Final Report

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The Rural Crime & Justice Center (RCJC)
A University Center of Excellence
at Minot State University

Rodney Hair, Executive Director

By

The Rural Methamphetamine Education Project (RMEP)

Compiled by
Brittany Welt, Project Coordinator
Dawn Reule, Training & Research Associate
Matthew Schaefer, Training & Research Associate
Shawna VanSkiver, Training & Research Associate

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For additional copies, contact the RCJC at:
Rural Methamphetamine Education Project
Rural Crime & Justice Center
Minot State University
500 University Avenue West
Minot, ND 58707
701.858.3440
701.858.3460 (fax)
www.minotstateu.edu/rcjc
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Executive Summary

- Through analysis of methamphetamine-related data, RMEP identified that the prevalence of methamphetamine in North Dakota is decreasing in areas such as clandestine lab seizures and adolescent use, but trafficking continues to rise.

- The RMEP strives to provide the most recent statistical informational, as well as information that details the human cost of methamphetamine abuse in North Dakota.

- During the reporting dates December 26, 2007 – December 25, 2010, RMEP provided 462 presentations attended by 18,240 people, and 61 booth displays attended by 13,501 people.

- When surveyed, 95.9% of event facilitators indicated that the presentation/booth display increased the awareness of the intended audience.

- When surveyed, 95.9% of event facilitators agreed or strongly agreed that they would recommend RMEP services to others.

- During the reporting dates December 26, 2007 – December 25, 2010, RMEP attended 222 meetings with community coalitions and safety organizations.

- The RMEP will create a “toolkit” to include RMEP presentation materials, along with a resource guide of grade specific activities and information currently available from various local, state, and national prevention associations.

- The RMEP will continue to serve as a resource through the formation of a research library containing literature and data collected throughout the duration of the project.

- RMEP will continue to stay abreast of methamphetamine research conducted by chemistry students and staff through communication with the Minot State University (MSU) Chemistry Department.

- The RMEP will continue to evaluate its education and awareness program by encouraging audience members to complete an evaluation after attending a presentation.

- The RMEP remains committed to providing its services, expanding services to areas in need, and evaluating the threat of methamphetamine in North Dakota.
Introduction

A variety of resources have been allocated to address the significant threat of methamphetamine facing North Dakota. The Department of Justice (DOJ), the Drug Enforcement Administration (DEA), the High Intensity Drug Trafficking Area (HIDTA) program, the Federal Law Enforcement Training Center (FLETC), the North Dakota Bureau of Criminal Investigation (BCI), North Dakota Department of Health (DOH), North Dakota Department of Human Services (DHS), North Dakota Department of Corrections and Rehabilitation (DOCR), and the Rural Crime & Justice Center (RCJC) have each contributed resources to help address the problem. Continued evaluation of the threat posed by methamphetamine to North Dakota and the efforts to reduce its presence show that we have seen success in some areas and must continue to evaluate and adjust strategies in others.

The Rural Methamphetamine Education Project’s (RMEP) initial goal was to develop and deliver a public awareness campaign to North Dakota communities. As the project has evaluated its efforts, it has expanded its role of public awareness to include many different strategies for information dissemination. This report details the efforts of RMEP.
Section 1: Methamphetamine in North Dakota

1.1 Transportation and Distribution

North Dakota is a part of the Midwest High Intensity Drug Trafficking Areas (HIDTA), which is an area connected by an extensive transportation infrastructure, making it easier for traffickers to ship wholesale quantities of methamphetamine and other drugs into the region (National Drug Intelligence Center [NDIC], 2010).

Methamphetamine distribution and abuse and associated violence are the greatest drug threats to the Midwest HIDTA region. According to the National Drug Intelligence Center (NDIC) National Drug Threat Survey (NDTS) 2010, 101 of the 178 federal, state and local law enforcement respondents in the Midwest HIDTA region identify methamphetamine as the drug that poses the greatest threat to their jurisdictions. Well established Mexican traffickers are supplying sufficient quantities of ice methamphetamine to meet demand for the drug in most HIDTA cities, and 81 NDTS 2010 respondents categorize the drug as highly available in their jurisdictions. (NDIC, 2010, Drug Threat Overview section)

According to the 2010 Drug Market Analysis, the Midwest HIDTA region has experienced exploitation from various Mexican drug trafficking organizations (DTOs). As a result of the legislative control of pseudoephedrine in 2005, these DTOs have significantly increased distribution of ice methamphetamine in the region. The Midwest HIDTA region is also vulnerable to drug trafficking through the Northern border. North Dakota alone shares more than 300 miles of border and 18 land ports of entry with Canada, much of which is isolated and rural (NDIC, 2010).

