8th Annual
FALCON Conference
October 27–30, 2012 • Albuquerque, NM
Building 1994 Land-grant Capacity Through Innovative Resource Development
FALCON thanks the United States Department of Agriculture National Institute of Food and Agriculture (NIFA) for its support and participation in the conference. NIFA’s mission is to advance knowledge for agriculture, the environment, human health and well-being, and communities by supporting research, education, and extension programs in the Land-Grant University System and other partner organizations.

AIHEC thanks USDA’s Office of Advocacy and Outreach for its support of the conference. The conference and our materials are funded in part through USDA Grant Award No. 59-2501-11-002-0. Any opinions, finding, conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

For more information about 1994 Land Grand Faculty and Staff Fellowships and Student Scholarships, contact:

USDA/1994 Programs Director
U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Ave., SW
Washington, D.C. 20250
phone: 202.720.7265
e-mail: 1994init@usda.gov or Lawrence.Shorty@ascr.usda.gov

AIHEC recognizes the talents of United Tribes Technical College art department student Karmin Walker in helping with the design of this cover. Photos courtesy of UTTC.
### Agenda

**Day One—Saturday, October 27**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>8:00−9:00 am</td>
<td>Registration</td>
<td></td>
</tr>
<tr>
<td>9:00 am−12:00 pm</td>
<td><strong>Training Workshop 1—Fundraising:</strong> Expanding Your Circle of Friends, Ron Walters, Sitting Bull College</td>
<td>Franciscan Ballroom</td>
</tr>
<tr>
<td>9:00 am−12:00 pm</td>
<td><strong>Training Workshop 2 (for Students):</strong> Business Planning Michael Patrick, New Mexico State University</td>
<td>Turquoise</td>
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<tr>
<td>10:00−10:30 am</td>
<td>Break</td>
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<tr>
<td>12:00−1:30 pm</td>
<td>Lunch—on your own</td>
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<tr>
<td>1:30−4:30 pm</td>
<td><strong>FALCON Membership Meeting</strong></td>
<td>Franciscan Ballroom</td>
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<tr>
<td>2:30−2:45 am</td>
<td>Break</td>
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</table>
| 5:00−6:30 pm | **Welcoming Remarks:** Cynthia Lindquist Cankdeska Cikana Community College & AIHEC Board of Directors  
**Poster Session and Reception** | Franciscan Ballroom       |

**Day Two—Sunday, October 28**

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<thead>
<tr>
<th>Time</th>
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<tr>
<td>7:30−8:30 am</td>
<td>Registration</td>
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<tr>
<td>8:30−8:45 am</td>
<td>Welcome and Opening Remarks</td>
<td>Franciscan Ballroom</td>
</tr>
<tr>
<td>8:45−9:15 am</td>
<td><strong>TCU President’s Address:</strong> Sherry Allison Southwestern Indian Polytechnic Institute</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>9:15−9:30 am</td>
<td>Break</td>
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<tr>
<td>9:30−11:45 am</td>
<td><strong>Training Workshop 3:</strong> Best Practices in Resource Development</td>
<td>Franciscan Ballroom</td>
</tr>
<tr>
<td>12:00−1:15 pm</td>
<td><strong>Luncheon with Keynote Presentation:</strong> Cheryl Crazy Bull American Indian College Fund</td>
<td>Alvarado AB</td>
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<tr>
<td>1:30−2:30 pm</td>
<td><strong>Presentation Panel 1—Student</strong></td>
<td>Franciscan Ballroom</td>
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<tr>
<td>1:30−2:30 pm</td>
<td><strong>Presentation Panel 2—Student</strong></td>
<td>Potters</td>
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<tr>
<td>Time</td>
<td>Event</td>
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<tr>
<td>2:45–3:45 pm</td>
<td>Presentation Panel 3—Student</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>2:45–3:45 pm</td>
<td>Presentation Panel 4—Faculty</td>
<td>Potters</td>
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<tr>
<td>3:45–4:00 pm</td>
<td>Break</td>
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<tr>
<td>4:00–5:00 pm</td>
<td>Presentation Panel 5—Student</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>4:00–5:00 pm</td>
<td>Presentation Panel 6—Faculty</td>
<td>Potters</td>
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**Day Three—Monday, October 29**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:00–8:30 am</td>
<td>Registration</td>
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<tr>
<td>8:30–8:45 am</td>
<td>Welcome and Opening Remarks</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>8:45–9:15 am</td>
<td>Keynote Presentation: Muquarrab Qureshi</td>
<td>Franciscan Ballroom</td>
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<td></td>
<td>USDA National Institute of Food and Agriculture</td>
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<tr>
<td>8:30 am–12:00 pm</td>
<td>Student Field Trip—Greenhouse Management and Gardening at SIPI, Jina Garland, Sandoval County Extension</td>
<td>Hotel Lobby</td>
</tr>
<tr>
<td>9:15–10:00 am</td>
<td>NIFA Project Directors 2012 Recap and Post Award Review</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>10:00–10:30 am</td>
<td>Break</td>
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<tr>
<td>10:30–11:45 am</td>
<td>NIFA Project Directors 2013 RFAs, Special Emphasis</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>11:45 am–1:15 pm</td>
<td><em>Lunch—on your own</em></td>
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<tr>
<td>12:00–1:15 pm</td>
<td>Integrated Pest Management Meeting</td>
<td>Turquoise</td>
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<tr>
<td>1:30–2:00 pm</td>
<td>NIFA Project Directors Presentation: Tribal Land Grant Development, Steve Yanni, Bay Mills Community College</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>2:00–3:00 pm</td>
<td>Tribal College Research Grant Program, New RFA and New Directions for Program</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>3:00–3:30 pm</td>
<td>Break</td>
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<tr>
<td>3:30–4:30 pm</td>
<td>NIFA and the 1994 Land Grants—How Can We Partner for a Stronger Program?</td>
<td>Franciscan Ballroom</td>
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**Day Four—Tuesday, October 30**

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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>9:00 am–12:00 pm</td>
<td>Special Symposium: USDA Outreach and Technical Assistance 1994 Programs—Office of Advocacy &amp; Outreach, USDA</td>
<td>Franciscan Ballroom</td>
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<tr>
<td>12:00 pm</td>
<td>Conference Close</td>
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Workshop 1

Expanding Your Circle of Friends

Saturday, October 27, 2012.  9:00am–12:00pm.  Franciscan Ballroom

Ronald “Ron” G. Walters, Jr.
Director of the Office of Resource Development
Sitting Bull College

During this three hour workshop, participants will learn about important processes and strategies for fundraising in the private sector, including the importance of organizational infrastructure, developing relationships with donors, and prospects and understanding the media. The workshop will include group activities in association with fundraising techniques, donor relations and the news media.
Ronald “Ron” G. Walters, Jr.
Director of the Office of Resource Development
Sitting Bull College

Ronald “Ron” G. Walters, Jr., an enrolled tribal member of the Standing Rock Reservation, currently serves as director of Resource Development at Sitting Bull College, located in Fort Yates, ND. His current duties at Sitting Bull College include special projects, Alumni Development, Director of Fundraising (capital campaign, annual giving and planned giving) and Chair of the college’s Finance & Resource Committee. In association with fund raising, Walters also manages the college’s donor database and media relations for the president’s office, including media inquiries, photographs and news releases.

In the past, Walters worked as a news producer (reporter) for South Dakota Public Radio, where he utilized 13 years of business experience and his education from the University of South Dakota to produce news stories, including numerous stories relating to Native American communities and contemporary issues. Walters’ past print journalism work includes reporting for two daily newspapers and one weekly, all based in the tri-state region of Iowa, South Dakota and Nebraska. He served as executive director of a national Native American organization from 2002-2005, where his major responsibilities included fund raising, media relations and national conference planning.

Walters’ other past media work include hosting a special radio program about Native American music and narrating an educational video about the Wacipi (Pow-Wow) dances, both of which were produced and distributed by South Dakota Public Broadcasting.

Walters is active in his community and hosts many of the public events held on campus at Sitting Bull College and the Standing Rock Reservation. He’s been involved with numerous youth programs/activities throughout his life, including youth basketball coach and student recruitment for Native American journalism programs. He is an active member of the Association of Fundraising Professionals (Great Plains Chapter) and serves as a mentor at the Native American Journalism Career Conference. He has one adult child (Tyler) and one grandchild (Bentley). Ron is the fourth of six children from his parents, Delores M. (Cadotte) Walters and Ronald G. Walters, Sr. of Fort Yates, ND.
J. Michael Patrick
Associate Professor
New Mexico State University

Michael Patrick is an Associate Professor in the Agricultural Economics and Agricultural Business Department, Director of the Doctorate of Economic Development program, and Community Resource & Economic Development Specialist with the Cooperative Extension Service (CES) at New Mexico State University, a Land-grant institution.

The mission of the community resource and economic development program of the NMSU-CES is to promote and support the economic development of New Mexico’s diverse communities. Its goals are to provide NMSU-CES county extension agents and local community leaders with relevant research-based knowledge and information, education programs, and professional development training to achieve community and regional economic development.

Patrick received a bachelor’s of science degree in Biological Sciences from California State Polytechnic University, Pomona; a master’s of science degree in Community Development from Southern Illinois University, Carbondale; and he earned a Ph.D. in Agricultural Economics from Michigan State University.

