

Chapter 13

A Therapeutic Landscape? Contextualizing Methamphetamine in North Dakota

Kevin Romig and Alex Feidler

Abstract Crystal methamphetamine production and consumption has rapidly expanded over the last 10 years throughout much of the Great Plains. One of the states experiencing tremendous growth is North Dakota. Distinct spatial patterns exist when examining methamphetamine crimes of production and consumption, creating a geographic duality in the landscape of abuse. In terms of treatment, a cursory inspection might suggest North Dakota to be a therapeutic landscape due to its rural nature and slow pace. A more detailed investigation reveals that few treatment facilities exist internally, and North Dakota regularly exports offenders who seek treatment. This chapter highlights the problems faced by the state in limiting crystal methamphetamine production and consumption and suggests applying a more holistic approach to confronting this issue.

Introduction

North Dakota is a rather quiet, sparsely populated, rural, Midwestern state with historically low levels of crime. According to the 2000 Uniform Crime Report, North Dakota was ranked the safest state in the nation. North Dakota was ranked 50th (the safest ranking) in overall crime, violent crime, robbery, and aggravated assaults (Table 13.1). However, North Dakota has the third highest rate of clandestine methamphetamine lab seizures in the country. This is no insignificant statistic; clandestine lab seizures are seen as a major problem facing many parts of the country. The US Department of Justice reports that, “methamphetamine is the most significant drug threat to North Dakota and is the drug-related investigative priority for federal, state, and local law enforcement officials” (2002). According to North Dakota Attorney General Wayne Stenehjem, methamphetamine is “the single most serious law enforcement issue North Dakota is facing – and has ever faced.” In a locale

K. Romig
Department of Geography, Texas State University-San Marcos, TX, USA

Table 13.1 Comparison of crime rates between North Dakota and adjacent states

| State | Crime Index | Rank | Violent Crime Index | Rank |
|--------------|-------------|------|---------------------|------|
| North Dakota | 2288.1 | 50 | 81.4 | 50 |
| South Dakota | 2319.8 | 49 | 166.8 | 47 |
| Minnesota | 3488.4 | 32 | 280.8 | 38 |
| Montana | 3533.4 | 31 | 240.6 | 44 |

Source: Uniform Crime Reports 2000.

that is quite inexperienced in dealing with significant crime issues, the onslaught of methamphetamine is staggering.

The production, sale, and use of illegal drugs stresses a community in a number of different ways, be it crime, rehabilitation measures, law enforcement expansion, or a decline in the public social environment. Methamphetamine use is a particularly serious problem in some rural areas, many of which lack the infrastructure necessary to engage a major drug problem. For example, many rural locales do not have decent access to nearby treatment providers or the expertise to sufficiently respond to methamphetamine abusers. Similarly, law enforcement officials in rural areas lack the training and financial resources to house addicted inmates, recognize meth addiction or production facilities, and pay for laboratory cleanup costs associated with methamphetamine manufacturing in their communities. In rural settings, clandestine drug labs tend to be smaller scale labs. However, these smaller scale labs are sometimes more of a problem to the community and law enforcement largely because they are inefficiently run. Due to these inefficiencies, rural clandestine drug labs can cause three main types of harm: (1) physical injury from explosions, fires, chemical burns, and toxic fumes; (2) environmental hazards due to the numerous amounts of wastes produced; and (3) child endangerment since many of the labs run out of the home or garage and kids are exposed to highly toxic substances (Scott 2000).

The phenomenon of small, rural clandestine labs is one that can be found in many parts of North Dakota. Of the 46 laboratories seized in 2000 by the North Dakota Bureau of Criminal Investigation, 22 were located in rural areas, 17 were in urban areas, and 7 were located in areas classified as small towns (US Department of Justice 2002). Since 2000, the number of seized laboratories has increased (to a high of 297 in 2003) and has shown a growing tendency to move out of the urban areas and into rural ones. One of the most taxing aspects of tackling the methamphetamine epidemic is the clandestine lab cleanup that follows a seizure. According to the US Department of Justice (2002), the national average cost of cleaning one site is \$5000; however, costs can exceed \$100,000 for larger sites. To put that into perspective; in 2003, there were 297 methamphetamine lab seizures in North Dakota, which would mean their cleanup would cost taxpayers around \$1,485,000. However, if damage done by a lab was particularly extensive, the cost can go up substantially, being that the upper limit for cleanup costs can well exceed the \$5000 average. Given North Dakota's small population and number of taxpayers, this is a significant financial burden.