The trafficking and use of methamphetamine is a primary concern for law enforcement and public health officials in North Dakota. In an April 2010 press release, the North Dakota Highway Patrol reported that during the 12 month period between September 2008 and August 2009, troopers seized a half a pound of methamphetamine and over $5,000 of drug-related money. Patrol officers saw a significant increase in trafficking during the eight month period of...
August 2009 to March 2010, seizing seven pounds of methamphetamine and over $50,000 in drug money (North Dakota State Highway Patrol, 2010). In addition, BCI reported seizing 6.9 kilograms of methamphetamine during the 2010 calendar year (North Dakota Bureau of Criminal Investigation [BCI], 2011).

In an effort to keep law enforcement officers aware of the current illegal street drug prices in North Dakota, BCI provided the following information. As of February 7, 2011, this information may be used in calculating the illegal market value of methamphetamine throughout the state (BCI, 2011).

**Table 1. Methamphetamine Street Cost**

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powder</td>
<td>1 gram</td>
<td>$100-150</td>
</tr>
<tr>
<td></td>
<td>1 ounce</td>
<td>$2,000-2,500</td>
</tr>
<tr>
<td></td>
<td>1 pound</td>
<td>$10,000-20,000</td>
</tr>
<tr>
<td>Crystal</td>
<td>1 gram</td>
<td>$200-300</td>
</tr>
<tr>
<td></td>
<td>1 ounce</td>
<td>$2,500-4,000</td>
</tr>
<tr>
<td></td>
<td>1 pound</td>
<td>$24,000-35,000</td>
</tr>
</tbody>
</table>

1.2 Seizures and Arrests

**Figure 1. Clandestine Methamphetamine Lab Seizures**

* Source: ND Office of the Attorney General, 2000-2010
* includes operational labs, non-operational labs, chemical equipment/glassware seizures, and dumpsites
**Figure 2.** Methamphetamine/Amphetamine Samples Processed by ND Crime Lab

Source: Stenhjem, 2010

**Figure 3.** ND Drug Offense Arrests by Drug Type

Source: ND Bureau of Criminal Investigation, 2000-2009
**Figure 4. Federal Drug Sentencing: Methamphetamine as Primary Offense**

![Bar Chart](chart.png)

Source: United States Sentencing Commission, 2009

1.3 Associated Activity

High levels of criminal activity in the Midwest region are often linked to the distribution and frequent use of illicit drugs in the area. Methamphetamine abuse is often associated with violent criminal activity such as domestic violence and child abuse, as well as the commission of property crimes such as burglary, forgery, fraud, and identity theft, which provide a means to support an offender’s drug habit (NDIC, 2010). According to the 2010 Drug Market Analysis, 55.6% of federal, state and local law enforcement respondents identified methamphetamine as the drug that “most contributes to violent crime in their jurisdictions” (NDIC, 2010. Drug Related Crime section).

1.4 Youth at Risk

To gauge the use of methamphetamine by students in grades 7-12, RMEP refers to the results of the North Dakota Youth Risk Behavior Survey (YRBS). This self-reporting survey is voluntary for all public schools and is administered in the spring of odd years. The compiled
data is randomly selected from all participating schools. It focuses on youth and young adult behaviors that may lead to death or disability, including alcohol and other drug use. The information is reported by both state and region. The survey indicates how youth risk behaviors change over time and is important because, “these behaviors are often established during youth and extend into adulthood” (ND Department of Public Instruction [DPI], 2009, Background Information section). The YRBS indicates a steady decrease in methamphetamine use by North Dakota students in grades 9-12 from 1999-2009, while it indicates fluctuation in use by students in grades 7 and 8 (DPI, 2009).

**Figure 5. ND YRBS Data: Used Methamphetamine 1 or More Times in Life**

![Chart showing the percentage of students using methamphetamine by grade and year from 1999 to 2009.](chart.jpg)

Source: ND Department of Public Instruction, 1999-2009
*No data available for 1999, Grades 7-8*
Figure 6. Grades 9-12 by Region: Used Methamphetamine 1 or More Times in Life

Source: ND Department of Public Instruction, 2001-2009

1.5 Department of Corrections and Rehabilitation

According to the North Dakota Department of Corrections and Rehabilitation (DOCR), 3,341 individuals were admitted to a state prison facility during the time period of October 1, 2007 to December 6, 2010. Of those admitted during this time period, 522 (15.6%) were due to a methamphetamine-related crime, which is defined as possession, paraphernalia, distribution, or manufacturing, and 640 (19.2%) were admitted due to a methamphetamine-related crime or probation violation (ND Department of Corrections and Rehabilitation, 2010).