His areas of expertise include community economic development, rural development, business development and entrepreneurship. He has spent more than 20 years of teaching, research, and community economic development activity in the U.S.- Mexico border region and Latin America.
FALCON Membership Meeting
October 27, 2012 • 1:30–4:30 pm
Franciscan Ballroom

Agenda

Welcome and Call to Order

Approval of Minutes from 2011 Meeting

Executive Director’s Report

- Highlights from 2011 and 2012
  - Morrill Sesquisentennial Events
- FY 2013 and FY 2014 Budget Update
- Farm Bill Update
- NIFA National Extension and Research Administrative Officers’ Conference (NERAOC)
- Annual Conferences for 2013 and 2014

Treasurer’s Report

Officer Nominations

Amendments to Bylaws

Partnership Reports

- CARET—Council for Agricultural Research, Extension, and Teaching
- WEDA—Western Extension Directors Association
- USDA 1994 Programs

Other Business

- Items from the Floor

Adjourn
Call to Order

Virgil Dupuis called the meeting to order at 4:05 pm, October 24, 2011.

Approve Agenda

The business meeting agenda was reviewed. The agenda was amended with the addition of a CARET partnership report and a discussion on the Smithsonian Folklife Celebration and 1994 Food Sovereignty programs. A motion to approve the agenda, as amended, was made by Carrie Schumacher and seconded by Terry Tatsey. The agenda was approved by unanimous voice vote.

Approve Minutes

The draft minutes from the October 24, 2010, FALCON Membership meeting were reviewed. The minutes were amended to indicate Dr. titles for Drs. Steele and Phillips. A motion to approve the minutes, as amended, was made by Steve Dahlberg and seconded by Mary St. Pierre. The minutes were approved by unanimous voice vote.

Executive Director’s Report

John Phillips provided updates on major accomplishments and key partnerships for 2010-2011. He also identified challenges for the future.

- The major accomplishments and key partnerships were reported as follows:
  - FALCON and Blackfeet Community College were awarded a USDA Extension Special Emphasis grant to administer a TCU Leadership Development Initiative. The project is a two-year pilot program targeting mid-career TCU land grant administrators, faculty and extension educators. It provides individual mentoring and enrollment in the national land-grant leadership development program, LEAD21. The program has been a great experience, and should be continued. The estimated cost per person is $20,000, and new funding models are being explored.
  - A USDA Outreach to Socially Disadvantaged Farmer and Rancher grant has been awarded to AIHEC. There will be mini-grant (five at $10,000 each) for TCUs to complement existing community-based activities. A Web upgrade with additional resources was included in the USDA proposal. AIHEC is administering the program because it is well-positioned nationally and FALCON currently lacks the capacity to do this level of programming.
FALCON and First Nations Development Institute are continuing to develop a community-based agri-business curriculum to be piloted in 4 Montana TCUs, and will eventually be disseminated to all TCUs.

FALCON continues to work with AIHEC to include 1994 input into the 2012 Farm Bill. Key components of the input are as follows:

- Open research partnerships to include non-land grant institutions, schools of forestry, and ARS.
- Add three new TCUs to the land grant system: Muscogee Nation (Okmulgee OK), Keweenaw Bay Ojibwa Community College (Baraga, MI) and Comanche Nation College (Lawton, OK).
- Add TCUs to eligible institutions to apply for two Smith-Lever competitive programs: the Federally Recognized Tribes Extension Program (FRTEP) (formerly Extension Indian Reservation Program) and Children Youth and Families at Risk (CYFAR).
- Farm bill discussion will be included in the White House Tribal Leader’s Conference, Friday, December 2, 2011.

Emerging Issues (Implementing the FALCON Strategic Plan)

- FALCON continues to strengthen the AIHEC relationship, though formal and regular reports to the Board of Directors. TCU presidents are now asked to speak at FALCON conference, and TCU presidents have been invited on FALCON advisory group. AIHEC and FALCON continue to work effectively on legislative initiatives.
- A key issue for FALCON is cultivating new leadership through its leadership development initiative and officer appointments.
- Implementing the USDA 1994 Strategic Plan remains a concern and missed opportunity. FALCON is eager to work with USDA and AIHEC on implemented the strategic plan.

Federal Budget Update

- The Senate Agriculture appropriations subcommittee restored the 1994 Institutions Research and Rural Community Advancement Program at current funding levels, as well as Equity and Extension programs. The conference committee will be reviewing and agreeing on the final budgets. We hope the current funding levels are maintained.
- APLU will meet in San Francisco in November 12-15, 2011, where they will begin the FY 2013 budget process.

The venues for the FALCON annual conferences for the next three years were presented, as follows:
October 22-25, 2011, in Denver, CO, at the Westin Center. This conference will be held in cooperation with the USDA Tribal College Research Grants Program Project Directors conference.


October, 2013, in Washington, DC. Exact dates and location are to be determined.

A survey will be sent out to determine if the FALCON membership is satisfied with the regional rotation of the annual conference.

Treasurer’s Report

The Treasurer’s Report was presented by Susan Given-Seymour. As of October 19, 2011, FALCON bank balances at Wells Fargo were as follows:

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<th>Account</th>
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<tr>
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<tr>
<td>Savings</td>
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<tr>
<td>CD</td>
<td>30,583.86</td>
</tr>
<tr>
<td>Total Assets</td>
<td>$82,242.01</td>
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The current conference budget includes almost $10,000 for student scholarships for those making presentations at the annual conference. Sustainable funding for students scholarships was discussed. Consensus was expressed that we increase the conference registration fee to provide student scholarship money. This year, USDA Civil Rights office provided $5,000 for student scholarships, half the amount of support provided in previous years.

Partnership Reports

- Joe McDonald, 1994 representative to CARET (Council for Agricultural Research, Extension, & Teaching) and Minority-Serving Institutions representative on the CARET Executive Committee, and President emeritus of Salish Kootenai College, reported on his activities with CARET. CARET is an advocacy group of influential citizens interested in the land-grant system. APLU reimburses him for his participation in the CARET.

- Lawrence Shorty, Program Director of the 1994 Office of Advocacy and Outreach, talked about the desire to have a USDA liaison person with every TCU. He discussed dedicated research needs, scholarships and internships, as well as advocacy for the underserved TCUs.

- Gary Halvorson (Agriculture Division Director, Sitting Bull College) provided an update on his participation on the North Central Regional Association (NCRA) of State Agricultural Experiment Station Directors.

Other Business

- Bylaws Revisions to the bylaws were discussed. FALCON officers currently serve four-year terms. John Phillips recommended that the term be shortened to three years for
the treasurer and two years for other officers. An e-mail election will be held for all voting members.

- The term for Susan Given-Seymour as Treasurer has completed. Nominations for Treasurer were entertained. James Hafer nominated Carrie Schumacher, Fort Peck Community College as treasurer. There were no additional nominations. A motion to cast a unanimous ballot for Carrie Schumacher for treasurer was made by Susan Given-Seymour and seconded by Gary Halvorson. The motion passed by unanimous voice vote.

- The NIFA National Extension and Research Administrative Officers Conference (NERAOC) will be held in West Virginia during May 2012. Benita Litson has represented TCUs on the planning committee. There will be panel sessions for the 1994s. A food sovereignty session is being planned.

- Future FALCON Conferences were reviewed: October 27-30, 2012, in Albuquerque, NM at the Hotel Albuquerque; 2013 in Washington DC; 2014 in Minneapolis, MN; and 2015 in Denver, CO. There was a discussion on the conflicting schedule of AIHEC’s Fall Board of Directors meeting and the desire to move FALCON’s conference dates later to avoid the conflict. John will survey members via the Web to choose preferred dates for the conference.

- The Smithsonian Folklife Celebration, July 2012, is part of the 150th anniversary celebration of the Morrill Act that created the Land Grant System. Susan Given-Seymour will continue discussing and planning this activity. All who are interested are welcome to participate.

A motion to adjourn was made by Terry Tatsey and seconded by Carrie Schumacher. Adjournment was approved by unanimous voice vote.

Meeting adjourned 5:55 p.m.
Cynthia A. Lindquist
President, Cankdeska Cikana Community College
Chair, AIHEC Board of Directors

Cynthia A. Lindquist is a member of the Spirit Lake Dakota Nation. She earned a Bachelor of Arts degree in Indian Studies and English at the University of North Dakota and a Master’s degree in public administration (Indian health systems emphasis) at the University of South Dakota. As a Bush Foundation Leadership Fellow, Dr. Lindquist earned a Ph.D. in educational leadership at the University of North Dakota. In 2003, she was appointed as the president of Cankdeska Cikana (Little Hoop) Community College, which serves the Spirit Lake Dakota community and is her home reservation.

Lindquist is an adjunct faculty member, community medicine and rural health, with the University of North Dakota School of Medicine and Health Sciences. She is a founding and ongoing member of the National Indian Women’s Health Resource Center, a non-profit health advocacy organization. Lindquist serves as a member of the Council of Public Representatives (COPR), an advisory council to the Director of the National Institutes of Health (NIH), and is a former Executive Director, North Dakota Indian Affairs Commission.

In October 2012, Lindquist was elected to a two-year term as Board Chair of the American Indian Higher Education Consortium (AIHEC), the non-profit advocacy organization composed of 37 Tribal Colleges and Universities in the United States, and one in Canada. She is a member of the Board of Trustees for the American Indian College Fund, which is the scholarship fund raising organization for the Tribal Colleges and Universities. Lindquist also serves on the Board of Trustees of the Higher Learning Commission, North Central Association of Colleges and Schools.
Northern pike (*Esox lucius*) is a fish species common to the Northern Midwest regions of the United States. The species is of great interest to fish biologists, because northern pike are a significant fish to sport-fishing enthusiasts. The purpose of this study is to determine seasonal movement patterns of northern pike in small, lentic water systems located in the Northern Midwest region of the US in an effort to provide data for better management of the fish species. The movement pattern data was attained by using radio telemetry during all four seasons of the year. When fish were tracked and found, latitudinal and longitudinal points were determined using global positioning system (GPS) technology. In addition to logging the position of tracked fish, environmental data, such as water depth, water temperature, and weather conditions, was obtained to determine reasons for seasonal fish movement. The research found that weather conditions and water temperature are not factors in determining seasonal fish movement of northern pike in small, lentic systems in North Dakota; however water depth does play a role in fish movement.