While crimes involving the production of methamphetamine have caught the attention of law enforcement, local consumption of the drug is also a source of

concern. Over the four-year period, arrests have gone from 369 in 2000 to 932 in 2003. As the maps show, the spatiality of arrests as defined by clandestine lab seizures and possession arrests are distinctly different, meaning that there is high likelihood that many of the drugs being consumed by offenders are produced and trafficked in from outside the state. The possession arrests have consequences on the health landscape of the state. Methamphetamine is a highly addictive substance, and ridding addiction and addictive behaviors is extremely important in suppressing local demand for the drug.

This chapter has two goals. First, we intend to illustrate the pattern of methamphetamine offenses in North Dakota as visualized by criminal arrests. In this vein, we will address why there is a significant spatial disparity when mapping production versus consumption arrests according to known police records, and why this is significant. Secondly, we will describe the treatment provision linking with the literature on therapeutic landscapes and explain how North Dakota will not be able to properly combat drug abuse without consistent and better treatment facilities and providers. To better theorize this situation, we believe the theory of neoliberalism is critical in better understanding the issue of treatment in North Dakota and discuss how this is emblematic of similar healthcare issues in rural America in terms of access and funding.

Literature Review

To contextualize this research, this chapter briefly reviews three bodies of literature: crime mapping, cultural geography focused on cultural landscape, and therapeutic landscapes from health geography and healthcare literature. Early manifestations of crime mapping were performed by Pauly, McEwen, and Finch (1967) who were interested in computer methods of visualizing crime patterns in Saint Louis. With the advent of geographic information technology, the applications within crime mapping have exploded (Harries 1999). Crime mapping has been one of the most successful applied geography fields in illuminating the positives of spatial thinking. However, the level of mapping applications and detail is constrained by the granularity of the data. Like any other system, better data inputs will result in more useful visualization (Star and Estes 1990). The data received from the North Dakota Bureau of Investigation had only a 'county' geographic identifier, so the mapping was limited to mainly choropleth techniques since point data was not available (Slocum et al. 2005). This also limited the types of spatial analyses we could perform beyond broad comparisons of regions within the state. While a regression model including demographic information would have been useful as a predictive tool (Butler 2000), the data did not lend itself to that level of analyses because of uneven demographic patterns within counties.

The idea of a cultural landscape dates back to the seminal writings of Carl Sauer. The landscape refers to generalizations derived from the observation of different geographical scenes (Sauer 1925). The idea of culture was then applied

to the landscape, meaning that certain cultural areas would produce and reflect differing landscapes and landscape ideals. This can vary from the specific way a Mormon landscape is laid out with certain fencing styles and street layout (Francaviglia 1978) or how people of the Upper Great Plains use weather and the harsh climate to define themselves as tough survivors (Norris 1993). Each landscape has cultural identifiers that can be interpreted or read. Numerous cultural landscapes then overlap each other and become a collection of lands that are interrelated and part of a broad system (Jackson 1984). The cultural landscape or setting is imperative in understanding the poignancy of this issue. North Dakota is an American anomaly. Most of the state is losing population; hospitals are closing due to not enough demand for services; and local law enforcement has not received much training in identifying drug abuse because there has been little history of narcotic abuse in the state. The rise of methamphetamine has devastated a cultural landscape that is short on medical and economic capital to address this issue.

The impetus of this chapter is in linking the literature on therapeutic landscapes to identify endogenous reasons as to why this drug has had a crippling effect on North Dakota. Social geography has increasingly interested the subjective meanings of places and examining links between the material and spiritual significance of place as identified by residents (Williams 2002). The idea of a therapeutic landscape is a place or situation in which a social environment is optimal for treatment and healing. This is often enhanced by areas of low stress and calmness derived from a location sheltered from the normal 'high octane' American scene. They are also believed to have an enduring reputation for achieving physical, mental, and spiritual healing (Williams 1999). Therapeutic landscapes can be more nature-focused sites of healing (Palka 1999), locales that have clusters of rehabilitation facilities to promote a landscape of healing (Wilton and DeVerteuil, 2006), or landscapes of commodification where healing places are marketed through imagery and lore (Gesler and Kearns, 2002). The rural aspect of North Dakota's cultural landscape is inescapable. Theoretically, North Dakota has many intrinsic characteristics of a therapeutic landscape in its slow pace and rural nature. Our interest is in defining whether North Dakota or parts thereof are a therapeutic landscape for recovery from such an addictive substance like methamphetamine.

