

July 14, 2006

To Whom It May Concern:

Please find enclosed Richland County's report on the environmental health assessment conducted in our county. This assessment was facilitated with grant money from the Montana Department of Health and Human Service's Environmental Public Health Tracking (EPHT) project between October 2005 and July 2006.

The environmental health assessment was conducted utilizing the Protocol for Assessing Community Excellence in Environmental Health (PACE-EH) process, in which the local community implements an environmental health assessment and strategic planning process. Through this process, county residents are given the opportunity to express their opinions about the local environment through written surveys and community meetings. Using the opinions of local residents, a representative team of community members, local policy makers, and the Board of Health work together to develop a plan to address resident concerns.

Conducting an environmental health assessment in Richland County has been a rewarding project, as Health Department staff have gained greater insight into pertinent issues in the county, and local residents have been actively involved in the planning process for their local communities. I would like to thank the DPHHS for making this work possible, and Richland County residents for making it successful.

Sincerely,

Judith LaPan, MBA, MS

Environmental Health in Richland County:

Blurring the Line Between Social and Environmental Factors

Richland County Health Department

August 15, 2006

Contract # 06-07-6-31-013-0

This needs assessment was funded under a contract with the Montana Department of Health and Human Service's Environmental Public Health Tracking (EPHT) project. The EPHT project is funded by the Centers for Disease Control and Prevention (CDC), through cooperative agreement U50/CCU 822453. The statements herein do not necessarily reflect the opinions of the Department or CDC.

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ABSTRACT

Between October 2005 and July 2006 the Richland County Health Department hosted a grant administered by the Montana Department of Health and Human Services' Environmental Public Health Tracking program to conduct a local Environmental Health Assessment. This is a community driven environmental health assessment and strategic planning process designed to gather the opinions of local residents and develop an action plan to address major concerns.

A Community Environmental Health Assessment Team, comprised of community members representing the county geographically and industrially, was responsible for leading the process. Meeting at least once a month, the team designed a written survey asking local residents about their level of concern regarding various environmental health topics. This survey was distributed to over 400 participants. The top concerns that surfaced were: Illegal Drugs, Road Safety, Alcohol Use, Crime, Oil / Gas Development, Unsafe Drivers, Domestic Violence, Water Quality, Quality of Medical Facilities, and Outdoor Air Quality. Using this information, the team conducted five community meetings, each in different population centers in the county, to gather more specific information about resident concerns. Using the information gathered from the written survey and the community meetings, the team completed a priority setting process to identify the most pertinent issues. An action plan was then developed for each priority topic.

Social issues (illegal drugs, alcohol, and domestic violence) were the top priority concern, followed by Water Quality, Medical Facilities, Oil/Gas, and Unsafe Drivers. Investigation was the first step in the action plan for each issue, followed by public education. The public's lack of knowledge - about the local impact of the oil industry, the availability of environmental monitoring data, and the severity of the drug and alcohol problem - was a reoccurring theme. In Richland County, perception is often difficult to separate from reality; therefore, the distinction between the two surfaced as a top priority in the action plan.

This action plan will be incorporated into the strategic planning process of Communities in Action and the County Growth Policy Board. These relationships will help ensure the plan is followed through to completion and that the community development projects will continue long into the future. The success of the environmental health assessment in Richland County was due in large part to the support of policy makers and the hard work and dedication of the Community Environmental Health Assessment Team.

INTRODUCTION & BACKGROUND

The fall of 2005 was an ideal time for the Richland County Health Department to conduct an Environmental Health assessment. The county had recently initiated other assessment activities that would overlap nicely with an environmental health assessment. The necessary community infrastructure and staff was also available. The Health Department had been investigating a community and environmental health assessment project for several years, and in the summer and fall months of 2005, the logistical pieces came together to make these assessments feasible.

