effort x 2 yrs Add funding from support staff line \$11,655	\$ 30,564			
MS student, \$46,176, 50% effort x 2yrs	\$ 92,352			
Marc Schwabenlander (Program Manager), \$97,100, 10% effort x 2yr	\$ 19,420			
Tiffany Wolf (PI), \$157,565, 5% effort x 2 yrs	\$ 15,757			
Peter Larsen, (Co-PI), \$190,024, 2% effort x 2 yrs	\$ 7,601			
Professional/Technical/Service Contracts				
Tribal/Community liaisons and survey personnel to facilitate Tribal communications/meetings. These personnel will be community members that will be contracted for this project and not supported for work on this project through any other means. In addition to time on the project, funds will also be used to reimburse costs related to travel by community partners to facilitate data collection, and/or participant interviews estimated at \$45 per interview		\$ 48,000	\$ 6,741	\$ 41,259
Graphical recorder to record information from focus group meetings		\$ 12,000	\$ 2,834	\$ 9,166
Material translation to serve multilingual stakeholders/study participants		\$ 2,000		\$ 2,000
Transcription and data entry of research/survey data		\$ 5,000	\$ 899	\$ 4,101
Equipment/Tools/Supplies				
Outreach materials,Focus group meetings, 16 events, \$450		\$ 11,200	\$ 6,630	\$ 4,570
Survey supplies, equipment and shipping expenses. Supplies include six electronic tablets for data collection and transfer by community partners (\$250/tablets), among other recording supplies. These will be assigned to specific community partners and returned to the university at project end. Funding to also cover shipping expenses to send supplies and outreach materials to community		\$ 10,000	\$ 2,658	\$ 7,342
Travel expenses in Minnesota				
Travel to 2-3 meetings in Tribal and Amish communities; Includes lodging \$80/night and M&E at \$46/day for teams of 3, \$42/day university vehicle rental.		\$ 16,576	\$ 6,263	\$ 10,313
COLUMN TOTAL		\$ 270,469	\$ 188,581	\$ 81,888
SOURCE AND USE OF OTHER FUNDS CONTRIBUTED TO THE PROJECT	Status (secured or pending)	Budget	Spent	Balance
Non-State: USFWS tribal wildlife grant	secured	\$ 200,000	\$ 37,969	\$ 162,031
Non-State: UMN Office of Vice President of Research	secured	\$ 22,440	\$ 22,440	\$ -
In kind: Seth Moore is a tribal employee (Grand Portage Department of Biology and Environment); this time on this project is considered an in kind contribution. 10% FTE (\$130,000) x 2 years = \$26,000	secured	\$ 26,000	\$ 13,000	\$ 13,000
In kind: David Fulton is a federal employee (USGS), this time on this project is considered an in kind contribution. 10% FTE (\$190,000) x 2 years = \$38,000	secured	\$ 38,000	\$ 19,000	\$ 19,000
Other ENRTF APPROPRIATIONS AWARDED IN THE LAST SIX YEARS	Amount legally obligated but not yet spent	Budget	Spent	Balance
Previous appropriation: M.L. 2017, Chp. 96, Sec. 2, Subd. 04g, Project Title: Chemicals of emerging concern in subsistence species used by Minnesota Chippewa, Project manager: Seth Moore		\$ 400,000	\$ 388,424	\$ 11,576
Previous appropriation: ML 2016, Ch 186, Sec 2, Subd 6a, Project Title: Understanding the benefits and limitations of using goats for invasive plant control, Project manager: Tiffany Wolf	\$ 242,882	\$ 445,533	\$ 380,322	\$ 65,211
Previous appropriation: M.L. 2019, First Special Session, Chapter 4, Article 2, Subd. 03t, Project Title: Development of advanced diagnostic tests for Chronic Wasting Disease, Project manager: Peter Larsen	\$ 606,576	\$ 1,804,000	\$ 1,156,180	\$ 41,244



ENGAGING MINNESOTA'S TRIBAL NATIONS ON CWD

Targeted discussions with Minnesota's Tribal Nations focused on increasing access to culturally-relevant information on the disease, including science and management, as well as seeking to understand barriers to and opportunities for tribal-led management.

FOCUSED COMMUNITY EVENTS **COLLABORATIVE ENGAGEMENT OPPORTUNITIES**



Pictured above: Representatives from Grand Portage Band of Lake Superior Chippewa, Keweenaw Bay Indian Community, Red Lake Band of Ojibwe, Shakopee Mdewakanton Sioux Community, Mille Lacs Band of Ojibwe, White Earth Nation, Bad River Tribe, and the University of Minnesota, as well as Tribal natural resource managers, hunters, and other community members at meetings in January and May 2023.