Methods

In order to better understand the spatial aspects of methamphetamine activity in North Dakota, ArcGIS, a Geographic Information System software program, was implemented to aid in visualizing the data received from the North Dakota Bureau of Criminal Investigation. Creating and implementing data layers such as methamphetamine-related arrests, lab seizures, as well as certain demographic aspects of North Dakota provide a more holistic picture of the spatiality of this phenomenon. Methamphetamine abuse is not evenly distributed through the state of North Dakota. Some counties have unusually high abuse rates while others do not

have a single documented case of a methamphetamine related arrest or a clandestine lab seizure. Certain counties are more prone to production, while others seem to be more prone to distribution and usage. To better understand the methamphetamine phenomenon in North Dakota, the next section attempts to answer two questions: (1) What is the spatial pattern of methamphetamine abuse according to known police records in North Dakota? (2) Why is it such a problem in North Dakota in a broad crime context? These questions will help understand the spatiality of methamphetamine across the state's landscape.

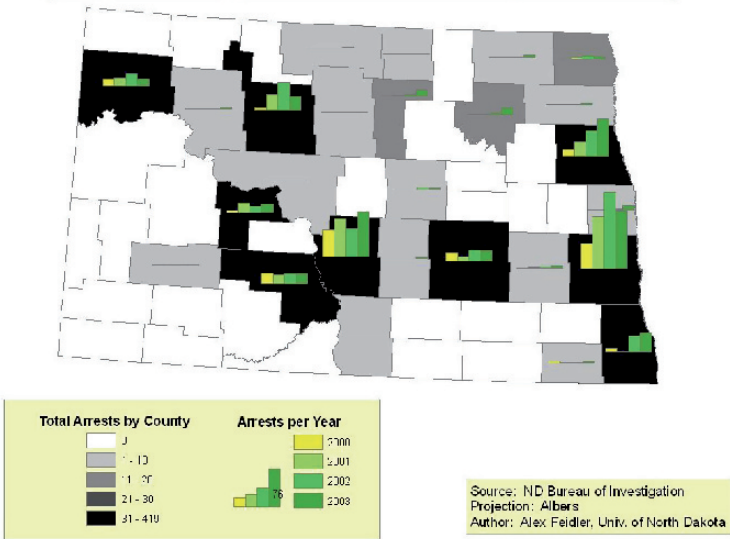
To investigate the overall landscape of methamphetamine in North Dakota, a combination of archival research and informal interviews with law enforcement and institutional officials involved in methamphetamine prosecution and treatment helped elucidate a clearer picture of the landscape of methamphetamine in North Dakota. We accessed data from the North Dakota Bureau of Investigation on methamphetamine-based arrests (possession) for the years 2000–2003 as well as data on clandestine laboratory seizures for 2000–2005. GIS was used to better spatially organize the data to determine trends and patterns across different areas and comparing said patterns with population trends. Before this exercise, methamphetamine-related data had not been effectively mapped at any scale in North Dakota. While the county is not the ideal level of granularity, at this point, it was the best geographic identifier we could apply since many of the arrests took place in rural locales that had no formal address, and law enforcement in the state is not equipped with GPS. Additionally, local newspaper accounts of the surge in methamphetamine crime ground the research to place. To enhance the secondary data, the authors interviewed public officials from local police to members of the Attorney General's office in Bismarck, and those interviews were conducted between June 2005 and May 2006.

Spatiality of Arrests

When examining the spatial pattern of methamphetamine-related arrests, our research discovered that they are more likely to take place in counties that are urban, closer to or containing a larger city, highly populated, higher per capita income, have a larger proportion of vacant houses, a higher percentage of the population in their late twenties, and a growing population (Figure 13.1). Methamphetamine-related arrests and arrest rates tend to be highest in counties with southeast and central parts of North Dakota, where some of the larger population centers are situated, such as Fargo, Bismarck, and Jamestown. This leads to a conclusion that much of the substance consumed in the state is not manufactured here due to the accessibility of southeast corner of North Dakota to drug trafficking routes.