The Health Department has been very active throughout the last year developing a strategy to facilitate a community needs assessment, planning, and implementation project. In the spring of 2005, Communities in Action (CIA) was established to facilitate this project. The CIA Steering Committee, comprised of local community leaders, decided to use the Mobilizing for Action through Partnerships and Planning (MAPP) method to facilitate the community needs project. The MAPP process involves several assessment activities, including a Community Health Status Assessment, a Local Public Health System Assessment, a Community Themes and Strengths Assessment, and a Forces of Change Assessment. While the Forces of Change Assessment briefly touches on the local environment, there is not an assessment specifically dedicated to environmental health. The CIA Steering Committee felt this was an important factor that would influence all other assessment areas, and agreed to support an environmental health assessment.

In October 2005, the Richland County Health Department received a grant to facilitate an environmental health assessment from the Montana Department of Health and Human Services' Environmental Public Health Tracking project. Grant requirements mandated the use of components of the Protocol for Assessing Community Excellence in Environmental Health (PACE-EH), a community-driven environmental health assessment process. The PACE-EH process focuses specifically on local environmental health, while the MAPP process is more general, addressing community health as a whole. However, these two assessment processes have many overlapping areas, as both are community driven, require broad representation and community participation, and follow assessment with a strategic planning process. The parallels and cooperation between the two projects contributed to the success of each.

Richland County hopes to use the results of the PACE-EH assessment, in correlation with the assessment results from the MAPP process, to develop a countywide strategic plan to address community health. Richland County Commissioners and local civic organizations identified the need for such a plan, due to the rapidly changing demographics and local landscape, as a result of increased oil production and other factors. Local leaders and residents agreed that taking the community's pulse on environmental and community issues, and developing an action plan utilizing this information, would ensure that the plan would accurately address local concerns.

Richland County Description

Richland County is situated near the confluence of the Yellowstone and Missouri Rivers, and sits on the border of North Dakota. The county encompasses 2,084 square miles with 9,263 residents, or 4.4 people per square mile. This classifies Richland County as a frontier community. Education levels are slightly lower than the state average, with 84% having obtained a High School Diploma and 17% with a Bachelors Degree, compared to 87% and 24% at the state level, respectively. Median Household Income is \$32,110, compared with \$33,024 in the State of Montana. Local per capita income is \$23,590. While lower than the state average, this was an increase of 24.2% from 1997. Of those employed, 71% of the county is employed in a private business, 16% are employed in a governmental agency, and 12% are self-employed. Spatially and economically, Richland County is a frontier community with lower than average education and income levels.¹

The housing market in Richland County has changed dramatically since the beginning of the current oil boom. Currently, there are waiting lists at every apartment complex, few homes are for sale, and many families and single people are living in hotels or motels until more permanent housing becomes available. Every town in the Montana-Dakota (MonDak) region is facing a similar problem. Unfortunately, this is not reflected in the housing data from the 2000 census, as the oil boom began in full force a year after the census was taken. According to the outdated data, 14.4% of the housing units in the county were vacant, while 71.6% were owner-

¹ 2004 Montana County Health Profiles: Demographics, Health Status Indicators, and Health Resource Assessment. Montana Department of Public Health & Human Services. October 2004.

occupied and 28.4% were renter-occupied. This data has undoubtedly changed in the last 5 years, but there is no record of the change caused by the influx of oil workers to the region.²

Richland County is an aging community, as the median age is 39.2 years; nearly two years over the state median. The national average is even younger, at 35.3 years. In Richland County, 5.9% of the population is under the age of 5 years, while 6.8% are under 5 years nationwide. Conversely, the number of residents over 65 in Richland County is much higher than the national average, at 15.4% compared to 12.4%. This older population will have a large impact on the community in years to come, especially as the Baby Boomer generation reaches retirement age.³

