Goal 1: Designing & Implementing Programs of Study: Goals, Objectives and Strategies

QUESTION: What activities were conducted during the grant year that supported quality Programs of Study (POS)?

Meetings were held at Northland Community and Technical College (Northland) for the purpose of continuing our articulation agreements in medical careers with Fosston High School, Thief River Falls High School and Roseau High School. Due to recent retirements there was concern about losing quality CTE teachers in medical careers. We are lucky to be able to offer medical career courses in three of our districts.

The secondary coordinator meets with principals four times a year and with school counselors two times per year. Individual schools are also visited at least two times per year depending on the location and needs of the school. During these meetings the coordinator reviews 1S1-6S2 data to ensure stakeholders understand the importance of individual education plans for each student in the district. It’s important to note that career and college readiness plans for each school district are not static and will be changing constantly as a result of legislation, curriculum changes and student needs.

NCTC technical programs were represented at the Northern Valley Career Fair in Grand Forks, ND which brings 1700 students from Northwest MN and Northeast ND. Sixteen technical programs representing ten different career pathways were represented at Northern Valley.
Advisory committee meetings were held at the college in both spring and fall semesters. These meetings provided opportunities for business and industry representatives to provide input on POSs.

Northland continues to partner with Altru Health System to support our Respiratory Therapist AAS degree program. The Respiratory Therapist program at Northland has had low enrollment for some time and it has been an expensive program to conduct. Because the program serves a valid need for the local economy, our largest health organization, Altru Health Systems, agreed to support our program by reimbursing the college the equivalent of tuition costs for up to six students when second-year enrollment falls to less than 12 students. This provides financial support for the program while also ensuring that Altru Health System has a constant supply of new respiratory therapists.

Northland 1st cohort in Manufacturing Process Technology AAS degree program started their second year. This program prepares students for technical careers in the manufacturing industry. It provides students with strong technical competencies in mechatronics. This program was developed with cooperation and support from local manufacturing businesses.

Technical skill assessments were given in all seven of the Pine to Prairie Programs of Study. While our scores were down, it’s my belief that this percentage will increase as instructors become more confident and comfortable with the curriculum and testing materials.

Although Perkins funds are limited at both the secondary and postsecondary level, we continue to support our programs by purchasing modern tools and equipment. CTE instructors at both the secondary and postsecondary levels request equipment from the Perkins coordinators which will enhance and align their programs to industry standards. Local as well as Perkins dollars are used at the secondary and postsecondary level to purchase modern, industry standard tools and equipment.

**QUESTION:** Describe the impact of the POS in terms of participation, concentrators, student outcomes, etc.

Secondary: Due to a renewed emphasis of the importance of CTE programs at the national, state and local level, we are seeing an increase of secondary Pine to Prairie students participating in CTE programs. In 2014-2015 there were 2936 students enrolled. During the 2015-2016 school year we had a total of 3100 students taking CTE courses. 2016-2017 saw an increase again with a total of 3226 students enrolled in CTE courses. 2017-2018 saw a slight dip in numbers but that can be attributed to some recent teacher retirements in our consortium.

Our CTE student graduation rates have been high and we expect to maintain these targets. In 2015-2016 our 3S1 target was 99 percent with an actual of 98.91 percent. 2016-2017 data showed an increase to 99.31 percent graduation rates. Our 3S1 data for 2017-2018 was 98.82%. This is still a very high rate that we are all very proud of.

At the postsecondary level, the total headcount of Northland CTE students was 1,472 in reporting year 2019 compared to 1,424 the prior year (reporting year 2018/cohort entry year
2016). For reporting year 2019, the percentage of completers, concentrators, and participants was as follows:

Completers 29.08%
Concentrators 17.6%
Participants 53.33%
NCTC enrollment overall has been in a steady decline during the period FY2015 through FY2018 with a slight increase in FY19. At the same time, the total number of completers, concentrators, and participants decreased less than 1%. This shows that despite declining enrollment overall, CTE enrollment remains steady by comparison. One can conclude that students perceive CTE as having value. With our close proximity to North Dakota, many NCTC graduates pursue employment in Grand Forks, ND and surrounding areas. Altru Health System was the largest employer for Grand Forks County, ND in 2016. According to US Census Bureau 2016 estimates and Bureau of Labor Statistics data from May 2016 (latest data available), North Dakota has the third-highest density of healthcare workers in the nation with 50 per 1,000 residents. Minnesota falls closely behind with 47 medical workers per 1,000 residents. As the population continues to age, healthcare occupations will continue to be the major employers in northwest Minnesota and eastern North Dakota in the coming years. Therapeutic Services and Diagnostic Services POSs will therefore continue to be popular for the Pine to Prairie/Northland Consortium

**QUESTION:** What activity (or POS) was the most successful, something that you would repeat or share with others and why?