1.6 Treatment Episode Data Set

Each year in the United States, there are approximately two-million substance abuse admissions to treatment facilities that report to individual state administrative data systems. The Treatment Episode Data Set (TEDS) is a part of the Substance Abuse and Mental Health Services Administration’s (SAMHSA) Drug and Alcohol Services Information System. TEDS is a collection of both demographic and substance abuse data, which can be broken down by state and calendar year (SAMHSA, 2010).
TEDS is an admissions-based system; however, each admission reported does not necessarily represent an individual. For example, a single individual admitted to a reporting facility twice in one calendar year will count as two admissions. TEDS only includes the data from admissions to facilities that are licensed or certified by a state substance abuse agency, which are generally those that receive state alcohol or drug funding (SAMHSA, 2010).

*Figure 7. ND Substance Abuse Treatment Admissions: Methamphetamine as Primary Substance of Abuse*

The North Dakota TEDS shows a steady prevalence of females entering treatment for methamphetamine as their primary substance of abuse. From 2000 to 2010, the average rate of females reporting methamphetamine as their primary substance of abuse was 49.1 percent. In 2010 alone, 57.4 percent of women reported methamphetamine as their primary substance of abuse (SAMHSA, 2010).
1.7 Initiatives/Programs

Aside from RMEP, North Dakota has developed and implemented several other drug related initiatives. This list is not exhaustive, but some of the major initiatives include:

1.7.1 Retail Meth Watch Program

The North Dakota Retailers Meth Watch Program is a partnership involving the BCI and a number of concerned North Dakota retailers. The program’s goals are to:

- Raise the level of awareness across the state of the methamphetamine lab problem
- Educate and train retail employees to recognize the tell-tale signs of individuals that are obtaining the necessary precursors for the illegal production of methamphetamine
- Limit the accessibility of precursors (ND Office of the Attorney General, 2010)

1.7.2 Prevention Resource and Media Center

The North Dakota Prevention Resource and Media Center is located in Bismarck and maintains a library of written and video materials covering a wide range of topics including substance abuse. Resources are available to any North Dakota resident free-of-charge (ND Department of Human Services, 2011).

1.7.3 Drug Courts

As of July 2009, there were nine operating drug courts in six North Dakota cities. Seven drug courts have been operating for more than two years and two drug courts were recently implemented. Both adult and juvenile drug courts are operating in Bismarck, Fargo, Grand Forks, Minot, Belcourt, and Fort Totten (American University, Justice Programs Office, 2009).

1.7.4 Targeted Communities

In the past, the Department of Human Services (DHS) had a Regional Substance Abuse Prevention Coordinator in each of the eight regions in North Dakota. In the fall of 2010, DHS restructured its prevention efforts. All North Dakota communities were invited to apply to be a
“Targeted Community.” Selected communities will receive substance abuse prevention assistance through DHS’s Mental Health and Substance Abuse Services Division. The RMEP was an integral part of the application process for the Minot community. Initially, Bottineau, Carrington, Minot, Watford City, and the Mohall-Lansford-Sherwood school district were selected as targeted communities and these communities will have access to one of two Community Prevention Specialists. There are also Prevention Specialists in the following areas: Criminal Justice, Education, and Media. Funding for various prevention efforts will be available through this program, and DHS is continuing to accept applications from other interested communities (North Dakota Prevention Resource and Media Center, 2010).

1.8 Clandestine Lab Cleanup

Contamination related to methamphetamine production is extremely harmful to health and the environment. As a result, both the State of North Dakota and the Environmental Protection Agency (EPA) have established Best Practices for cleanup of a methamphetamine lab site. The guidelines for cleanup are designed to protect public health and the environment, and enable safe re-occupation of a former lab site. Neither the EPA nor the State of North Dakota requires compliance with these guidelines, and neither agency will certify that the cleanup has been performed accordingly. However, it is advised by both agencies that all property owners of a confirmed or suspected methamphetamine lab site closely adhere to the published guidelines because they are based on the lessons learned and practical experience of experts in the field. The guidelines provide property owners with a series of remediation tactics, as well as the best practices for cleaning specific items and materials that might be found on the property. Both the state and EPA Best Practices indicate that these cleanup and remediation guidelines are in no way to be deemed all inclusive and therefore, individuals using them are also advised to consult

1.9 Native American Issues

The lack of readily available data regarding methamphetamine on North Dakota Native American reservations makes assessing its impact challenging. Difficulty finding tribal specific data is occurring at both the state and national level. When reporting data regarding abuse of illicit substances on reservations, the 2008 Indian Country Drug Threat Assessment makes a notation which explains that existing data does provide a general perspective, however due to issues such as substandard reporting and non-reporting, assessing reservation specific data is difficult (NDIC, U.S. Department of Justice [DOJ], 2008). The National Institute of Justice also cites the lack of available data as a challenge researchers will face when conducting studies of American Indians and Alaska Native communities (National Institute of Justice, 2010).