The general health and safety of Richland County residents is fairly good. The teen birth rate in Richland County is lower than the state average, at 27.7 pregnancies per 1,000 teen females, compared with 36.2 across the state. Infant mortality is also lower in Richland County, with 2 deaths per 1,000 live births, while this same rate is 6.8 deaths per 1,000 births at the state level. There is a lower rate of suicide as well, with 8.2 suicides per 100,000 population compared with 18.5 across the state. The reported STD rate is relatively low in Richland County, with 103 reported cases per 100,000 population, while the state rate is nearly double at 207 cases per 100,000. However, motor vehicle crashes are more deadly in Richland County than elsewhere in the state, as the fatal crash rate was 35 per 100,000, while the state average is 24.5 per 100,000 population. No public transportation is available within the county or to outside areas. Senior transportation is provided by several agencies within the county, and school buses are run by private vendors during the school year. With few exceptions, one's transportation within the county or to other areas is reliant solely on personal vehicle.⁴

Richland County is farm and ranch country, with the recent addition of oil and gas production (See attachments A-1 thru A-4). Sugar beets are the main agricultural product. Beets require irrigation, for which local farmers draw water from the Yellowstone River, via the irrigation canal. The close proximity of this water source is an important asset to the agricultural vibrancy of the region. Many local families have lived in the county for years, several dating back to the original homesteaders. This social and family history ties many residents to the land,

² Census 2000 Demographic Profile Highlights: Zip Code Tabulation Area 59270. <http://factfinder.census.gov>

³ Census 2000 Demographic Profile Highlights: Zip Code Tabulation Area 59270. <http://factfinder.census.gov>

⁴ 2004 Montana County Health Profiles: Demographics, Health Status Indicators, and Health Resource Assessment. Montana Department of Public Health & Human Services. October 2004.

with pride in their long-standing communities. Recently, however, an out migration of local youth has started to change this history. This out migration is a trend across Montana, and is due to a number of factors, including the self-identified lack of local entrepreneurial support, and the availability of higher paying jobs elsewhere.

Despite the out-migration of local youth, migration *to* Richland County by oil workers has increased the local population by about 25%. The current U.S. Census data shows the permanent population of Richland County to be 9,464, down 5.4% from 2000; however, this estimate is closer to 11,464 when temporary oil workers are included. According to this estimate, there are nearly 2,000 temporary workers employed in the oil industry in Richland County (See attachment A-5 – A-14). These workers – geologists, roughnecks, roustabouts, drillers, and others - are temporary, as most do not come with families, return to their home states when they have time off work, and plan to move when the oil boom subsides.

For those living in the county permanently or temporarily, many recreational activities are available. There are 15 organized sports teams available to the public, including sports like baseball, basketball, and hockey. For school aged children, 71 different organized sports teams are available. There is one health club in the county, 20 parks, 54 outdoor playing fields, courts, arenas and rinks, and two swimming pools. Many indoor and outdoor walking options are also available throughout the county.

The oil boom has initiated an influx of money to the county, and many organizations are benefiting from the windfall. For example, Sidney High School will be receiving a new track within the next year, and many of the county schools received money to help with repairs and renovation of the school buildings. Other community foundations, non-profits, private organizations, and others have also received cash donations directly from the oil companies or from the city or county governments as a result of incoming oil money.

The influx of funds has been a positive development in the area, but the oil production has also caused worry among residents of Richland County. Some of the aesthetic beauty of the area has been compromised by the oil rigs, over 300 of which dot the county's landscape. Additionally, with the high volume of oil production, many residents are worried about the current and future effects the rigs may have on water and air quality, and the leaching of toxic chemicals into ground.

The high wages paid by oil contractors have also changed the employment situation in the county. Many businesses are finding it difficult to hire for lack of workers. This shortage has been caused by two related factors – one, many of the male workforce have found employment with the oil companies instead of other local businesses, and two, some women who historically would have held positions in government or private businesses as a second income no longer need the money as their husbands are making enough for the whole family by working in the oil fields. The end result is that the employment pool is decreased but the average wages are rising. However, many of the men working in the oil fields are young, single, and have migrated to Richland County specifically to work in the oil industry. Without family or other ties to this area, the large paychecks will leave with the workers, increasing the negative impact of the bust if appropriate planning precautions are not taken now.