Through the observations of the natural world around them, Native American societies have accumulated immense knowledge of how to use the surrounding fauna and flora for food, medicine, shelter, and clothing. Not only did these societies use native plants for themselves but also for their domesticated animals. The purpose of this preliminary study is to determine native plants used in treatment of horses by the Lakota (Sioux) People of the Standing Rock Reservation located in the Dakotas. No known ethnobotanical study of this nature has been conducted on the Standing Rock Reservation. During summer 2012, student researchers conducted a literature review to assess available knowledge of native plants used in the treatment of horses and interviewed enrolled tribal members on the use of native plants in this process, i.e., identification of plants, parts of the plants used and how they were administered. Sixteen plants were documented from the literature review and interviews as used by the Lakota People to treat
horses for distemper, wounds, sore muscles, urinary tract infections and other ailments. Interviews concluded that horses continue to play an important role among many of the people on Standing Rock, although further interviews must be conducted to fully understand the extent to which native plants are used today to treat horses in ethnoveterinary practices.

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<th>Title</th>
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<tr>
<td></td>
<td>Biosorption of Lead and Copper from an Aqueous Solution Using Banana Peels</td>
<td>LaLynn M. Antell</td>
<td>Sitting Bull College</td>
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**ABSTRACT**

Metal contamination of water sources is a global environmental and health problem. The removal of metal from contaminated water sources can be quite expensive and cost-prohibitive for people living in developing nations of the world. The purpose of this study was to find an inexpensive method of removing metal from water. Specifically, the study examined the removal of lead (Pb) and copper (Cu) from water using banana peels as a biosorption mechanism. An atomic absorption spectrophotometer graphite furnace was used to analyze the level of lead and copper removal from water samples in a laboratory setting. Both fresh and dried banana peels were effective biosorption mechanisms for the removal of both lead and copper from the water samples. Most lead removal took place within the first hour of contact between the banana peels and the aqueous solution, whereas minor amounts of copper were removed throughout the study period. This study found that banana peels may be able to be used as an inexpensive method of lead and copper removal from contaminated water sources.

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<th>Title</th>
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<tr>
<td></td>
<td>Fire History on Gaagiizhikikaag Zaaga’Igan-Cedar Lake</td>
<td>Ann Solano</td>
<td>Sitting Bull College</td>
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**ABSTRACT**

This research team is developing the fire history of lakes where *manoomin* (wild rice) grew in the past in the area of the Anishinaabe people. Manoomin has been a part of the Anishinaabe people for centuries. The tribe has implemented a restoration plan in efforts to preserve the future of *manoomin*. The team works on the Fond Du Lac Reservation of what present day people call the Fond Du Lac Band of Lake Superior Chippewa Indians. The team has taken lake core samples from the beds of various lake systems. Samples taken from different depth intervals have been baked and sediment separated. The samples were examined with a microscope to determine the various amounts and morphotypes of charcoal. Charcoal accumulation can help to better reveal prior fire history from the lake core samples.
### ABSTRACT

From its headwaters in Glacier National Park to its confluence with the Missouri River, the 476 mile Milk River is heavily used and impacted. Along the way, numerous factors influence both the quality and quantity of river available for beneficial uses, including diversions from the St. Mary River system, the diversion system’s deteriorating infrastructure of pipelines and canals, increased irrigation demands, agricultural inputs, municipal drinking water and wastewater treatment systems, pulsed flow from dam releases, ephemeral flow, long-term drought, boundary water disputes between the United States and Canada, and ongoing negotiations between the State of Montana and American Indian tribes living along the river and its tributaries. Currently, there is both a great scarcity of and a great need for accurate, reliable water quality data for the Middle Milk River. This project will establish a research protocol for long-term monitoring and assessment of water quality for the stretch of the Middle Milk River running through the Fort Belknap Indian Reservation. This protocol will serve as the foundation for a longitudinal study using bio-indicators (benthic macro-invertebrates, periphyton, and diatoms) to assess water quality and river health for the Fort Belknap portion of the Milk River. The objectives of the project include: 1) conduct a comprehensive literature review of existing water quality data and sampling and analysis methods for the Milk River and comparable non-wadeable prairie rivers and streams; 2) identify benthic macro-invertebrate, periphyton, and diatom taxa present in the Milk River; 3) identify sampling sites; 4) prepare a sampling and analysis protocol document; 5) collect samples, identify organisms, assess data; and 6) educate members of the Fort Belknap Indian Community about local water quality issues. The presenter collected both benthic macro-invertebrate and periphyton samples, sorted and identified benthic macro-invertebrate samples, and interpreted data, resulting in greater understanding of the health of the Middle Milk River as it passes through the Fort Belknap Indian. Future plans for this project include learning more about periphyton communities found at sample sites during the summer, the first time periphyton samples were collected.

### ABSTRACT

Rice is a key cultural component and main food source for the White Earth Nation. This project examines the impact of land use on the lakes of White Earth (W.E.) which affect not only the rice but entire ecosystems of W.E. Here, National Land Cover Database (NLCD) data from online sources are used to project the typical land use and to determine if land use or other environmental factors impact the nutrients in the ricing lakes of W.E. GPS points, data analysis (from samples collected), and watersheds were mapped and differences in data were found between Lower Rice Lake and Rice Lake. Lower Rice Lake has a higher amount of nutrients, and...
future studies on other lakes may reveal the reason. Knowledge of the chemistry increases understanding of the entire ecosystem. These systems are all very important to the Ojibwe nation, both traditionally and culturally, and future studies will aid preservation.

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<tr>
<th>Title</th>
<th>Presenters</th>
<th>Institution/Organization</th>
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<tbody>
<tr>
<td>Development of a Wild Rice Permit System for the White Earth Nation</td>
<td>Dianne Kier</td>
<td>White Earth Tribal and Community College</td>
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ABSTRACT

For the past 25 years, Dianne and her sister have joined hundreds of other wild rice harvesters at the lake's edge for the annual harvest. Wild rice (*Zizania palustris* L.) has cultural and economic value to the people of White Earth Nation. Wild rice is considered sacred amongst the Anishinaabe people of the upper Great Lakes Region, not only because it was a staple food component in their diet, but also a cultural tie to ancestors since their migration west to where the “food that grows on water.” Wild rice yield productivity is a concern to the tribal communities who rely upon the annual wild rice harvest, and therefore it is important to understand yield expectation to derive a total number of harvest permits. This research project explored two lakes: Lower Rice Lake located on the White Earth Reservation and Mitchell Dam/Rice Lake on the Tamarac National Wildlife Refuge (TNWR). Using geometry calculations in ArcGIS, GPS waypoints, and estimates based on personal and Traditional Elder Knowledge, the goal for this project was to research and estimate the wild rice productivity of each lake to make recommendations on how many harvest permits can be issued for each of the lakes. In the near future, the researcher hopes to secure more detailed data for the two surveyed lakes and begin to acquire data for other bodies of water on the reservation and refuge which offer rice.

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<tr>
<td>Native Prairie</td>
<td>Taylor Bjerk</td>
<td>White Earth Tribal and Community College</td>
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ABSTRACT

The presenter spent two months over the summer working with the White Earth Tribal and Community College Extension as a prairie research student intern, learning to identify various plant species and researching their various medicinal, landscaping, or other uses. The presenter also studied insect and animal identification, plant propagation techniques, and seed collection. The project aimed to identify eight important native prairie plants. “Hooping” – placing a hoop around a plant and examining everything inside the hoop – was used to study the relationships between the plants. Hooping helped researchers find correlations between different plants, such finding Plant A will usually result in finding Plant B nearby. Everything studied had a direct link to the prairie, whether it was going into the prairie or coming out of the prairie. This presentation focuses on native prairie plant species, propagation techniques, native seed collection, and how other organisms are involved in a native plant ecosystem.
### Solar Energy for Elderly People on the Navajo Reservation

**Title:** Solar Energy for Elderly People on the Navajo Reservation  
**Presenters:** Mariah Ashley  
**Institution/Organization:** Diné College

**ABSTRACT**

The world, as a whole, increasingly releases carbon emissions into the atmosphere creating a noxious “greenhouse effect.” This greenhouse effect traps gases such as carbon dioxide, methane, and other pollutants from the burning of fossil fuels in the atmosphere. This in turn warms the planet causing detrimental ecological and biological effects. However there are many renewable alternative energy sources available, meaning there are no harmful emissions being released into the atmosphere. Photovoltaic solar arrays or solar panels are one of the many solutions to decrease the effects of global warming. With the help from Grand Canyon Trust and Shonto Economic Development Corporation, student researchers installed six solar panels at an elderly Navajo woman’s house in Shonto, Arizona located on the Navajo Reservation. Compared to the standard HVAC (heating ventilation and air conditioning) system, solar panels reduce the energy consumption from major generating stations and instead capture solar radiation and convert the AC current into DC current electricity through an inverter box and then straight into the home. Solar arrays also help the Navajo Nation economy. Instead of consuming the power generated and exported to urban-industrial sized cities, some 18,000 rural Navajo communities are still living without electricity. Solar energy is most beneficial, because it is cost efficient, is renewable energy, and is almost free to Navajo elders on a fixed income.