Resources have been allocated to address the issue of methamphetamine on tribal lands at the regional, state, and national levels. In 2005, Indian Health Services (IHS) and SAMHSA formed the IHS/SAMHSA Methamphetamine Initiative Workgroup. In addition to coordinating, collecting, analyzing and reporting information concerning methamphetamine on tribal lands, the work group assisted in planning the 2007 Aberdeen Area Methamphetamine Summit in Fargo (Woodis, 2007). Despite the workgroup’s efforts, there was still a lack of resources. Therefore, DOJ, through Community Oriented Policing Services (COPS), announced in September 2007 that $5.9 million would be awarded to 14 training organizations in 11 states under the Methamphetamine Training and Technical Assistance program. Through this funding, three of the North Dakota tribes received grants under the FY 2007 Methamphetamine Initiative. This included Standing Rock Sioux Tribe ($382,533), three Affiliated Tribes ($449,051), and Turtle Mountain Band of Chippewa Indians ($261,632) (DOJ, 2007). The grants could be used to help
tribal communities combat the manufacture, use, and distribution of meth and to collaborate with other entities in the areas of prevention and treatment. Additionally, funds were intended to educate training and technical assistance providers to increase their ability to inform and engage the community (DOJ, 2007).

Although these additional resources were made available, the impact of methamphetamine has not been eliminated. In January 2009, Myra Pearson, Chairwoman of the ND Spirit Lake Tribe, made the State of the Tribal-State Relationship address to the North Dakota 61st Legislative Assembly. She stated,

Substances such as “meth” have devastated many tribal and state communities alike. If we are to tackle this issue we need cooperation among our law enforcement agencies, prevention programs, and rehabilitation services. The Five Tribal Nations are well aware that this plague knows no jurisdictional boundaries, and we pledge to work with state officials to defeat this malady. (Pearson, 2009)
Section 2: Rural Methamphetamine Education Project

The primary goal of RMEP is to provide a statewide methamphetamine education and awareness campaign. This is achieved by conducting presentations to educate professionals, community members, and students of all ages on the most current issues regarding methamphetamine.

2.1 Presentations

The primary focus of RMEP continues to be providing methamphetamine presentations as speaking engagements. Presentations are delivered using Microsoft PowerPoint and can be adapted to meet the needs of the audience. A shorter, animated presentation based on the children’s game *Operation* has been developed for younger audiences, and is primarily used in elementary schools. *Operation* gives the presenter the opportunity to discuss the difference between medication and illicit substances, the effects of drugs on the body, and refusal skills. The RMEP also developed an interactive presentation, based on the popular game show *Jeopardy*, geared towards middle school students. The contestants select questions from categories such as “Can Medicine Hurt You?” and “Drug FX on the Body.” In addition, an extensive slide bank exists for both high school students and adults, allowing for brief or detailed presentations. Topics that are currently covered within the adult presentation can include:

- History: History of methamphetamine and how the drug problem has evolved
- Identification: Identification of the various forms of methamphetamine, street names, cost, who is using, and why
- Signs & Effects of Use: Routes of administration, how methamphetamine works in the brain, immediate effects, short-term effects, long-term effects, and additional damage to the body
- Cycle of Use: Types of users and the stages of abuse a user may go through
- Production & Trafficking: Ingredients used in local production, environmental impact of waste disposal, and transition from production to trafficking
• Concealment Techniques: Innovative methods used to conceal drugs and/or paraphernalia

• Tips for First-On-Scene: Personal and public safety measures and recommended secondary actions

• Penalties: Associated criminal activity and consequences and penalties for methamphetamine-related activity

• Children at Risk: Prenatal exposure, lab exposure, and drug-focused lifestyle of parent/caregiver

• Intervention: Strategies used with drug exposed children

• Treatment: Myths vs. facts

• Prevention: Options at the individual and community levels

The presentation is updated as new research becomes available. The RMEP strives to provide the most recent statistical informational, as well as information that details the human cost of methamphetamine abuse in North Dakota.