The general trend for clandestine laboratory seizures in North Dakota is that they are more likely to take place in counties that are more rural, further away from larger cities, and have smaller populations. These counties, in general, tend to be located in the northwestern corner of the state. Williams county is the most interesting case

A Temporal Histogram of Total Meth Arrests, 2000 - 2003



B Temporal Histogram of Total Meth Lab Seizures, 2000 - 2003

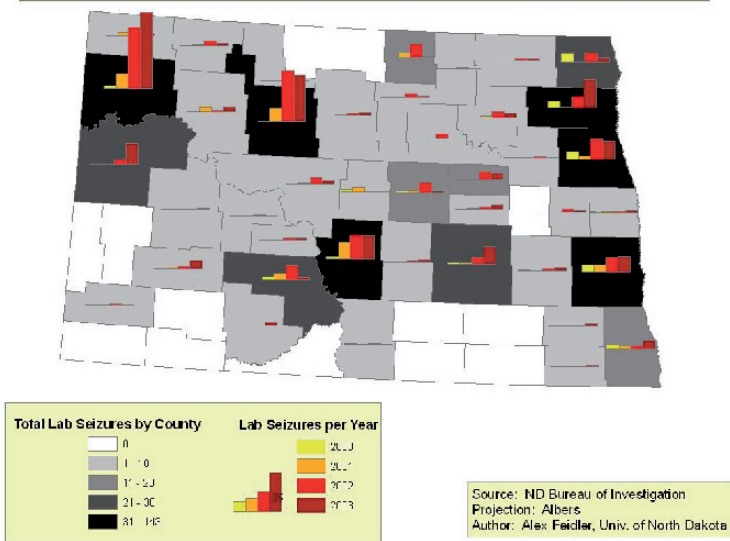


Fig. 13.1 (A) Map showing the growth of methamphetamine arrests in North Dakota over a four-year period; (B) map displaying the growth of clandestine laboratory seizures in North Dakota (See also Plate 15 in the Colour Plate Section)

because it has such a high seizure rate as well as one of the higher arrest rates. Other rural counties had no methamphetamine arrests over this four-year period as defined by known police records. With no documented methamphetamine-related criminal activity, these counties are statistically saying that they are the perfect place to ‘not find methamphetamine’. There are two possible explanations for this anomaly. The first is that production is taking place in these counties, but they have gone undetected thus far. The second explanation is simply not all rural communities are prone to methamphetamine production at this time. Most of the counties that are both 100% rural and have no documented methamphetamine activity tend to be clustered together, particularly in the southwestern corner and southern border of the state.

The State Responds

North Dakota is proactively responding to increased methamphetamine crime through a number of programs and policies. In the northeast counties of Pembina, Walsh, and Cavalier counties, locks have been placed on anhydrous tanks so that anhydrous ammonia cannot be stolen from farms to manufacture methamphetamine. These locks are free to farmers who participate in this program (Figure 13.2). Another ingredient cracked down upon was pseudoephedrine, commonly found in the over-the-counter drug ‘Sudafed’. On June 1st of 2005, North Dakota HB 1346 took effect, which limits the amount of methamphetamine precursor drugs that can be sold at one time and requires written documentation of the purchase in a retail log book (Indiana Criminal Justice Institute 2005). Although more organized groups of manufacturers can find ways around this, either by obtaining the ingredients illegally or using a number of people to buy the precursors at a number of different locations, it has shown to be successful.



Fig. 13.2 Anhydrous ammonia tanks in a rural part of the state. Photo: Kevin Romig