We have had tremendous success with our mobile manufacturing and welding labs. We had a total of 18 school districts signed up to use the trailers during the 2018-2019 school year. The number of students who were impacted by this new curriculum is approximately 1200. There is always a learning curve when introducing new technology and curriculum, but the instructors have embraced the challenge. Online College in the High School has also proven to be very popular in our region. Students are able to enroll in college courses and earn dual credit, while still remaining in their buildings which is important to the overall climate of their building.

Therapeutic Services is the most successful POS in the consortium due to the number of students who pursue credentials in the medical areas, especially in nursing. Northland students majoring in programs within the Therapeutics Services pathway account for over 20% of all students who have declared majors. Several of the high schools in the consortium offer courses in the Therapeutic Services POS. Courses such as Health Occupations, Medical Terminology, Anatomy & Physiology, Psychology, and Ethics are available for college credit either through College in the High School or Online College in the High School (OCHS). Of course, many of these courses also apply to the Diagnostic Services POS. Online College in the High School (OCHS) continues to be very popular in our consortium and important for secondary students to have a wide selection of options for college credit in the rural communities of our consortium.

**QUESTION:** Describe any innovative initiatives. Did your consortium award incentive subgrants for exemplary performance or to promote innovation? If yes, please describe.

Pine to Prairie Cooperative Center in conjunction with Northland Community and Technical College was given a CPIP grant for the purpose of creating a POS in manufacturing. These funds were used to create instructional videos for the Mobile Manufacturing Labs to help instructors and students navigate the new technology.
Northland continues to host the Pioneer Robotics Vex Robotics Competition Tournament. Statewide teams have increased from 150 to over 400 teams in the last few years and a total of 50 teams from Northwest Minnesota competed in the event. This robotics competition was sponsored by the 360 Center of Manufacturing Excellence, Digi-Key Electronics, Philadelphia Macaroni Company, Central Boiler, and SMC Corporation. These sponsors see the value in how these events shape the participants and give them the opportunity for hands on competition that can be molded in various programs like electronics and manufacturing and prepare them to work for these organizations in the future.

Northland conducted Multiple DroneTech UAS Summer Camps this year at multiple locations ranging from the WOTN Airshow, the Boy Scouts Basecamp and at the Northland Aerospace facility. This camp was designed for students in grades 9-12 who are interested in aviation and technology. A DroneTech Educators’ Workshop was conducted twice this year. This workshop was designed to help secondary and postsecondary educators incorporate UAS technology into existing STEM education at their schools/colleges.

If you answer “Yes” to any of the following questions, please briefly describe your activities.

**QUESTION:** Did your consortium:

- expand the use of technology in CTE programs? Mobile Manufacturing and Welding Labs were shared across the districts in our region. Northland also worked on kits to be available for schools to use in aerospace fields that can be shipped to educators to utilize in their classes. Northland purchased self-contained breathing apparatuses for the fire programs to prepare for real world scenarios in the field.

- offer or provide professional development to CTE teachers, faculty, administrators, and/or career guidance and academic counselors? Professional development was provided for instructors to learn how to properly use the equipment found in the Mobile Labs. Professional development was a key task this year for assisting our faculty to continue to receive the most up to date training. Faculty in Welding received an AWS credential to be able to sign off on students in class as well as offer it to business and industry partners looking for recertification. With the new Cyber security program at Northland our faculty were able to acquire some advanced training to further the knowledge of students completing the program.

- provide support for CTE programs that improve the academic and career and technical skills of students through the integration of academics with CTE? The Mobile Labs were offered to other curriculum areas such as science and physics to encourage cross curricular instruction.

- use Perkins funds to support CTE programs that offer experience in and understanding of, all aspects of an industry for which students are preparing to enter? All CTE programs in the Pine to Prairie Cooperative Center are encouraged to incorporate the All Aspects of an Industry Curriculum into their classroom activities.