The RMEP currently offers Peace Officer Standards and Training (P.O.S.T.) board hours for law enforcement. Continuing Education Units (CEUs) are also available for social workers (LSW/LCSW/LICSW), licensed addiction counselors (LAC), licensed professional and clinical counselors (LPC/LPCC), first responders (EMS), and nurses. *This continuing nursing education activity was approved by CNE-Net, the education division of the North Dakota Nurses Association, an accredited approver by the American Nurses Credentialing Center’s Commission on Accreditation.*

In November 2008 and October 2010, Basin Electric Power Cooperative, one of the largest electric generation and transmission cooperatives in the United States, integrated RMEP presentations into its mandatory staff trainings. Training sessions were provided for seven facilities in three states and reached more than 1,300 employees both years. From December 2009 through September 2010, RMEP provided 24 presentations to companies throughout North Dakota as part of Mine Safety and Health Administration (MSHA) certification or recertification.
training. The RMEP also presented a block of instruction in 2008 and 2009, and provided an exhibit in 2008-2010 at the North Dakota Safety and Health Conference. This annual event is hosted by the North Dakota Safety Council.

Table 2. Attendance Totals

Reporting dates: December 26, 2007 – December 25, 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Presentations</th>
<th>Adult Attendance*</th>
<th>Youth Attendance</th>
<th>Booth Displays</th>
<th>Booth Attendance</th>
<th>Total Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>184</td>
<td>2789</td>
<td>4821</td>
<td>27</td>
<td>5677</td>
<td>13,287</td>
</tr>
<tr>
<td>2009</td>
<td>110</td>
<td>1112</td>
<td>3431</td>
<td>19</td>
<td>3408</td>
<td>7,951</td>
</tr>
<tr>
<td>2010</td>
<td>168</td>
<td>2766</td>
<td>3321</td>
<td>18</td>
<td>4416</td>
<td>10,503</td>
</tr>
</tbody>
</table>

*Includes both general awareness presentations and training seminars

2.2 Presentation Evaluations

2.2.1 Evaluation of Services

To determine the effectiveness of RMEP, an evaluation of the RMEP services was conducted during the summer of 2010. The evaluation focused on surveying individuals who contacted RMEP to set up a presentation, booth display, or both. These individuals will be referred to as facilitators in this report. Facilitators were asked to evaluate RMEP services using a survey which was developed and distributed via email providing a link to the survey online. A total of 186 surveys were distributed. Sixty-seven surveys were collected between June 2010 and September 2010 resulting in a 36% return rate.

The main purpose of the evaluation was to determine if RMEP met the needs of the facilitator, and if the service provided raised awareness of the intended audience. Facilitators answered questions related to demographics, evaluation of the scheduled event, and the overall value of the program.

2.2.2 Demographics

Facilitators reported working for a variety of organizations such as education, health, law enforcement, and private industry and business. Fifty-two percent reported that they worked in
education, while 19.2% worked in community based or non-profit organizations. The majority of facilitators served Region II (39.7%) and VII (23.3%) with 55% indicating they worked in a rural setting.

**Figure 8. Facilitator’s Organization/Agency**

**Figure 9. Region Served**

2.2.3 Evaluation of the Scheduled Event

Facilitators were asked to identify the type of services provided (i.e. presentation or booth display), and if the services were a standalone event or part of a larger event. Presentations were reported as the most common service utilized with just over half of all services provided as a standalone event.

**Figure 10. Standalone or Combined Event**

**Figure 11. Service Provided**
In addition, facilitators classified the purpose of the event in one of the following categories: K-12 awareness, adult awareness, community awareness, or to fulfill a training requirement for professionals. The RMEP services were utilized most often as K-12 awareness; while the other categories were fairly evenly distributed. The age of the intended audience ranged from elementary school students to adults.

**Figure 12. Age Group of Intended Audience**

**Figure 13. Purpose of Event**

To determine the effectiveness of the presentations, facilitators were asked to indicate: 1) if RMEP was effective in fulfilling the purpose of the event, 2) if the presentation increased awareness of the intended audience, 3) if they would consider RMEP services for future events, and 4) if they would recommend RMEP services to others. The majority (91.9%) of facilitators agreed or strongly agreed that RMEP was effective in fulfilling the purpose of the event with 95.9% indicating that the presentation/booth display increased the awareness of the intended audience. Ninety-seven percent would consider a presentation/booth display for a future event and 95.9% would recommend RMEP services to others.
2.2.4 Overall value of the program