### Revitalizing Soil with Organic Matter

**Title:** Revitalizing Soil with Organic Matter  
**Presenters:** Erick Freeman  
**Institution/Organization:** Diné College

**ABSTRACT**

Land is important, especially the top soil that farmers need to produce crops every growing season. Periodically soil does not properly cultivate crops, and the problem usually reflects the condition of the top soil. By daily vehicle/machinery use and overgrazing, farmers, ranchers, cattle, and wildlife demolish nutrients and minerals in the soil. Through controlled experimentation and proper rehabilitation efforts, a ruined plot of land can be restored through simple composting methods.
ABSTRACT

Climate change adversely affects Mother Earth and the cycles of life, which seems to transgress and regress at her will. Temperature gradients differ across the world, so a given level of warming leads to different expected range shifts of species in different regions (Loarie et al., 2009). The focus of this study is to determine how pinyon pine (Pinus edulis) responds to climate change with an emphasis on pollen production and viability in relation to drought and associated insect resistance and susceptibility. Student researchers measured the traits of a group of trees that had successfully reproduced as fathers of a number of offspring (super dads) and compared their traits to those of neighbors that did not father seedlings. In addition, pollen viability was tested by placing pollen into a regime of incubation and germination temperatures that pinions might experience as the climate warms. The analysis of the variation of pinyon pine is to further understand the progression, distribution, and hybridization due to climate change.

The team hypothesized that insect resistant pinyon pines will be more likely to produce more offspring due to their resistance to insects than the susceptible pinyon pines and that their pollen will be more viable in optimal temperatures and less viable in hotter temperatures projected for the future P. edulis. Results should further the ongoing study of pinyon pine and raise questions on climate change and its effects on the flora and fauna of Mother Earth.

ABSTRACT

In 2009 and 2011 Northwest Indian College summer interns documented plants from semexws, Smuggler’s Slough. In this study, interns identified dangerous plants, and the presenter researched their hazardous properties.
### Measures of Tropical Premontane Reforestation Success, Early Tree Species Survival and Growth and the Influence of Policy

**Michelle Kernak**  
**Northwest Indian College**

**ABSTRACT**

Much of the landscape in Costa Rica is dominated by abandoned cattle pastures. The government responded with stringent deforestation policies and incentives feasible for local farmers. There is keen interest in matching plantation success with financial incentives for reforestation. To measure plantation success, the presenter tested the relativity of two-year survival of native tree seedlings planted into an abandoned pasture, then examined the 13-year growth of the species at an existing plantation at the Las Cruces Biological Station in Southwest Costa Rica. There were considerable species differences in both survival and growth. First-year mortality averaged 9%, second year 38%. Height of planted trees at year 13 varied between six and 14 meters. Both survival and growth were different between species which illustrates an important link between tree species selection and success of reforestation under current incentive programs. This information will contribute to the development of reforestation plans available under the Costa Rican government incentives, the Environmental Services Program (PSA). This information will help ensure successful reforestation and also will increase the confidence of local farmers to reforest pasture lands.

### The Answer is in Our Hands

**LaVonne Snack and Hilary Spray**  
**Little Priest Tribal College**

**ABSTRACT**

Little Priest Tribal College (LPTC) coordinates multiple grants to develop innovative resources throughout the Winnebago community to address the high incidence of diabetes in the community. Increased access and availability to healthy food and a return to a more traditional diet could be an effective treatment for diabetes.

Two large National Institute of Food and Agriculture grants (BRAEHN and CSEAD)—commonly known as Common Ground Gardens (CGG)—are in their second year. Together they provide GMO-free, pesticide-free fruits and vegetables to the Village of Winnebago year-round. The CGG project includes free monthly workshops to demonstrate and educate the community on topics of horticulture and sustainable living. CGG builds relationships between community garden partners in a collaborative effort to grow food for the community. LPTC students have opportunities to be garden interns for the program. Each summer CGG also hosts youth, ages 10 to 18, as summer interns.

A third National Institute of Health IDeA Networks of Biomedical Research Excellence (INBRE) grant works to preserve the Hocak (pronounced ho chunk) native corn varieties. Changes in the climate, depletion of the soil, and cross pollination by genetically modified corn grown in monocultures in the surrounding countryside threaten the seed stock that has been in various
families for generations. The INBRE grant supports two student interns who identify and manage native lines of corn with the intent to preserve the genetic diversity and strengthen the genetic integrity of the species.

Availability of traditional foods creates difficulty in returning to a traditional diet. The preservation of Hocak native corn, locating protected areas to grow the corn, and empowering the Winnebago community to grow healthy, traditional foods for the community for generations to come are the work of LPTC students through these grants.

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<td>15</td>
<td>Tohono O’odham Food Systems</td>
<td>Zade Arnold and Roxanne Jose</td>
<td>Tohono O’odham Community College</td>
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**ABSTRACT**

Tohono O’odham Agriculture & Natural Resources (TOANR) at Tohono O’odham Community College (TOCC) helps educate members of the Tohono O’odham Nation in the fields of agriculture and natural resources by using students as the primary point of contact at the college. The program helps TOCC students primarily in the areas of agriculture and natural resources to develop techniques and to gain knowledge in these areas. This is a useful way to gain hands on experience as they learn how to build and maintain their own gardens.

These hands on exercises also teach a lot of patience, persistence, respect for nature, and ways to maintain the traditional Tohono O’odham Food systems. Many of the vegetables and grains harvested at the student learning farm are used to teach and also to reproduce seeds for the gardening programs taking place in different parts of the Nation.

Many of the traditional foods are species native to the Arizona desert and can tolerate long periods of drought and heat. Over the years, residents of the Tohono O’odham Nation have conserved these plant varieties by storing seeds in glass jars to keep the seeds from germinating.

The TOANR program launched a campaign last year sponsored by USDA/NIFA Equity and a small grant from the Department of Agriculture Natural Resource Conservation Services (NRCS) to collect native seeds from across the Nation and create a seed bank from future generations. This will allow TOANR to grow plants in a green house setting to propagate seeds and increase the amount of available seeds for distribution to interested individuals who are planting community gardens.

By promoting these types of food systems, TOCC will have the leading edge in restoring the health the residents of the Tohono O’odham Nation (TON) so desperately need. Currently, residents of TON have the world’s highest incidence of type 2 diabetes. By providing new food systems, TOCC will contribute to the reduction of this lethal illness.
Calculating Bison Pasture Stocking Rates Using G.I.S.

Brittani E. Lopez and Mark A. Weaver

Sinte Gleska University

**ABSTRACT**

Sinte Gleska University (SGU), located in South-Central South Dakota, depends on its bison herd to provide daily meals for students on campus and meat for tribal communities, diabetes prevention, and elderly nutrition programs. SGU recently received a USDA Tribal College Research Grant for “evidence-based strategies to optimize range bison herd health and well-being.”

The USDA project includes student-led research which enabled presenters to calculate the total amount of acreage within current SGU bison pastures using a hand-held GIS plotter. SGU leases tribal Range Uni #55 near Antelope Lake Campus. SGU pays a premium rate for this lease but did not have the true acreage to calculate proper stocking rates for the pastures. The calculated acreage can be used in the near future to negotiate the lease with the Bureau of Indian Affairs (BIA) and Antelope Community (leaseholder).

Using a GIS hand-held plotter, presenters plotted the boundaries and corners of the bison pastures. An electric fence has been built inside the BIA boundary fences; both fences have been plotted to show lost acres due to fencing. Water wells and dams were also plotted to calculate distance of bison travel to water throughout the pasture. Non-working wells were plotted to demonstrate water availability to further disperse grazing. Acreage of prairie dog towns and unused acres fenced out of unit are also plotted to be calculated.

Calculation of total available acreage and distances to available water are being calculated using plotted GIS points within bison pastures. This information will be shared with SGU bison managers and faculty decision makers. Data and mapping that demonstrate an accurate calculation of acreage will be used along with accurate head count of bison to complete a land inventory and stocking rate that optimizes herd health and productivity at SGU.

Sustainable/Edible Landscaping

Alonzo M. Chico

Cankdeska Cikana Community College

**ABSTRACT**

This poster explains how to properly plant a tree. The Natural Resource Department at Cankdeska Cikana Community College (CCCC) received an orchard grant for fruit trees. Interns planted 23 fruit tree varieties plus others including plum, apple, cherry, pear, apricots, peegee hydrangea, corkscrew willow, and Hetz midget. The presenter taught interns the basic steps in properly plant trees, such as digging the appropriate hole size and using the correct type of potting soil and mulch. Instructions included not burying the sapling’s root flare, keeping it above the surrounding ground by at least two inches. Planter’s should make a bowl to keep water from running off. Wood chips surrounding the tree base should not cover the root flare; this prevents the trunk of the tree from being burnt by the mulch. Poles should be placed on either side of the tree for support. Use rope or wire to cover the poles with small pieces of
garden hose so as not to cut into the trunk of the tree. These poles should be left in for at least the first year after planting to make sure that the roots establish. The last and foremost in new planting is to water the tree every day depending on the dryness of the climate. These small details make all the difference to the growth of the tree.

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<td>Assisting Community Members on Preserving from a Natural Resource</td>
<td>Bobbie Mudgett</td>
<td>Cankdeska Cikana Community College</td>
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**ABSTRACT**

This presentation teaches community members about preserving from a natural resource – growing one’s own garden and to using from the natural habitat. Canning, drying, and storing goods further the preservation.

The program helped the community in numerous ways to start its own gardens. Residents of Spirit Lake tilled plots for their gardens. Plants were grown in the greenhouse for their use, including tomato, eggplant, and other vegetables. The program provided members with information about the varieties and allowed them to take seeds of their choice.

In the natural habitat a person can find many edible and traditional sources. The project included picking June berries, choke cherries, wild grapes, and apples and growing traditional plants, such as sage and sweet grass, at Cankdeska Cikana Community College.

Canning food is an important technique used for preserving. During the program, participants canned the wild berries and vegetable from the college gardens and dried herbs such as basil and parsley.

The program makes community members a part of the projects, holding farmers markets where community members may buy or sell their own foods and holding workshops to teach about preservation and natural resources. The presenter is excited to share knowledge of preserving from a natural resource.