- use Perkins funds to support the improvement or development of new career and technical education courses and initiatives, including career clusters, career academies,
and distance education? Red Lake Falls High School used Perkins funds to obtain a CNC router for the purpose of bringing modern machining capabilities in the form of CAD/CAM to their students.

- use Perkins funds to provide activities to support entrepreneurship education and training? Perkins funds in our consortium are used to help support a variety of CTSOs.

**Goal 2: Effectively Utilize Employer, Community, and Education Partnerships**

**QUESTION:** How did your consortium support partnerships among local educational agencies, institutions of higher education, adult education providers, and, as appropriate, other entities, such as employers, labor organizations, intermediaries, parents, and local partnerships, to enable students to achieve state academic standards and career and technical skills?

The Director is a member of the Northwest Private Industry Council which is a local Workforce Development Board that serves the counties of Kittson, Roseau, Marshall, Pennington, Red Lake, Polk and Norman. We have several work-based learning opportunities in Fosston, Fertile-Beltrami, Bagley and Thief River Falls which enable students to experience a wide range of experiences. Northlands Perkins coordinator sits on a local chamber board and helps to collaborate between industry and college initiatives. Northland also houses MN Workforce Solutions, NW Private Industry Council and Adult Basic Education on our campuses. This makes a student’s experience more efficient because when they come in for any of these services they usually have others needs that can be addressed while on site.

**QUESTION:** Do business and industry partners help connect students to experiential and work-based learning opportunities? If so, what type of experiential/work-based learning is available to students in which programs? How many students were impacted in specific career pathways?

Fosston High School has a wonderful Work Based Learning Program where students are able to work in a wide variety of local businesses. Bagley students are able to experience an apprenticeship program through TEAM Industries. Warroad, Thief River Falls and Fertile-Beltrami also have Work Based Learning Programs in place. Our biggest hurdle is finding properly licensed instructors. Northlands Agriculture programs have internships in the spring semesters of both years in the program. This allows a student to go work with an Ag partner and gain hands on knowledge with pay while also receiving college credits.

**QUESTION:** Describe the status and activities of CTE advisory committees in your consortium.

Within the Pine to Prairie/Northland consortium there are separate advisory committees for secondary and postsecondary. The consortium consists of 28 schools spread across northwest
Minnesota. Distance and time make it difficult for combined advisory committees. At the secondary level we have some schools in smaller towns that have a joint advisory committee. Representatives from the town serve on these joint committees, but each CTE program area is represented on the committee. It’s important to note that most of our schools use separate committees for each of the CTE areas. The consortium director attends the postsecondary advisory committee meetings and encourages secondary teachers to participate in the postsecondary committee meetings, but distance, coaching and family responsibilities makes this difficult.

At the postsecondary level, program advisory committees provide invaluable support and guidance to CTE programs. Prior to any program changes, advisory committees review changes and provide their input, and recommend approval or disapproval. It is important for program faculty to obtain advisory committee support for course or program changes because without this support, proposed changes rarely are approved. When program changes are reviewed by the college’s Academic Affairs and Standards Council (AASC), they look for the advisory committee’s “seal of approval” prior to voting to accept any course or program changes. If the program advisory committees don’t support a change, the AASC usually doesn’t vote to approve it either. Northland’s advisory committees typically perform the following tasks:

- Review TSA results
- Review proposed changes to curricula and academic programs
- Provide input on course and program revisions
- Support development of articulation agreements
- Advise on the development of new degree programs
- Provide opportunities for job placement
- Advise on equipment purchasing
- Provide input regarding trends within the industry
- Make suggestions on program marketing
- Assist with meeting accreditation requirements
- Assist with internships and clinical experiences

**QUESTION:** Did your consortium use Perkins funds to support CTSOs? If so, how?

Yes, Perkins funds were used to help with transportation and lodging for the advisors of CTSOs.

**QUESTION:** Did your consortium use Perkins funds to support partnerships between education and business, or business intermediaries, including
cooperative education and adjunct faculty arrangements at the secondary and postsecondary levels? If yes, please describe.