All of the facilitators agreed or strongly agreed that awareness and education programs like RMEP are effective strategies for addressing issues related to substance use/abuse. Eighty-six percent agreed or strongly agreed that RMEP is a contributing factor to the decrease of use, abuse and overall presence of methamphetamine in North Dakota, and 89% agreed or strongly agreed that RMEP enhanced their professional capacity to address issues related to methamphetamine.
2.3 Drug Endangered Children

Recognizing that children are affected by methamphetamine in North Dakota and that there was no Drug Endangered Children (DEC) chapter established, RMEP began gathering information and developing materials to form a chapter in North Dakota. A DEC chapter is a close working group of individuals whose goal is to find, protect, and help children who are endangered by drug lifestyles. DEC does this by identifying children who come from drug families and helping them to break the cycle of abuse, thereby, enabling them to maintain healthy, normal lifestyles. The chapters are composed of law enforcement, human services, social services, counselors, teachers, medical and health professionals, and representatives from the legal community. The idea is that combining resources will enhance the welfare of the affected children. According to the National Alliance for Drug Endangered Children (NADEC), North Dakota is one of 25 states that does not have a DEC chapter (National Alliance for Drug Endangered Children, 2010).

The RMEP reconsidered the formation of a DEC chapter based on three events. First, in 2006, the NADEC was officially incorporated to include a board of directors and staff, a resource center, and working groups. All of these resources focused on promoting best practices, strengthening collaboration, and increasing awareness on endangered children at all levels. Second, the North Dakota Attorney General’s office developed uniform procedures to coordinate state and local agency resources and services for drug endangered children. Finally, the reported number of clandestine methamphetamine lab seizures decreased over the next several years, from 297 in 2003 to only seven in 2010. The low response rate from communities and lack of interest by professionals to form a chapter furthered the belief that RMEP efforts should be focused elsewhere. The RMEP has received requests from both communities and professionals regarding training related to methamphetamine and children at risk. Therefore, the focus shifted
from creating a full DEC chapter to developing and providing training tools and guides to assist professionals who work directly with children.

The training tools developed included a PowerPoint presentation and informational brochures. The presentations were provided statewide to emergency medical services, law enforcement, social workers, nursing staff, foster care providers, and addiction counselors. With the formation of the National DEC chapter, the development of the state protocols, and the decrease in statistics of methamphetamine lab seizures, it appears as if drug endangered children are already being cared for in the appropriate manner.

2.4 Involvement on Native American Reservations

From January 2008 through December 2010, RMEP has met or presented to 2,107 Native Americans from three of the four reservations of North Dakota – Fort Berthold, Spirit Lake, and Turtle Mountain. In addition to providing presentations to individual groups, RMEP has attended the North Dakota Indian Child Welfare Act conference every year since 2008. This allows a wide variety of professionals working from all tribal lands the opportunity to learn about RMEP and the services available through the project.

In 2007, Standing Rock Sioux Tribe, Three Affiliated Tribes, and Turtle Mountain Band of Chippewa Indians received federal funding under the Methamphetamine Initiative. Three Affiliated Tribes and Turtle Mountain Band of Chippewa Indians also received funding in 2010. Due to this funding, RMEP’s involvement with these tribes has been minimal, however, services are provided upon request.

2.5 Additional Strategies

The RMEP utilizes various means of information dissemination including booth displays, brochures, and publications. The RMEP provides booth displays at health fairs, conferences, schools, and community events across the state. This display allows RMEP to distribute
materials, answer questions, and network within the community which provides for a greater reach of the services offered. All printed resources are available online at www.minotstateu.edu/rcjc.

The RMEP team has been active in several coalitions and safety organizations across the state. The RMEP regularly attends the Safe Communities of North Central Dakota, the Minot Area Safety Association, the Southwest Coalition of Safe Communities, and Project Ace. In addition, RMEP is involved in the Alcohol, Tobacco, and Other Drugs (ATOD) Task Force at Minot State University. This is a multi-disciplinary group that addresses issues within the university system. The RMEP has also been instrumental in planning and coordinating various conferences, speakers, and health and safety fairs throughout the state. Some examples are the Summer Safety Fair and Law Day in Minot and the Teen Maze in Dickinson.