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<td>Gardening</td>
<td>Yolande Thompson</td>
<td>Cankdeska Cikana Community College</td>
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**ABSTRACT**

This poster shares the presenter’s new-found knowledge of gardening and her desire to learn more. The presenter assisted in planting college gardens, planting tomatoes, cucumbers, potatoes, carrots, corn, pumpkins, many varieties of flowers, eggplants, pepper plants, sunflowers, and gourds. In the fall, gardeners planted an orchard garden with several varieties of fruit trees and shrubs.

Students planted gardens of different sizes and shapes, such as an arrowhead garden, a spiral herb garden, and a salsa garden; the salsa garden was planted in the lasagna garden. Students created a garden for the children in the day care, using plants for which children can easily care.
The presenter learned much about gardens, such as mounding for potatoes, pumpkins, cucumbers, and melons and that tomatoes and peppers grow well together. Potato bugs can be prevented by planting marigolds near the potato plants. Placing wet newspaper between rows of plants reduces the need for weeding. To keep pumpkins round, regularly rotate them. Trees grow better when planted in the fall. This knowledge will be useful in future gardens and for sharing with family and friends who plant gardens.

**ABSTRACT**

This poster demonstrates lessons learned while working in the Natural Resource Department. During the presenter’s first year, she worked in the greenhouse, starting the plants in February to pass out to the community. In May, students tilled gardens for the people who signed up for community tilling, distributed seeds and plants started in winter, and providing gardening tips for the first-time gardeners. Students also planted their own garden at the college with leftover plants and seeds and harvested their ripe produce.

During her second year, the presenter learned to preserve food by canning. Canning saves money long term and is healthy. Food that can be preserved is limitless.

Over the summer, the presenter learned about landscaping and planted the trees received through the tree orchard grant. Students planted gardens of various shapes, such as an arrow head, medicine wheel, spiral, and heart. Students also replanted the lasagna garden—one of the presenter’s favorites—using techniques to reduce weeds. Students helped at the annual powwow by planting grass seed and keeping it watered. They also assisted at the center for the elderly with their house plants and the outdoor flower beds. The presenter participated in the weekly farmers market, baking for the bake sales, canning the produce, and helping set up and tear down.

There is something new to learn everyday in this department. The presenter would like to continue to learn and to pass her knowledge to new interns.

**ABSTRACT**

The Lac Courte Oreilles Ojibwa Community College (LCOOCC) Extension Department has many different aspects. By promoting recycling, organic foods, farming, physical activities, and integrating traditional Ojibwe culture, the department positively changes the lifestyle of the community members. The poster will focus on Extension’s process of engaging physical activities and traditional Ojibwe lifestyles in the community.
LCO Extension offers workshops and activities that are open to the college students and the communities. The physical activities offered are based on living by the seasons. During spring the Extension offers ice spearing workshops, explaining everything from setting up the ice shacks to preparing to fish. Sugar bush workshops, also offered in the spring, explain the process of making maple syrup traditionally. Summer activities include canoeing, hiking, and camping. Trips to the Boundary Waters Canoe Area (BWCA) were organized, which integrated all three of these activities. On these trips, many skills are taught, such as basic wilderness survival skills and advanced canoe safety courses. In the fall, the focus is on hide tanning, trapping, and wild rice workshops. During these workshops the student interns are involved in the entire process of the workshops from set up to clean up.

These events are just some of the many workshops the LCO Extension Department has to offer. Extension also promotes healthy living, recycling, and local foods at community events, powwows, and local fairs/festivals. Future plans are to reach out to communities and make them aware of the many workshops LCO Extension is able to offer the community.

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<td>Lac Courte Oreilles Ojibwa Community College</td>
<td>Ryan Coshow</td>
<td>Lac Courte Oreilles Ojibwa Community College</td>
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<tr>
<td></td>
<td>Creating and Maintaining a Sustainable Agriculture Research Station</td>
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**ABSTRACT**

The Lac Courte Oreilles Ojibwa Community College (LCOOCC) Sustainable Agriculture Research Station (LSARS) located in northwest Wisconsin provides an integrated system of growing plants for sustenance, improving wildlife habitat, and attracting pollinators to create a sustainable environment to provide the community with healthy, nutritious, local food. Chickens are used for pest and weed control. Water is collected using over 20 rain barrels throughout the grounds. A composting program has been organized with the LCO K-12 School to collect breakfast and lunch food waste, collecting approximately 125 pounds per day. Tribal construction waste is repurposed to create standing raised bed garden areas for Elders. There are many designated garden areas including perennials, perennial fruits, community plots, wholesale/retail, research, community supported agriculture, the medicine wheel garden, and a native wild edibles garden. Infrastructure, including a hoophouse and two greenhouses, is used to extend the growing season in a cooler climate location. Post-harvest, seeds are gathered for next year’s planting; a seed library will be created for the community to use. Once the growing season is over, LSARS staff provides food preservation workshops to the community that consists of canning, dehydrating, and creating value-added products.

LSARS hosts many workshops on-site to assist with educating the community on all aspects of sustainable living. Workshops that have been provided include building compost bins, building rain barrels, seed saving, beginner gardening, make-and-take cold frames, and attracting pollinators.
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<td></td>
<td>Regeneration</td>
<td>Rose M. Burcham</td>
<td>United Tribes Technical College</td>
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**ABSTRACT**

To learn more about regeneration, the presenter used planaria, bilaterally symmetric metazoans of the phylum Platyhelminthes for her study, predicting that vitamins A, B₁₂, and E needed by humans to maintain health would help with regeneration in planaria. The human body cannot always regenerate a specific organ needed to stay alive and may require an organ transplant. The human body needs certain vitamins, minerals, and nutrients to maintain health; after careful testing and daily monitoring of the planaria in a regeneration assay, regeneration was possible with certain vitamins. The presenter would like to repeat this testing with higher levels of vitamins and also with other vitamins needed by humans to maintain health.

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<td></td>
<td>Determining the Presence of Glucosidase Inhibitors in June Berries, Chokecherries, and Buffalo Berries</td>
<td>Jason P. Breiner</td>
<td>United Tribes Technical College</td>
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**ABSTRACT**

The presenter studied how incorporating native berry plants, known for hundreds of years by Native Americans and which contain glucosidase inhibitors, back into everyday diet could help alleviate the diabetes epidemic in both native and non-native people. Glucosidases are carbohydrate-splitting enzymes. Their substrates are dependent on their specificity. Inhibitors are a substance added to another product to prevent slowdown or change. Glucosidase inhibitors help slow the breakdown of sugar in the blood. Many foods, such as fruits and vegetables, contain glycosidase inhibitors. These foods can aid in controlling blood sugar naturally. Some foods with glucosidase inhibitors help lower blood sugars, while others help an individual maintain a consistent blood sugar level. Some fruits are now labeled super foods for their positive properties. For this assay, acarbose (a known glucosidase inhibitor) is the positive control. It was placed in a marked petri dish containing a potato-enriched agar. A Lugol's stain was added over the surface of the plate. Extracts containing glucosidase inhibitors remained blue, while extracts without showed clear. One hundred percent of the berries tested positive for the inhibitor. The presenter would like to see a program developed on campus and reservations that would make native berries and plants more easily accessible. Planting groves with community herbal gardens and incorporating an education program for young students would encourage a traditional healthy lifestyle.
**Faculty Section**

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<td><strong>Assessing Sources of Contamination on the Lower Little Big Horn River in Montana on the Crow Reservation</strong></td>
<td>Sara Plaggemeyer</td>
<td>Little Big Horn College</td>
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**ABSTRACT**

The goal of the project entitled *Assessing Sources of Contamination on the Lower Little Big Horn River in Montana on the Crow Reservation* was to reduce the distance between previous water quality monitoring sites used on the Little Big Horn River on the Crow Reservation in Montana, in order to identify areas of high inputs of coliforms from non-point sources, as these sources are greatly impacting the water quality of the lower portions of the river. Previous water quality monitoring by students at Little Big Horn College over the last four years, has shown there to be significantly higher fecal coliform and *E. coli* counts in this lower area of the river during the summer months. The distance between past monitoring sites is relatively large and variation of land use between sites is potentially large enough that there is a potential for a number of non-point sources of contamination that could not be identified with past monitoring. A second component addressed the issue that, at times during the previous four years of monitoring, *E. coli* counts from water samples from the Little Big Horn River exceeded the amount of *E. coli* that EPA recommends for safe recreational use of these waters. The monitoring of these sites includes both physical and biological parameters. These parameters include dissolved oxygen, conductivity, pH, coliform enumerations, and *E. coli* enumerations.

The key findings of the project identified a period of time in May in which the *E. coli* counts exceeded EPA’s limit for recreation use of bodies of water. It was found that during the sampling season of this project that there was not a significant difference in the *E. coli* between sites at any time, therefore not allowing an identification of a high input non-point source of contamination.

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<td><strong>Portage Island Plant Survey, Lummi Nation Reservation, Washington</strong></td>
<td>Charlotte Clausing</td>
<td>Northwest Indian College</td>
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**ABSTRACT**

Over the past couple of summers the presenter has worked on plant survey projects connected with the Lummi Natural Resources Department. That Department has expressed interest in the location of plant species on the reservation. This type of information would be used for ecological studies and restoration projects in the future. Another reason for identifying shoreline plants specifically is the connection to sea level rise and the impact on those plant communities. Portage Island as a study area is unique, because it is an uninhabited, relatively undisturbed tract of land. Establish a baseline survey of plants along the lowest level shoreline of Portage Island. Create a base map of the plants with GPS data points and a sea level rise impact projection. Give a presentation on the completed project to all Northwest Indian College people and/or any other
Lummi people who wish to attend. Make this data available to appropriate tribal entities and the findings available to the Lummi community at large.

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<tr>
<td>Reconnecting Tribal Families and Youth to the Nature to Maintain Cultural Practices</td>
<td>Charlotte Clausing</td>
<td>Northwest Indian College</td>
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**ABSTRACT**

During a two-day workshop participants discussed the different ways that the tribes of Western Washington and state partners and federal government agencies could help reconnect Native American families and youth to nature. It is important that the Native American families and youth return to their cultures and traditions.