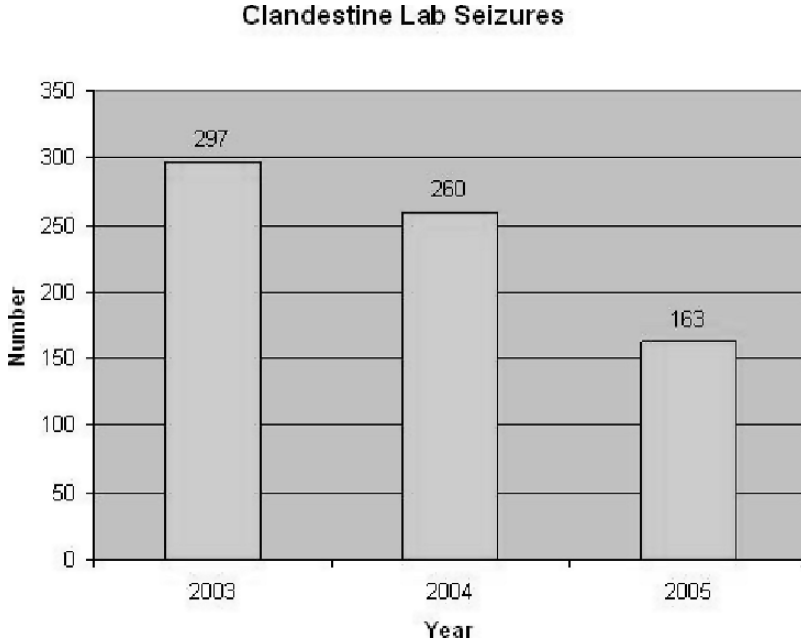


Fig. 13.3 The decline in clandestine laboratory seizures in North Dakota after new laws and restrictions go into effect
Source: North Dakota Bureau of Investigation.

In addition to the restriction placed on many of the chemicals needed to properly manufacture methamphetamine, the North Dakota’s Organized Drug Enforcement Task Force (OCDETF), along with local drug task forces, battles trafficking within the state. One of the more significant ways this can be accomplished is by imploring local law enforcement to call a regional Task Force member to the scene if an offender is thought to be under the influence of methamphetamine. North Dakota state law now allows officers the ability to arrest persons under the influence of methamphetamine for possession of a banned substance since finding proof of substances in the body is now considered possession. These combined crack-downs on illicit methamphetamine have actually reduced the number of clandestine lab seizures from 297 in 2003 to 260 in 2004, and most recently to 163 in 2005 (Figure 13.3). It has also provided a stern warning to users that law enforcement is proactively engaged in deterring the production and consumption of methamphetamine across the state.

A Therapeutic Landscape?

While the numbers of clandestine laboratories has subsided due to law enforcement and government efforts, the consumption of methamphetamine as defined by possession offenses has not seen such a significant decrease. The state is seeing

an increase in the numbers of persons seeking treatment for methamphetamine addiction. In 2003, the arrest rate was 72/100,000 while the rate of persons seeking treatment was 44/100,000. This gap is surprising. This likely has to do with the lack of available rehabilitation facilities in the state. Also, according to some addicts, the treatment programs in North Dakota are not as successful as other more stringent programs elsewhere in the Northern Plains (Bakken 2006). This incongruity in rates between possession arrests and treatment may also be a function of the number of repeat offenders who have incredible difficulty breaking their addiction.

In the widely read book *Dakota: A Spiritual Geography*, Kathleen Norris paints a bucolic yet sparse picture of life in the Great Plains. It is an autobiographical look at the process of how and why she moved to the Upper Plains to learn more about herself. As a clergy person in more urban settings, she tended to lose focus on what was important or the larger picture of life and how she understands her place in the universe, but in the Dakotas, she was able to notice more, feel more, and get to know her surroundings in a more visceral and meaningful way. The rural landscapes are calm, friendly, and spiritual. She writes, "Dakotans know why they like living here, where life is still lived on a human scale" (Norris 1993, p. 35). As compared with many of the faster-paced, urbanizing landscapes in the United States, much of North Dakota remains an anachronism in its focus on agriculture and rural character. Drug abuse is intrinsically thought of as an urban situation. The pressures of a stressful urban life become overwhelming and persons fall into abusive lifestyles in order to deal with those stressors. This is why North Dakota was so unprepared to deal with the methamphetamine onslaught. While binge drinking has been and continues to plague many communities across the state, drugs have always been a problem somewhere else. In its halcyon tranquility, bucolic North Dakota *should be* a landscape of recovery or a therapeutic landscape. In the Northern Prairie, people should not fall through the cracks because life is lived on the human scale, meaning that relationships, hugs, and handshakes take precedence over case law, mistrust, and political correctness. If anything, people in North Dakota have always been proud of their lack of crime, but the rapid rise in methamphetamine has proven to be a significant radical departure from normality.