Table 3. Meetings Attended by RMEP

Reporting Dates: December 26, 2007 – December 25, 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Meetings Attended</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>71</td>
</tr>
<tr>
<td>2009</td>
<td>73</td>
</tr>
<tr>
<td>2010</td>
<td>78</td>
</tr>
</tbody>
</table>

2.6 Site Visit

On August 19, 2009, RMEP received a site visit by the Office of Community Oriented Policing Services (COPS). The RMEP, along with RCJC, was evaluated on several issues and received positive comments in all areas. In the area of “Community Policing,” the following remarks were made regarding RCJC as a whole:

While RCJC does not pursue community policing strategies directly, the education, training and assistance it provides to local law enforcement shows that the RCJC participates in community policing strategies. I applaud your efforts in this area and wish you continued success in your partnerships with local law enforcement. (K. Brown, personal communication, September 2, 2009)
It was further reported that RMEP, along with RCJC, was in compliance with both the nonsupplanting and reporting requirements set out by COPS.
Section 3: Minot State University Chemistry Collaboration

The RMEP, in conjunction with MSU, purchased a Gas Chromatograph Mass Spectrometer (GC-MS) for use in the detection of methamphetamine and other materials used in methamphetamine production. Studies regarding the detection of lithium and the degradation of methamphetamine over time were conducted using the equipment. The following sub-sections describe the studies conducted by the MSU Chemistry Department.

3.1 Lithium Detection

Lithium metal is a key element in the clandestine production of methamphetamine. Lithium is used as a reducing agent during the chemical process. It is a readily available element that can be found in common household batteries. While lithium is a naturally occurring element whose toxicity is limited, elevated lithium levels in soil can indicate a methamphetamine dump or cook site. In 2008, Dr. Robert Crackel, MSU chemistry professor, and student researcher Jack M. Carraher used the equipment provided by RMEP and tested methods for extracting lithium from soil in the study: A Comparison of Methods for Determining Lithium Extracted from Soil; Analysis via Flame Atomic Absorption. This article was published by the North Dakota Academy of Science (Carraher & Crackel, 2008) (See Appendix A).

3.2 Methamphetamine Degradation

In the fall of 2009, LeeAnn Pekovitch, RMEP Training & Research Associate, under the supervision of Dr. Robert Crackel, conducted the study Temperature Degradation of Methamphetamine as a Function of Time. This study explored how methamphetamine breaks down over time at both room temperature and elevated temperatures. During this 57 day study, methamphetamine samples were collected from glass surfaces at room temperature and elevated temperatures. The study documented that while the amount of methamphetamine detected
decreased over time in both groups, methamphetamine concentration decreased at a faster rate when the temperature was elevated (See Appendix B).
Section 4: Project Recommendations

As the issues related to methamphetamine in North Dakota evolve, so do the efforts of RMEP. The RMEP remains committed to providing its services, expanding services to areas in need, and evaluating the threat of methamphetamine in North Dakota. The RMEP is actively working on several projects that include the following:

4.1 Expand the Use of Digital Medium

The RMEP contacted the Department of Public Instruction (DPI) to gather information regarding current drug prevention requirements for the state of North Dakota. While no requirements for drug prevention exist, instruction regarding substance abuse is recommended. Based on these findings, RMEP researched the North Dakota state curriculum standards for Health, Science and School Guidance for grades K-12 to determine what additions and modifications could be made to the current presentations for students. The RMEP’s goal is to incorporate more grade specific, relevant information. Once the presentations are edited, RMEP will explore the possibility of narrating them to include in a “toolkit.” The toolkit will include RMEP presentation materials, along with a resource guide of grade specific activities and information currently available from various local, state, and national prevention associations. The information will be provided to individuals who solicit services or inquire about resources. Once the toolkit is fully developed, it will be made available on the RMEP website.

4.2 Methamphetamine Research Library

The RMEP has been in existence since 2001 and has compiled a great deal of data and literature. The organization of this literature into a research library will allow RMEP to continue serving as a resource. This library will make current literature readily available to human service professionals, law enforcement, and the general public.
4.3 Minot State University Chemistry Collaboration

The RMEP staff is not currently participating in chemistry research; however, the Chemistry Department, along with enrolled chemistry students, is using RMEP equipment for further research pertaining to methamphetamine detection and removal. Current research includes the testing of a variety of cleaners to determine their effectiveness in removing methamphetamine from surfaces. Chemistry students are investigating the influence the type of surface has on the removal of methamphetamine. While not directly involved in this research, RMEP will continue to stay abreast of the findings through regular communication with Dr. Crackel.