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**ABSTRACT**

On a global scale, *Pseudo-nitzchia*, a phytoplankton species, has begun producing increasing amounts of domoic acid (DA). It has been found that the biotoxin travels up the food chain. In 1987, blue mussels containing domoic acid caused an outbreak in Canada where 150 people became ill and three died. Since then, domoic acid has been found to be the cause of unusually high rates of mortality in brown pelicans, northern fur seals, northern anchovies, and California sea lions. A laboratory research study of zebra fish found that they produced an immune system biomarker with regular injections of low levels of DA, and confirmed the manufacture of the antigens in the bodies of naturally exposed wild sea lions.

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<td>Northwest Indian College Team SkyWalkers competed in the University Student Launch Initiative (USLI)</td>
<td>Charlotte Clausing</td>
<td>Northwest Indian College</td>
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**ABSTRACT**

Northwest Indian College Team SkyWalkers competed in the annual NASA-sponsored Huntsville, AL University Student Launch Initiative (USLI). The NWIC rocket, Sky Bolt, competed with 40 universities from the US at the Marshall Space Center. Notable participants, aside from NWIC, were MIT, Notre Dame, Purdue University, University of Washington, and other prestigious engineering universities and colleges.

One objective was for the rocket to reach an altitude of 5,280 feet and no higher or lower. The parachutes deployed as designed, and Sky Bolt landed gently on the ground about 0.8 mile from the launch pad. The 15-20 mph wind picked up the rocket’s main parachute and
dragged it a mile from its touchdown spot. The only damage came from being dragged over the ground. Sky Bolt’s altitude was recorded at 4,830 feet, one foot higher than the University of Washington’s rocket. Sky Bolt transmitted the GPS data and the data it collected from the science payload that Science Payload team designed, built, and tested to the ground station successfully. Mini-cameras attached to the rocket captured photos.

The First Nations Rocket Launch in Milwaukee, April 28, aims to keep the rocket’s center of gravity in the same position throughout the rocket’s boost phase. This means devising a method to compensate for the burning and diminishing rocket fuel.

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<td>“Pride, Proficiency and Prosperity” – A Project to preserve Traditional Native Crafts and empower Native Businesses</td>
<td>Vonne Strobbe</td>
<td>Southwestern Indian Polytechnic Institute</td>
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ABSTRACT

The “Pride, Proficiency and Prosperity” program is a Special Emphasis Grant related to the Family Extension and Education Program. The program was created to help Native American artisans benefit from instruction in expanded business practices and, at the same time, address the high rate of unemployment in Native American communities and among Southwestern Indian Polytechnic Institute students.

The project has three objectives: 1) to provide instruction in traditional arts to at least 100 people per year in an ongoing program; 2) to provide instruction in small business management to at least 60 people per year with the idea of establishing their own home businesses; and 3) to help at least to five people per year establish, market, and successfully manage a business featuring authentic traditional arts and crafts or traditional food items.

The Native artisans recruited during the initial phase of the project received instruction in basic management skills, purchase of materials, and networking. To augment networking, the recruited artisans formed an informal cooperative to market and sell their wares throughout the country at Native American craft shows and, at the same time, develop business relationships with other Native artisans and recruit them for a second cohort.

The project has conducted Traditional Craft Nights from the onset of the award, with each topic conducted over a two to three day period. The following topics have been addressed: a variety of beading, ceramics, traditional clothing, moccasins, sandblasted glass mirrors. Future classes will include Native photography, traditional belts, jewelry making, and pottery.

At least five new artisans have been recruited for the second cohort and plans are presently underway to host a series of business classes including basic management skills, record keeping, and purchase of materials. Business sessions educate members of the first cohort in web design and networking opportunities. The new PI is developing an extensive resource directory for the project.
Sherry R. Allison  
President  
Southwestern Indian Polytechnic Institute

Sherry Allison is president of Southwestern Indian Polytechnic Institute (SIPI), Albuquerque, New Mexico. A member of the Navajo Nation, Allison is originally from Shiprock, New Mexico and holds a Doctorate of Education from Northern Arizona University, Master of Arts in Education from Northern Arizona University (Special Education), and a Bachelor of Social Work from New Mexico State University.

Allison has served on numerous boards and task forces, including service as the 1999-2000 president of the National Indian Education Association (NIEA) and past chairperson of the New Mexico Individuals with Disabilities Education Act (IDEA) State Advisory Panel. Dr. Allison’s professional experience in Indian education spans over a 25-year period that includes the following university appointments: assistant professor (LAT) and senior research scientist at the University of New Mexico (UNM)/Health Sciences Center/Center for Development and Disability in Albuquerque, New Mexico; assistant professor (adjunct) with the Native American studies program at UNM; and research associate with the University of Arizona/School of Medicine/Native American Research and Training Center. Working with the Bureau of Indian Education (BIE), she has served in the capacities of program supervisor for programs dealing with residential treatment centers and educational services to students in juvenile detention centers, professional development, and special education. She also served on details as the education line officer (superintendent of education) for two agency offices located on the Navajo Nation which oversee both BIE operated and grant schools; and, a seven-month tenure as the acting chief for the BIE Division of Performance and Accountability to ensure compliance and implementation of all statutory responsibilities in accordance with the Individuals with Disabilities Education Improvement Act (IDEIA) (P.L. 108-446) and No Child Left Behind Act (NCLB) (P.L. 107-110) for all 184 Bureau of Indian Education (BIE) funded schools located in 23 states.
Cheryl Crazy Bull
President and CEO
American Indian College Fund

Cheryl Crazy Bull is President and CEO of the American Indian College Fund.

Crazy Bull (Lakota) is the former President of Northwest Indian College in Bellingham, Washington. Crazy Bull has more than 30 years of experience in tribal education. Her extensive experience with the tribal college movement includes initiatives that support Native student success, expansion of academic and workforce programming, community-based research, and intellectual capacity-building focused on leadership and tribal sovereignty. She has advanced the efforts of the tribal colleges to be more responsive to community opportunities and student needs. Crazy Bull has broad experience with building networks of supporters of tribal students and tribal education and with all aspects of fundraising. She also served as President of the Board of Directors for the American Indian Higher Education Consortium.

Crazy Bull held varied positions including Vice President of Administration, Director of Institutional Relations, Dean of Instructional Programs, Director of Women's Projects, a planning officer, instructor, and department chair at Sinte Gleska University, a tribally controlled college in Rosebud, SD. In 1996 she established Crazy Bull and Associates and for the next two year she provided planning, improvement, and development services to American Indian organizations.

Crazy Bull earned a Bachelor of Science degree in Business Administration with Management Emphasis, and a Masters of Education in Educational Leadership, from the University of South Dakota.
Northern pike (*Esox lucius*) is a fish species common to the Northern Midwest regions of the United States. The species is of great interest to fish biologists, because northern pike are a significant fish to sport-fishing enthusiasts. The purpose of this study is to determine seasonal movement patterns of northern pike in small, lentic water systems located in the Northern Midwest region of the U.S. in an effort to provide data for better management of the fish species. The movement pattern data was attained by using radio telemetry during all four seasons of the year. When fish were tracked and found, latitudinal and longitudinal points were determined using global positioning system (GPS) technology. In addition to logging the position of tracked fish, environmental data, such as water depth, water temperature, and weather conditions, was obtained to determine reasons for seasonal fish movement. The research found that weather conditions and water temperature are not factors in determining seasonal fish movement of northern pike in small, lentic systems in North Dakota; however water depth does play a role in fish movement.

The Land Grant Office at Diné College has hosted youth programs focused on educating youth about environmental issues and environment-related careers across the Navajo Nation through youth camps. This one-week program made youth aware of the environmental issues within the students’ community and had them think about differences they could make in helping their community and environment. This past summer, the Land Grant Office at Diné College tried a new approach by partnering with various departments within United States Department of Agriculture (USDA), mainly with Animal Plants Health Inspections Services (APHIS), to administer the two-week summer outreach program, Safeguarding Natural Heritage (SNH): Strengthening Navajo Youth Connections to the Land, which was targeted at educating high school students. The program enhanced youths’ exposure to agriculture, natural resources, and wildlife biology through activities within the environs of the community of the Navajo
Nation. While the environmental youth camps were one-week programs, the two-week APHIS program allowed the Land Grant a larger timeframe and resources to expand to other programs outside the Navajo Reservation. The high school students’ higher capacity of learning allowed the program to go more in-depth with their curriculum. The students’ experiences increased their awareness and gave them a better understanding of plant and animal care and motivation to aid their community and environment and possibly consider careers in fields related to these areas. The APHIS program provided the Land Grant with quality resources to expand upon their well-established youth camps and advance them to create a high-quality educational experience.

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<tr>
<td></td>
<td>Flowing Rush (Butomus umbellatus) influences on Habitat and Food Web Implications to Non-native and Native Fishes in the Flathead Basin</td>
<td>Jerome O’Brien Sr.</td>
<td>Salish Kootenai College</td>
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**ABSTRACT**

The aquatic invasive macrophyte flowering rush (*Butomus umbellatus*) directly affects and impacts environmental quality, recreation, wildlife, and irrigation water delivery. The implications of the flowering rush on native fish populations and overall water quality is not known. It has been SKC Extension’s top priority to quantify and analyze these implications, to evaluate impacts and implement management actions throughout the Flathead Lake region and the Columbia River Basin. The overall goal of this research is to gather basic information which will help assess how flowering rush expansion will impact fish habitat and native fish recovery in the Flathead Basin. This includes the native bull trout and the cutthroat trout, species of cultural and ecological concern on the Flathead Reservation. Flowering rush is becoming so well established in Flathead Lake, upper and lower Flathead River, and the upper reaches of the 900-mile Columbia River, that it has the possibility of altering crucial food-web interactions that will result in a fishery dominated by non-native species and a declining native fish population. These expanding stands of flowering rush provide habitats for introduced fish species that are vegetation spawners and/or ambush predators of the native fish species, such as the cutthroat and bull trout and juvenile salmon. These vegetation adapted piscivorous species include small and large mouth bass, yellow perch, and northern pike (Tabor and others, 1993; Fritts and Pearsons, 2004; Bonar S.A. and others, 2005; Schultz, 2008; Cooper and others, 2008).