The gap in the methamphetamine abuse cycle *should be* able to be closed endogenously as law enforcement procedures crack down on supply, and a landscape of healing should help recovery and curb demand. However, this is not the case. For 6 years, a Drayton, North Dakota resident abused methamphetamine. He entered three different treatment programs in North Dakota with the longest successes lasting 1 week (Bakken 2006). After nearly dying of an overdose in the emergency room in 2003, he served 4 months in prison. He attempted to recover in North Dakota, but found no success with rehabilitation in the seemingly therapeutic landscape. His prison release was predicated on his family sending him to a privately run rehabilitation facility in Brookings, South Dakota. This was a 12-month, faith-based treatment program with strict discipline and structure guiding individuals toward a better life (Teen Challenge of the Dakotas 2006). As of May 2006, this former abuser had been sober for 21 months and felt no significant cravings or desires to use methamphetamine again (Bakken 2006). While this scenario depicts a success

story in treating methamphetamine addiction, the questions remain of, why did he respond so much better to a private facility in another state? And what does this say about the healthcare or therapeutic landscape in North Dakota?

A critical issue is access to effective healthcare and related facilities. This is a significant social and economic problem in the state of North Dakota, limiting the ability of this calming landscape to produce therapeutic successes. When asked why there are not more successful treatment programs in North Dakota, a representative of Teen Challenge said, "North Dakota does not have the critical mass for a program to be sustainable." While much of this restricted access to modern treatment programs and facilities relates to an agricultural state with low population growth and a sparse population, it could be argued that equal amounts of state resources should be directed at rehabilitation of methamphetamine as law enforcement programs dealing with supply issues. This is not the case however, and North Dakota is not an anomaly. This is part of the broad neoliberal movement where the government and public agencies attempt to rid themselves of the provision of social goods and services (Greene 2002). If regional faith-based providers can do a decent job in rehabilitating offenders, why should the state pour slim public resources into social rehabilitation programs? Secondly, should the state be spending funds in rehabilitating delinquents who fall into a life of abuse? It is much more politically palatable in a conservative state to spend health capital on the large elderly population aging in place across many of the small towns throughout the state than abusers who are seen as burdens to the society. Faith-based programs are not the only proven successful programs in facilitating recovery of methamphetamine addiction, yet these are the most widely reported successful programs in the Dakotas (Bakken 2006). The state should be more proactive in offering better alternative programs for individuals who may not respond as well to a faith-based program. If the state is truly interested in combating the methamphetamine epidemic, they need to attack the problem more holistically and offer more funding to treatment programs to optimistically reduce the number of repeat offenders in the state.

This also speaks to another critical social issue in the Great Plains, which has access and accessibility to modern healthcare facilities. As market forces continue to make urban healthcare more lucrative and efficient, this is pulling needed resources away from many rural areas in the United States. According to the Center for Rural Health, more than 75% of the state is deemed medically underserved, and the center is involved in programming to deal with medical staff shortages across the state. Most of the top regional medical students are lured to the Twin Cities, Denver, or elsewhere to practice medicine. While this situation is important for the overall benefit of the society, it is critical when considering the rise of the methamphetamine epidemic over the past 10 years. Many of the primary treatment facilities for methamphetamine addiction are local and regional hospitals or sheriff department holding facilities which barely have the capability to offer helpful detoxification programs (Ness 2005). If neoliberalism is defined as the introduction of market discipline in the operation of social goods and services, there is likely not enough demand for private vendors to provide better access for many aspects of healthcare outside some of the more urban areas in the state. As the aging population

of North Dakota continues to make the interstate commute to Rochester, Minnesota, for contemporary medical services, it will also be likely that substance abusers will also have to seek alternatives away from their native calming and quiet landscape.

This illuminates an important conundrum in understanding North Dakota's cultural landscape. While the social environment, with its slower pace and life, "Lived on the human scale," is seemingly conducive for therapeutic healing from drug abuse, the economic and population characteristics of North Dakota make it disadvantaged when it comes to treating abusers. Without an economic 'bottom line', this would be a positive place to try to avoid pressures and situations that caused or incited abusive behavior. While the majority of facilities are non-profit, they are not anti-profit and have to think about locating in more effective areas for treating broader markets. Due to neoliberal practices in healthcare provision, state and local governments do not attempt to bridge this gap. This being the case, North Dakota is not an effective therapeutic landscape for recovering for serious health issues because of the difficulty in accessing modern services.