4.4 Continued Evaluation

Continued evaluation is a useful tool to determine the effectiveness of a program. The RMEP will continue to evaluate its education and awareness program. Audience members will have the opportunity to complete a presentation evaluation after events and return them directly to RMEP Training & Research Associates or return them as a self-addressed, pre-paid post card to RMEP. Facilitators of events will be given the option to complete a facilitator’s evaluation online. Training & Research associates will continue to track events, including the attendance, purpose and location. Results of all evaluations will be made available on the RMEP website.
Conclusion

This report represents an analysis of the impact of methamphetamine in North Dakota and the response by RMEP. Statistics suggest that the prevalence of methamphetamine has decreased in areas such as clandestine lab seizures and adolescent use, but trafficking continues to rise. The RMEP will continue to provide resources and services throughout the state of North Dakota. In order to meet the needs of those requesting services, RMEP will continue to evaluate its efforts and modify its strategies when necessary.
References


North Dakota Department of Corrections and Rehabilitation. (2010). *Methamphetamine admissions into prison*. Received on December 10, 2010 via e-mail from Thomas Erhardt.


http://www.ag.state.nd.us/methwatch/methwatch2006/methlabs.pdf


http://www.epa.gov/oem/meth_lab_guidelines.pdf


Appendix A
Abstract
A Comparison of Methods for Determining Lithium Extracted from Soil; Analysis via Flame Atomic Absorption
Jack M Carraher
Minot State University, Chemistry Department
Under direction of Dr. Bob Crackel

Introduction:
Approximately 10.4 million Americans over the age of 12 have used methamphetamine (meth) for non-medical reasons (ONDCP 2005). Meth is easily made, and Midwest states like North Dakota have the highest concentration of clandestine meth manufacturing sites (USDEA 2005). A common method of manufacturing meth is the Birch method, also known as the “Nazi” method (USDEA 2005). During the manufacturing process noxious solvents and gases like hydrogen chloride and phosphine gas are generated. For every kilogram of meth manufactured, 2 to 3 kilograms of toxic waste are left behind (Potera 2005). The waste and excess reagents are often discarded in ditches, rivers, or plumbing. Hazardous materials teams are necessary to clean the former manufacturing sites. During cleanup, crews typically wear hermetically sealed suits and self-contained breathing apparatures for protection (Snell 2001). Cleanup is costly. California spent $7.65 million on cleanup of meth manufacturing sites in 1997 (Bergeron 1997). Li was chosen for analysis because it is commonly used in the manufacture of meth via the Birch method and its presence could be evidence of contamination from production or waste disposal. Li is not toxic; it is a possible indicator that meth waste could be present as other potential sources of Li are rare. Three methods were investigated for extraction of Li from soil: extraction with water (H\(_2\)O), extraction with ammonium acetate (NH\(_4\)CH\(_3\)COO), and extraction with nitric acid (HNO\(_3\)). Flame AAS was chosen as the method of analysis because of its low detection limit of 2 ppm (Varian), and the availability of the instrumentation.

Method:
Li concentrations were determined using a Varian SpectrAA model 110 atomic absorption spectrometer with a lamp emitting light at 670.8nm. Three extraction methods were tested on two soil types (sandy and potting): extraction with 1M ammonium acetate (NH\(_4\)CH\(_3\)COO), extraction with 6M nitric acid (HNO\(_3\)), and extraction with water (H\(_2\)O). Known concentrations of Li containing solutions were added to known masses of soil, and the concentrations of the extract were determined by comparing the extract absorbencies to the absorbencies of a set of standards. The standards had K added to prevent ionization of the Li. Triplicate samples were prepared at 7 different concentrations, 21 samples, for each soil type, 42 samples total. A known mass of soil was weighed into a beaker and known concentrations of Li were added. The soil was then dried. Two grams were taken from each sample and 20mL of extracting solution was added. Samples sat overnight and were filtered then analyzed.

Results:
Extraction with NH\(_4\)CH\(_3\)COO resulted in the highest percent recovery for potting soil with an average of 95.82% Li recovered with a standard deviation of 10.62%. The percent of Li recovered was higher at the lower concentrations of added Li. Two of the 21 samples were more than one, but less than two standard deviations from the average. Both were samples with higher concentrations of Li. Extraction with HNO\(_3\) resulted in the highest percent recovery for sandy soil with an average of 75.85% Li recovered with a standard deviation of 9.63%. Extraction with HNO\(_3\) from the potting soil could not be determined because a precipitate formed in the burner head during analysis. The problem was not addressed because of time constraints. Paired t-tests show that at a 95% confidence interval there was no difference between extraction with H\(_2\)O and extraction with NH\(_4\)CH\(_3\)COO for the potting soil, but the two methods are statistically different at a 90% confidence interval. The tests also show that the sandy soil extraction with H\(_2\)O and NH\(_4\)CH\(_3\)COO are statistically the same at a 95% confidence interval.

<table>
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<th>Sandy Soil</th>
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<td>Standard Deviation of the Average</td>
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Appendix B