Flowering rush is only the latest invader to the Flathead system that clearly changes environmental conditions to large areas of Flathead Lake, provides favorable habitat for non-native fish, and causes undesirable impacts to lakeshore owners and users. This research into flowering rush food-web interactions is the first to document environmental conditions created by a flowering rush invasion and will provide information as to the future conditions of an unmitigated spread (Dupuis V 2011).
**FALCON Panel Presentations**  
**Sunday, October 28, 2012**  
**1:30–2:30 pm**  
**Potters**  

**Student Panel 2**

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<tr>
<td>1</td>
<td>Development of a Wild Rice Permit System for the White Earth Nation</td>
<td>Dianne Kier</td>
<td>White Earth Tribal and Community College</td>
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**ABSTRACT**

For the past twenty five years, the presenter and her sister have joined hundreds of other wild rice harvesters at the lake’s edge for the annual harvest. Wild rice (*Zizania palustris* L.) has cultural and economic value to the people of White Earth Nation. Wild rice is considered sacred amongst the Anishinaabe people of the upper Great Lakes Region, not only because it was a staple food component in their diet, but also a cultural tie to ancestors since their migration west to where the “food that grows on water.” Wild rice yield productivity is a concern to the tribal communities who rely upon the annual wild rice harvest, and therefore it is important to understand yield expectation to derive a total number of harvest permits. This research project explored two lakes: Lower Rice Lake located on the White Earth Reservation and Mitchell Dam/Rice Lake on the Tamarac National Wildlife Refuge (TNWR).  Using geometry calculations in ArcGIS, GPS waypoints, and estimates based on personal and Traditional Elder Knowledge, the goal for this project was to research and estimate the wild rice productivity of each lake to make recommendations on how many harvest permits can be issued for each of the lakes. In the near future, the researcher hopes to secure more detailed data for the two surveyed lakes and begin to acquire data for other bodies of water on the reservation and refuge which offer rice.

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<tr>
<td>2</td>
<td>What makes a Pinyon Pine (<em>Pinus edulis</em>) Super Dad? Pollen production and viability in the context of Climate Change</td>
<td>Brandon Canyon</td>
<td>Diné College</td>
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**ABSTRACT**

Climate change adversely affects Mother Earth and the cycles of life, which seems to transgress and regress at her will. Temperature gradients differ across the world, so a given level of warming leads to different expected range shifts of species in different regions (Loarie et al., 2009). The focus of this study is to determine how pinyon pine (*Pinus edulis*) responds to climate change with an emphasis on pollen production and viability in relation to drought and associated insect resistance and susceptibility. Student researchers measured the traits of a group of trees that had successfully reproduced as fathers of a number of offspring (super dads) and compared their traits to those of neighbors that did not father seedlings. In addition, pollen viability was
tested by placing pollen into a regime of incubation and germination temperatures that pinions might experience as the climate warms. The analysis of the variation of pinyon pine is to further understand the progression, distribution, and hybridization due to climate change. The team hypothesized that insect resistant pinyon pines will be more likely to produce more offspring due to their resistance to insects than the susceptible pinyon pines and that their pollen will be more viable in optimal temperatures and less viable in hotter temperatures projected for the future *P. edulis*. Results should further the ongoing study of pinyon pine and raise questions on climate change and its effects on the flora and fauna of Mother Earth.
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<tr>
<td>1</td>
<td>Ethnoveterinary Treatment of Horses by the Great Sioux Nation</td>
<td>Sunshine Claymore</td>
<td>Sitting Bull College</td>
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**ABSTRACT**

Through the observations of the natural world around them, Native American societies have accumulated immense knowledge of how to use the surrounding fauna and flora for food, medicine, shelter, and clothing. Not only did these societies use native plants for themselves but also for their domesticated animals. The purpose of this preliminary study is to determine native plants used in treatment of horses by the Lakota (Sioux) People of the Standing Rock Reservation located in the Dakotas. No known ethnoveterinary study of this nature has been conducted on the Standing Rock Reservation. During summer 2012, student researchers conducted a literature review to assess available knowledge of native plants used in the treatment of horses and interviewed enrolled tribal members on the use of native plants in this process, i.e., identification of plants, parts of the plants used and how they were administered. Sixteen plants were documented from the literature review and interviews as used by the Lakota People to treat horses for distemper, wounds, sore muscles, urinary tract infections and other ailments. Interviews concluded that horses continue to play an important role among many of the people on Standing Rock, although further interviews must be conducted to fully understand the extent to which native plants are used today to treat horses in ethnoveterinary practices.

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<tr>
<td>2</td>
<td>Navajo Gardening, Nutrition, and Wellness Project</td>
<td>Deina Michel Barton</td>
<td>Diné College</td>
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**ABSTRACT**

The Navajo Gardening, Nutrition, and Wellness Project was a community-based participatory research project that concentrated on four community sites located on the Navajo reservation: Shiprock, Hogback, Lukachukai, and Tsaile/Wheatfields. The project researchers conducted a community assessment of a “family's interest, resources, activities, barriers, and attitudes relating to gardening as a means of addressing nutrition and physical activity to improve health outcomes.”

Researchers conducted a subset of 30 face-to-face surveys within the Tsaile/Wheatfields community. Two staff members fluent in Navajo helped with translations for non-English speakers. This was a cross-sectional study with sampling stratified by community and by areas.
within the communities. Data was collected via face-to-face survey. Participants were selected at various sites throughout the community. Participants needed to be age 18 or older, of Navajo ethnicity, and full-time, permanent residents of the Tsaile/Wheatfields in order to be eligible.

The rise of type 2 diabetes in the Navajo people increases every year at alarming rates. Results of this study will help guide future health promotion programs or community-based projects in efforts to reduce or delay the onset of diabetes. Specifically, the future plans of the project are to use the information and data gathered to promote the consumption of fresh fruits and vegetables and provide alternative ways to attain healthy foods, especially for those who live in rural areas where access to fresh foods is limited. The project hopes that the Gardening Project is the first step in efforts to help the Navajo people with their fight against diabetes.

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<tr>
<td>His and Her Stories of Diné College Land Grant Office</td>
<td>Nicholas J. Ashley &amp; Amber Defoe</td>
<td>Diné College</td>
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**ABSTRACT**

The Diné College Land Grant Office (LGO) Internship fosters student and professional development, research, and curriculum design. The LGO student interns have conducted a variety of projects on illegal dumping, youth development, water shock chlorination, composting, and solar panel installation. These projects are small in nature but offer the local community members educational tools to enhance opportunities in technology, environmental sustainability, and use of local resources. The LGO also allows students to develop, create, and participate in educational presentations and workshops to the community. The educational aspects also include community and local development and natural resource and environmental management.

Interns and staff engage in educational duties on a daily basis. These activities and projects are funded by the United States Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA), Arizona Department of Rural Development, and Grand Canyon Trust. The Land Grant helps the community, including the college students, and its tribal members promote better lives and sustainable futures.
FALCON Panel Presentations
Sunday, October 28, 2012
2:45–3:45 pm
Potters

Faculty Panel 4

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<tr>
<td>Traditional Foods Teaching Tools</td>
<td>Elise Krohn and Elizabeth Campbell</td>
<td>Northwest Indian College</td>
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ABSTRACT

In the last year the NWIC Traditional Plants and Foods Program staff has created several interactive and culturally based teaching tools on native foods to meet growing demands from the communities we serve. Join Elise Krohn and Elizabeth Campbell as they share some of these, including a cedar box teaching kit that features Salish Foods and traditional cooking methods. The box was developed for the 2012 Smithsonian Folklife Festival Campus and Community exhibit featuring tribal colleges. It is currently being expanded as a tool for educators and will be available through train-the-trainer workshops in 2013. A curriculum called Honoring the Gift of Food, which was developed out of the book *Feeding the People, Feeding the Spirit* by Elise Krohn and Valerie Segrest, is also being refined and will be released broadly to tribal educators within the next year. The curriculum has been run at several NWIC extended campuses including Muckleshoot, Swinomish, and Nisqually and has had great initial success in helping students to create a modern traditional foods diet. In addition, the Northwest Indian College Cooperative Extension just launched its Indigenous Foods and Traditions Institute with a conference entitled Our Food is Our Medicine. Elise and Elizabeth will share some of the stories and outcomes from the conference, which brought together 125 people from the Pacific Northwest to celebrate native food traditions. This was the first of many gatherings that the institute will host related to indigenous foods.