While many residents are happy to see so much oil production in the Montana – Dakota (MonDak) area, there is also skepticism about the large number of out-of-state temporary workers. Some believe that these workers are responsible, in part, to the increased incidents of crime, vandalism, drug use, alcohol abuse, violence, dangerous road conditions, and other safety hazards. Despite these complaints, most residents agree that this oil boom, so far, has been much cleaner and safer than the last boom, which went bust in the mid 1980s.

Local county government consists of three County Commissioners, each with a six-year term of service. Elections are staggered. The City Council in the City of Sidney consists of the mayor and six city council members, and meets monthly. The City of Fairview City Council consists of four city council members and the mayor, and also meets monthly.

The cities of Sidney and Fairview draw their municipal water from deep wells throughout the city. All other county homes and businesses draw water from private wells.

There is a strong sense of community in each town and community in Richland County, although cohesion between towns is not as strong. Sidney and Fairview are the only incorporated cities, while Crane, Savage, and Lambert are the largest towns. Many small communities are also scattered throughout the county. Through community development exercises held throughout the past year, community members have identified school and church institutions as the strong points of the local communities, while new political blood and entrepreneurial spirit are lacking. Overall, Richland County is a relatively healthy, traditional, area that is currently in flux due to the large oil boom.

METHODS / DISCUSSION

The Richland County community has been preparing to conduct a health needs assessment for the last several years. As the Richland County Health Department has grown, programs and grants have expanded the scope of services and collaboration within the department. This expansion has raised awareness of the need for a community assessment to ensure that the department is providing the appropriate services to address the needs of the population.

Communities In Action, or CIA, was developed in the spring of 2005 to help facilitate a community health needs assessment, increase collaboration, and reduce duplication of services among area programs and service providers. The CIA Steering Committee is comprised of area leaders and residents, and was established with guidance from staff at the health department. Members of the Board of Health and a county commissioner also sit on the CIA Steering Committee. This broad community support was an important part of the infrastructure necessary to conduct a community assessment.

After researching various community health needs assessment programs, health department staff presented the Mobilizing for Action through Partnerships and Planning (MAPP) method to the Steering Committee. This process is an extensive, three-year community health needs assessment that involves every sector of the general public. After reviewing the process, members of the CIA Steering Committee agreed to facilitate the MAPP process in Richland County, and subsequently hired 10 AmeriCorps*VISTAs (Volunteers In Service To America) to help develop Communities in Action, facilitate the assessment, and work on site-specific projects.

While reviewing the MAPP process, the Steering Committee realized that there was no assessment that dealt specifically with the natural environment, although other health and social aspects were well represented. To conduct an assessment in Richland County, where a large percentage of the county's revenue comes from agriculture, ranching, and industry, and where local lifestyles are deeply rooted in the natural environment through hunting, fishing, and other land-use recreation activities, it only made sense to include an environmental health assessment.

When the health department was presented with the opportunity to facilitate an environmental health assessment using the Protocol for Assessing Community Excellence in

Environmental Health (PACE-EH) process, they jumped on it. The PACE-EH process, like the MAPP process, is community driven and adapted locally, and is inspired by the grassroots theory that a community can achieve more if action is driven by local residents rather than mandated by policy makers. There are many other overlapping factors between the PACE-EH and MAPP processes, and the CIA Steering Committee decided that if the two assessments were conducted simultaneously, both would benefit.

In September 2005 the Richland County Health Department applied for funding from the Environmental Public Health Tracking Program, EPHT, to facilitate the PACE-EH environmental health assessment in Richland County (see attachment A-6). The Board of Health approved the application before it was submitted. Grant funds were awarded in October 2005. After receiving notice of the grant award, a PACE-EH Steering Committee, separate from the CIA committee, was established to guide the environmental assessment process.