Conclusion

This research attempts to better understand the methamphetamine phenomenon in North Dakota by answering two questions: (1) What is the spatial pattern of methamphetamine abuse according to known police records in North Dakota? and (2) Is North Dakota an effective therapeutic landscape for recovery from methamphetamine addiction. Based on the results of this study, methamphetamine arrests in North Dakota are more likely to take place in counties that are urban, closer to or containing a larger city, and highly populated. These counties, in general, tend to be located in the eastern and southeastern parts of the state. Counties with high methamphetamine-related arrests are where the substance is being sold and consumed, though not necessarily produced. The trend for clandestine lab seizures in North Dakota is that they are more likely to take place in counties that are more rural, further away from larger cities, and have smaller population. These counties, in general, tend to be located in the more northern and northwestern areas of the state.

Why is methamphetamine such a problem in North Dakota in a broad crime context? This question is more difficult to answer and is addressed less directly than the first question by the analysis for this study. However, based on the data that has been analyzed and the review of the literature, the methamphetamine phenomenon in North Dakota can be explained by three different factors. The first is the relatively easy access to the chemicals needed to physically manufacture the substance, particularly anhydrous ammonia. The vast majority of communities in America do not have readily available access to an abundant source of anhydrous ammonia with low rates of law enforcement. However, North Dakota communities do. The second reason is the unusual remoteness of the North Dakota landscape relative to other American landscapes. This 'remoteness' is important for two reasons. First, remote or isolated environments are difficult for law enforcement and communities

to efficiently monitor for clandestine criminal behavior. Second, the remoteness of the North Dakota landscape, in addition to the long harsh winters (which most other states never have to face), lends itself to a landscape where certain people are susceptible to idleness, boredom, and despair. These symptoms can be a gateway for drug experimentation and abuse. The final reason why methamphetamine is such a problem in North Dakota is due to the social and cultural difficulty in adjusting to confront and combat the problem. First of all, North Dakota does not have a history of drug problems. Because of this, the state as a whole was largely unprepared for this outbreak. Drug problems tend to be associated with urban areas, not rural ones, and by most standards, North Dakota is an overwhelmingly rural state. Another point is that the North Dakota landscape is predominantly one where people are passive and non-confrontational in nature (Norris 1993).

As mentioned earlier, North Dakota is ranked extremely low in the Uniform Crime Reports indexes for criminal violations. In fact, North Dakota is considered to be the safest state in the nation (Uniform Crime Reports 2000). Within the broad neoliberal era, the issue of treatment or rehabilitation also challenges state and local resources. Specialized methamphetamine addiction treatment is not readily available in many areas, and the burden is placed on private care facilities often in other states. Since meth is a highly addictive substance, the problems will be difficult to reduce without proper treatment. While many of the cultural characteristics of North Dakota might suggest it is a therapeutic landscape with the low stress level and calm lifestyle associated with an agrarian experience, the landscape of healing and recovery for methamphetamine is often very far from home for North Dakota's methamphetamine addicts. While this state meets many of the qualifications for being a landscape of healing, there is not a critical mass for an infusion of private treatment facilities to the area due to issues with a small population, including number of addicts and supply of trained employees in rural areas. Until North Dakota deals more directly with the issue of rehabilitation and treatment, the overall methamphetamine problem will not subside. While the substance may not be as likely to have been produced locally, if addicts need the substance, cartels and dealers will find these people who desire to consume methamphetamine..

Although the rural Midwest is traditionally not associated with drug activity, it is hoped that this study will aid in better understanding processes occurring in such a landscape. The factors mentioned above that make North Dakota susceptible to methamphetamine abuse can also be found in other plains. Even in 2006, actions are being taken by surrounding states to combat methamphetamine in inventive ways. For instance, The Montana Meth Project runs graphic ads on television to aggressively dissuade teens from getting involved with the drug (MontanaMethProject.com 2006). Similar measures are likely to be taken in North Dakota. Conventional drug trafficking efforts that work in the more urban metropolitan areas will not always carry over and be effective in the rural environment. The nature of the problem is different. The culture, the population densities, and the relationship with the physical environment are often reversed when compared to big cities. Understanding these aspects of the North Dakota landscape will help to better understand and fight the methamphetamine phenomenon throughout the Northern Great Plains.