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<tr>
<td>Navajo Gardening, Nutrition and Community Wellness</td>
<td>Mark C. Bauer, Kevin Lombard, Felix Nez, William Bighorse</td>
<td>Diné College and New Mexico State University</td>
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ABSTRACT

Issues of nutrition, health, and rural development are of significant importance in the population of the Navajo Nation. Increases in risk factors for diabetes and cardiovascular disease are clearly related to nutritional and activity lifestyles. This research assesses Navajo families’ interest, resources, activities, barriers, and attitudes relating to gardening as a means of addressing nutrition and physical activity to improve health outcomes. The faculty/staff research team worked with community representatives and Navajo students to develop and pilot test a
Respondents were asked to identify themselves as gardeners or non-gardeners to serve as an independent variable. Dependent variable questions assessed knowledge of gardening and its connection to nutrition; current gardening activities; barriers/facilitators to gardening (e.g., access to land, water, tools, skills for gardening); family economic status; nutritional and physical activity levels; health conditions; and demographic questions (e.g., distance from various garden resources like irrigation water). Thirty interviews were conducted in each of four separate Navajo communities for a total sample size of 120. The three-stage sampling strategy roughly represented the population in terms of gender, age, employment status, and enrollment in assistance programs like SNAP. Additionally, four trained Summer Research Enhancement Program (SREP) students analyzed data from the questionnaire to test hypotheses they developed about associations among the independent and dependent variables. A significant finding was that 31% of respondents reported that they garden, and this group reported consuming 2.2 more servings of fruits and vegetables daily compared to the non-gardeners. Much additional detail from this dataset on attitudes, interest, barriers, and resources specific to each community will help the college’s extension program design outreach appropriately.

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<tr>
<td>“Pride, Proficiency and Prosperity” – A Project to preserve Traditional Native Crafts and empower Native Businesses</td>
<td>Vonne Strobbe</td>
<td>Southwestern Indian Polytechnic Institute</td>
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**ABSTRACT**

The “Pride, Proficiency and Prosperity” program is a Special Emphasis Grant related to the Family Extension and Education Program. The program was created to help Native American artisans benefit from instruction in expanded business practices and, at the same time, address the high rate of unemployment in Native American communities and among Southwestern Indian Polytechnic Institute students.

The project has three objectives: 1) to provide instruction in traditional arts to at least 100 people per year in an ongoing program; 2) to provide instruction in small business management to at least 60 people per year with the idea of establishing their own home businesses; and 3) to help at least to five people per year establish, market, and successfully manage a business featuring authentic traditional arts and crafts or traditional food items.

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At least five new artisans have been recruited for the second cohort and plans are presently underway to host a series of business classes including basic management skills, record keeping, and purchase of materials. Business sessions educate members of the first cohort in web design and networking opportunities. The new PI is developing an extensive resource directory for the project.
**Land Grant Forage Research**

This research project aims to increase the knowledge of Navajo communities and farmers about alternative forage crops. With these different location plots, Diné College’s Land Grant Office staff to developed workshops and field data days to involve local farmers, members of the local communities, student interns, and university collaborators. These research plots are located in Tsaile, Upper & Lower Wheatfields, Teec Nos Pos, and Many Farms, Arizona to plan, collect soil samples, measure rainfall, irrigation application, and harvest data from the forage crop variety trials. Anticipated outcomes include alternative forage crop selection by Navajo farmers and provide income sources to sustain farm families through the marketing of plant producers to help sustain livestock, produce market, and help restore quality nutrients to the soils and the environment.

**Revitalizing Soil with Organic Matter**

Land is important, especially the top soil that farmers need to produce crops every growing season. Periodically soil does not properly cultivate crops, and the problem usually reflects the condition of the top soil. By daily vehicle/machinery use and overgrazing, farmers, ranchers, cattle, and wildlife demolish nutrients and minerals in the soil. Through controlled experimentation and proper rehabilitation efforts, a ruined plot of land can be restored through simple composting methods.
### Strategizing our Unified Voices to Decolonize our Diets and Revitalize our Traditional Food Systems

**Presenters:** Jessica Porter  
**Institution/Organization:** Northwest Indian College

**ABSTRACT**

As community gardens, native plant restoration projects, traditional hunting journeys, and traditional food revitalization initiatives are happening throughout Indian Country, it is becoming more apparent that a movement is taking place. That is why this is the precise time to engage in dialogue about how we may unify our voice in the food movement. In this way, we become a larger part of the whole, standing in solidarity as a unified Indian Country, saying clearly that our traditional foods and medicines matter. While a lot of work is being done in underserved communities throughout the United States, our ancient food systems and the people who carry knowledge of how to take care of them go unheard. As this country moves towards a new food system for the future, its scarcity or its abundance totally depends on how well we honor our old world traditions. The Native people of these lands are not only the knowledge keepers but have made a commitment to ensure that these foods continue to exist for future generations. Now is the time for us to better strategize how we can unify our voice, using platforms like FALCON to have a presence in conversations about federal policy, the Farm Bill, GMO labeling, seed ownership, to name a few. In this session, Jessica Porter (Chinook) will facilitate a discussion around strategizing our unified voices so that we may stand in solidarity as we decolonize our diets and revitalize our traditional food systems.

### Creating Financial Resources for Tribal College Extension with Education Demonstration and Technical Services

**Presenters:** Virgil Dupuis  
**Institution/Organization:** Salish Kootenai College

**ABSTRACT**

As part of an integrated program involving college students, extension, and research, Salish Kootenai College Extension has developed significant financial resources by partnering with agencies and private entities by producing native plants, implementing ecological restoration educational demonstrations, and producing technical publications. Using existing USDA regulations and coordinating and planning with college administrators can assist in implementing these projects in successful fashion. However, it is likely to encounter problems
due to the lack of college policies and knowledge about fee for educational services. We will discuss successful projects, identify pitfalls, and present solutions for income-generating educational practices.
Muquarrab Qureshi is the new Assistant Director for the Institute of Youth, Family and Community (IYFC) within NIFA. The Institute provides leadership and oversight for the Institute’s research and extension programs which are focused on Youth and 4-H, Community and Education, and Family and Consumer Sciences.

In 2003 Qureshi joined USDA’s Cooperative State, Research, Education, and Extension Service as a National Program Leader. Prior to joining USDA, Qureshi served as a Professor, the Director of Interdisciplinary Graduate Program of Physiology, Director of Graduate Program of Poultry Science, and the Associate Dean of the Graduate School at North Carolina State University (NCSU). During his time at NCSU, Qureshi received several national outstanding teaching awards, authored 115 peer-reviewed scientific publications, mentored 20 MS and Ph.D. students, and carried out several invited international assignments through the United Nations or as a Fulbright Scholar.

Qureshi has a DVM and M.Sc. degrees from Pakistan and a Ph.D. from Cornell University.
USDA Outreach & Technical Assistance Symposium

October 30, 2012 • 9:00 am–12:00 pm
Franciscan Ballroom

Agenda

9:00 AM

OPENING & INTRODUCTION
Lawrence Shorty, Director
USDA 1994 Tribal Land-Grant Colleges and Universities (TLGCU) Program

PRIMER: Overview of the USDA 1994 Tribal LGCU Program
John Phillips, FALCON/AIHEC
Lawrence Shorty
Stephanie Koziski, Program Analyst, USDA 1994 TLGCU Program

The USDA 1994 Tribal Land-Grant Colleges and Universities (TLGCU) Program was established in the 2008 Farm Bill. Learn about events that led to the office’s creation and its purpose. A discussion will follow on ways the USDA 1994 TLGCU Program office and TCUs can work together to maximize their efforts in Indian Country.

CASE STUDIES: Building a Rich Soil for Land-Grant Development at your TLGCU

Bay Mills Community College (BMCC): Development of Waishkey Bay Farm
Steve Yanni, Land-Grant Director, BMCC
Stephanie Koziski

A case study in the development of one TCU’s land-grant function: how a community’s interest in gardening, a committed TLGCU staff with a plan, tribal and TLGCU leadership support, and partnerships with USDA agencies and local producers laid the foundation for building the Bay Mills Community College Waishkey Bay Farm.
Sitting Bull College (SBC): Leveraging Partnerships to Secure a Research Grant
Dr. Halvorson, Ag./Natural Resource Department Chair, SBC
Lisa Yellow, 1994 Central Region Liaison, USDA

After successfully applying for a USDA Agriculture Food Research Initiative (AFRI) grant, a strong partnership between USDA Agriculture Research Service – Northern Great Plains Research Laboratory, North Dakota State University, South Dakota State University, and Sitting Bull College has formed. Learn about how this partnership came to be and how it has evolved, the beneficial research on natural beef production on the Standing Rock Sioux Reservation, and its potential impact on American Indian communities.

PROGRAMS:  1994/TCU Opportunities

USDA Tribal Fellows Program
Lavinia Panizo, Tribal Fellows Program Manager

Learn about the resources available at USDA to help you build your schools land-grant function and meet 2012 fellows and hear about their experience.

Federal Excess Property
Lavinia Panizo

Did you know that Federal Government surplus material and equipment is available to 1994 TLGCUs? Get a quick overview on accessing nationwide USDA Surplus, as well as surplus from other federal agencies and learn about the types of materials and equipment that are available, including lab equipment, trucks, trailers, boats, and more!

FEEDBACK SESSION:
Stephanie Koziski

USDA offers internships and scholarships to TLGCU students and graduates, as well as training opportunities to high school students. Help us strategize on ways the USDA 1994 TLGCU Program can better work with TLGCUs to ensure that students are learning and taking advantage of the opportunities available to them

12:00 noon

CLOSING
Lawrence Shorty
FALCON thanks the American Indian Higher Education Consortium (AIHEC) for its continuing support of FALCON operations. AIHEC is celebrating 40 years as the collective spirit and unifying voice of our nation’s 37 Tribal Colleges and Universities—a unique community of tribally- and federally-chartered institutions working to strengthen tribal nations and make a lasting difference in the lives of American Indians and Alaska Natives. AIHEC serves its network of member institutions through public policy, advocacy, research, and program initiatives to ensure strong tribal sovereignty through excellence in American Indian higher education.

FALCON is composed of the 1994 Land-grant faculty and staff at AIHEC-member institutions. Thirty-one TCUs are currently designated as 1994 Land-grant institutions.

For more information about AIHEC, contact:

AIHEC
121 Oronoco Street
Alexandria, VA 22314
phone: 703.838.0400

More information on scholarship and educational opportunities for TCU students is available at:

http://www.aihec.org/colleges/studentOpportunities.cfm