The secondary Perkins coordinator uses a portion of his time to connect with our local businesses. Recently a meeting was held with Ericco Manufacturing to discuss ways to bring modern manufacturing techniques to area high schools. Thief River Falls High School sponsors a two day event called Manufacturing Career Day where a variety of local manufacturers introduce students to careers associated with modern manufacturing. Other events include Construct Tomorrow where students are exposed to careers in the construction industry, as well as career expos in health, technology and various trades.

Goal 3: Improve Service to Special Populations

**QUESTION:** What strategies were adopted to overcome barriers for special populations and non-traditional (by gender) learners?

The Perkins coordinator emphasizes the importance of non-traditional enrollment to the administration, counselors and teachers. In 2017-2018 Pine to Prairie had a 6S1 of 33.88% and a 6S2 of 30.78% of CTE enrolled students. Through communication with teachers, the coordinator emphasizes that in small schools with limited enrollment you have to actively attract non-traditional students to help support and sustain the CTE programs. Most CTE teachers also teach 7th and 8th grade students with an emphasis on exploratory curriculum designed to engage and encourage students to pursue their interests in a CTE classroom once they reach high school.

According to the latest cohort data, over 75.75% of Northland students identify themselves as academically disadvantaged. This is by far the largest special population category at the college and is therefore the reason why we invest Perkins resources into tutoring services provided in our Academic Success Center. The next largest special populations category at Northland is "economically disadvantaged," which exceeds 41.58% of CTE students. The Northland Foundation provides numerous opportunities for students to apply for scholarships to assist with the cost of tuition and fees. The amount of scholarships awarded exceeds $100,000 annually. Northland provides robust counseling services at both campuses. Full-time counselors are available at each campus to support all students, but especially special populations students who may have a greater need for counseling services. Counselors, advisors, and faculty recognize the unique circumstances that can negatively impact special populations students and work closely with these students to help them achieve academic success.

**QUESTION:** What support service was provided during the grant year that was most successful in increasing special population and/or non-traditional learner recruitment and retention?
Research has shown the most effective way to encourage special population and/or non-traditional learners is to show the students individuals who look like them who are having success in the career field. This has been done through guest speakers, industry tours and video. At the postsecondary level, providing tutoring and counseling services to students are the most successful services provided. These services by far had the largest impact on the success of CTE students due to the number of students reached through this program. Nine full- and part-time tutors provided excellent service to students through Northland’s Academic Success Centers on both the East Grand Forks and Thief River Falls campuses.

QUESTION: Describe how your consortium uses data-driven decisions to target consortium activities to the needs of special populations. What impact have these efforts had on success of special populations?

In reviewing the data from our Perkins reports, we realized that 68% of the students enrolled in our CTE programs come from special populations. This figure has stayed fairly consistent in the past few years. In looking at the data from our individual schools, it was noted that the majority of our schools do an excellent job in meeting the goals of non-traditional participation and non-traditional completers. In the schools that are below target discussions are held with the consortium director, teachers and administrators to look for ways to improve. It’s important to note that in small school districts, slight variations in class enrollment can show dramatic effects on the data collected.

Northland has reviewed the EPM 11 data sets and are working to utilize Perkins cohort and snapshot data to monitor success rates for students in the following special populations categories:

• Students with disabilities
• Economically disadvantaged students
• Nontraditional students
• Single parents/single pregnant women
• Displaced homemakers
• Students with limited English proficiency

From this assessment, we hope to see increases in both graduation and retention rates for these students. This should be reflected by increased 2P1 and 3P1 rates. In reviewing the latest cohort data, we see that overall, 3P1 rates have decreased in the 2019 reporting year over 2018, but 2P1 rates have increased for the same period. The 3P1 rate decreased from 24.50% to 22.68% while the 2P1 rate increased from 59.38% in 2017 to 62.56% in 2018. The retention or transfer rate has decreased while the credential, certificate, or degree completion rate has increased slightly. This allowed us to meet both targets in 2019.

QUESTION: How did your consortium provide preparation for non-traditional fields in current and emerging professions and other activities that expose students to high-skill, high-wage occupations?
The Director meets monthly with Superintendents, quarterly with Principals and twice a year with secondary counselors. During these meetings strategies and discussions are held in regards to introducing students to non-traditional career fields. Instructors are encouraged to invite individuals who are in non-traditional career fields to speak to their students to discuss opportunities that are available to them.

Northland has approved a new position called the Equity and Inclusion Director. This is a grant funded position for a National Science Foundation grant. This individual will be working with multiple CTE programs to find ways to connect with nontraditional and underserved or underreached individuals.

**QUESTION:** How did your consortium provide support for programs for special populations that led to high-skill, high-wage or in-demand occupations?

Although Perkins funds are limited at both the secondary and postsecondary level, we continue to support our programs by purchasing modern tools and equipment. CTE instructors at both the secondary and postsecondary levels request equipment from the Perkins coordinators which will enhance and align their programs to industry standards. Local as well as Perkins dollars are used at the secondary and postsecondary level to purchase modern, industry standard tools and equipment. The mobile manufacturing and welding labs also provide opportunities for special populations in participating districts by providing technology that the individual districts would not be able to afford.

**Goal 4: Provide a Continuum of Service Provision for Enabling Student Transitions**

**QUESTION:** Describe the kinds of articulation, dual enrollment, and transfer credit courses offered. What was the level of participation? How are these advanced credit courses transcripted on the student’s high school record and on college transcripts?

The Pine to Prairie/Northland Consortium offers CTE College in the High School courses (CHS), Tech Prep articulation and Online College in the High School (OCHS). Northland Community and Technical College had 42 high schools partnered in the Online College in the High Schools program. The OCHS program has been an effective avenue for students to receive college credit in both the academic and CTE areas. OCHS courses are taught by the college faculty so there are no concerns related to teacher qualifications and helped the OCHS program to see tremendous growth.

**QUESTION:** Did your consortium use Perkins funds to establish agreements, including articulation agreements, between secondary school and postsecondary
career and technical education programs to provide postsecondary education and training opportunities for students? If yes, please describe.

Yes, articulation agreements are reviewed and updated annually. Fosston High School and Thief River Falls High School continue to have articulation agreements with Northland Community and Technical College in the area of medical careers.

**QUESTION:** Did your consortium use Perkins funds to improve career guidance and academic counseling programs and/or to support occupational and employment information resources? If yes, please describe.

The Pine to Prairie Cooperative Center has a total of 19 districts that use the Minnesota Career Information System. This is a valuable resource for districts to create Portfolios as well as take practice exams. Northland has one counselor that is funded through Perkins and works specifically with our CTE students on career guidance as well as academic support and planning.

**QUESTION:** Did your consortium use Perkins funds to support initiatives to facilitate the transition of sub-baccalaureate career and technical education students into baccalaureate programs? If yes, please describe.

Welding Process Technology, Welding Technology, Aviation Maintenance Technology and Manufacturing Process Technology programs all have articulation agreements with Minnesota State University Moorhead BS Operations Management.

Manufacturing Technology AS articulates to Minnesota State University Moorhead BAS in Applied Management.

Electronics Technology AAS articulates to Bemidji State University BAS Applied Engineering.

Geospatial Intelligence Analysis AAS articulates to Minnesota State University Moorhead BS Geosciences

**QUESTION:** Describe other transition activities (secondary to postsecondary; secondary to work; postsecondary to work), courses, or services you provided. What were the lessons learned from these activities?

Northland has partnered with a local area high school to provide introductory experiences to technology, including programs in welding, autobody, automotive, agriculture and aviation. This gives students a higher level of understanding in CTE courses available to them through the consortium.
Goal 5: Sustain the Consortium

**QUESTION:** What activities were conducted that helped to improve and sustain the consortium? Are you considering changes to your consortium structure to better serve students? If yes, please describe.

The secondary and post-secondary Perkins coordinators meet on a bi-monthly basis to discuss the Perkins goals and activities that need to be accomplished throughout the year. In addition, the two coordinators have common meetings throughout the year where they meet as well. All superintendents and college administration meet in the fall to discuss issues affecting CTE such as the cost of tuition for CHS, and HLC credentialing requirements. Meetings are held to discuss tech prep articulations between consortium high schools and the college. The meetings are attended by both secondary and postsecondary coordinators along with college administrators and high school teachers representing programs being considered. An overview of past tech prep articulations was conducted and new articulations were reviewed and approved in the health diagnostics pathway. Articulation agreements for three high school courses were approved. Students who complete these courses at their respective high schools will be given a certificate which can be taken to NCTC where the student will receive college credit once they are enrolled at the college. The Pine to Prairie coordinator meets November through March with the Pine to Prairie Principals. He meets monthly with the superintendents from September through April, and meets with counselors two times a year at the Northwest Counselors meetings. The Perkins coordinator meets with CTE teachers at least twice a year during school visits. In addition, both the secondary and postsecondary Perkins coordinators attend the state MDE/MACTA meetings.

**QUESTION:** Provide an overview of the consortium leadership team (i.e. are they representing all districts, colleges, business and industry, and other community partners)?

The Pine to Prairie Consortium leadership team consists of an executive board made up of Superintendents of the participating school districts. In addition, we also have a board that meets quarterly. This board is made up of members who represent each one of the Pine to Prairie school districts. The secondary and post-secondary Perkins coordinators meet on a bi-monthly basis to discuss the Perkins goals and activities that need to be accomplished throughout the year. In addition, the two coordinators have common meetings throughout the year where they meet as well.

**QUESTION:** Did your consortium use Perkins funds to improve the recruitment and retention of career and technical education teachers, faculty, administrators,
or career guidance and academic counselors, and the transition to teaching from business and industry, including small business? If yes, please describe.

The Pine to Prairie Consortium makes every effort possible to improve the recruitment and retention of career and technical education teachers by providing quality professional development opportunities whenever possible.

**QUESTION:** To what degree does the consortium seek additional grants (federal, state, or local) or braid various funding streams together to support consortium activities? Please provide examples.

Pine to Prairie in conjunction with Lakes Country Service Cooperative worked together on a $900,000 legislative grant for the purpose of promoting Manufacturing and Welding Careers in our region. CPIP grant for the purpose of creating a POS in manufacturing careers.

Northland, along with five other partner agencies, has been awarded a National Science Foundation (NSF) grant in the amount of seven million dollars; the largest grant ever awarded to Northland. This grant will facilitate the formation of the National Center for Autonomous Technologies (NCAT) to be hosted on Northland’s Aerospace site in Thief River Falls, MN. Northland will partner with St. Cloud State University (SCSU), Marine Advanced Technology Education Inspiration for Innovation (MATE II), Center for Advanced Automotive Technology (CAAT), National Geospatial Technology Center of Excellence (GeoTech), and the Minnesota State Transportation Center of Excellence (TCOE) to educate and promote autonomous technologies throughout the United States.

**QUESTION:** How would the new definition of size, scope, and quality change the way you spent your Perkins funds this past year? What changes will you need to make in your next submission regarding size, scope, and quality?

At this point we have been working on our existing plans and they align for the most part with what we anticipate to do in Perkins V. We are still working on figuring out what is or is not working and hope to address it by spring submission.

**QUESTION:** How is your consortium planning to conduct the comprehensive local needs assessment required for submission with the two-year Perkins V application?

Pine to Prairie has joined forces with Lakes Country Service Cooperative, North Country Vocational Cooperative Center, Runestone, and Central Lakes. These regional consortium leaders meetings have been especially helpful in navigating the requirements of the comprehensive local needs assessment. We have identified groups and will be developing surveys to gather more data to develop our needs assessment for Perkins V.
Other Summary Comments

QUESTION: If you were unable to accomplish activities in your plan, indicate reasons why and what you might do differently. How can state staff better support your efforts?

The biggest barrier we face is geographically it can be difficult to reach all members of our consortium. With the extremely short supply of available substitute teachers, it can be difficult for teachers to attend professional development activities. When possible, we try to schedule activities during the summer months, however this can present a new problem for teachers who have summer employment responsibilities.

QUESTION: What lessons-learned will you incorporate into your two-year application due May 1, 2020?

It seems at times that each consortium is trying to reinvent the wheel. It has been extremely rewarding to work with other consortium leaders on the comprehensive local needs assessment. I hope this model can continue in the future as it greatly minimizes the learning curve associated with these positions.

State Staff Review:
Thank you for submitting a well written, comprehensive APR. The continued use of the mobile manufacturing/welding mobile lab as an example of partnerships is well documented as is the increase in secondary numbers overall. We appreciate the attention to non-trad and special populations including the disaggregation of EPM11 numbers.
Opportunities:
Your regional approach to the CLNA and just working with other consortia leaders is noted. We also hope this methodology continues in the future. The Online College in the Schools provides another continuing opportunity for the students of the entire state!