Environmental Health Assessment Steering Committee members included Don Stepler, County Commissioner, Judith LaPan, Health Department Administrator, Kathy Helmuth, RN, Deborah Swenson, Health Department Project Director, Sara Burnet, AmeriCorps*VISTA, and Erica Schultz, AmeriCorps*VISTA. This team met for the first time on October 31, 2005 to discuss the project in more detail, and to establish roles and responsibilities of the Steering Committee (see attachments A-8 and A-12). Throughout the next four Steering Committee meetings, members discussed the PACE-EH process in relation to the MAPP process, brainstormed possible organizational structures for the whole project, and compiled a list of potential community representatives for the Community Environmental Health Assessment Team. This community team, called CEHAT, was established to guide, direct, and facilitate the environmental health assessment.

Special care was made to invite a representative from every town and community in Richland County, and to invite representatives from major local industries. The original list of possible invitees exceeded 30 people. This broad community representation was necessary to provide an accurate representation of the county.

Libby Knotts	Lambert Community
Judy LaPan	Richland County Health Department
Jerry Nypen	Lower Yellowstone Irrigation Project
Erica Schultz	AmeriCorps*VISTA
Jay Skabo	Montana Dakota Utilities Co. – Bismarck, ND
Gail Staffanson	County Schools Superintendent
Don Stepler	County Commissioner
Deb Swenson	Richland County Health Department

After establishing expected outcomes (see attachment A-28), CEHAT’s first task was to define environmental health. This was an important first step, as it also helped the team define the scope of the project. CEHAT began the process by reviewing definitions used in other counties and discussed the strengths and weaknesses of each. These definitions were provided to the team by EPHT staff. After some discussion, CEHAT decided that there were four main environmental topics that needed to be included in Richland County’s definitions of environmental health. These topics included:

- Ecological:**
 - Water – potable, irrigation, and recreation
 - Air – indoor, outdoor
 - Radiological and biological chemical impacts
 - Animal and insect related diseases – west nile, hanta virus, H5N1
- Social:**
 - Civic engagement
 - Crime
 - Walkable communities
 - Recreational activities
 - Community center
 - Littering
 - Healthy food choices in stores and restaurants
 - Meth
 - Changing demographics – aging, influx of money, politics
- Infrastructure:**
 - Emergency preparedness – flood plains, prevention measures
 - Old housing: asbestos, old wiring, lead, radon, etc.
- Industrial:**
 - Farm safety – chemical use and disposal
 - Landfill – electronic waste, recycling
 - Industrial park
 - Dairies
 - Ranches
 - Gas stations
 - Oil and gas development

CEHAT members took this list of categories home, and in light of discussions at the meeting, wrote their own definitions of environmental health. Deb and Sara compiled pieces of each

definition into one cohesive statement and presented it to the committee at the next meeting (see attachment A-29). After some minor revisions, the definition read:

“Environmental Health is the measure of a community’s overall well being, and the interrelationships among community members and the environment in which they live: this relationship is determined by physical, chemical, biological and social factors where it is the responsibility of all members to foster, promote, and protect that environment.”

Using this broad definition of environmental health, the CEHAT team began the survey development process. Surveys from other counties were provided as examples, as well as a “core survey” provided by EPHT staff. CEHAT members reviewed these surveys, and as a homework assignment, were asked to start brainstorming survey questions. These questions, submitted in many formats, were compiled and distributed before the next meeting.

The CEHAT team decided to create a survey that could be completed in less than 10 minutes. With over 60 questions that the team deemed necessary, a quick and easy format was needed. After reviewing the various formats in other county’s surveys, the team decided to use the format used in the sample survey provided by EPHT staff. This grid-like survey, in which respondents circled their level of concern about listed environmental health topics, is quick and easy because it does not require extensive thought or response on each question. Minimal thought, or effort, for each question translates to a quickly administered survey.

Using the previously compiled list of questions, CEHAT members discussed various topics, questions, wording, format, length, and style. After agreeing to use a rating format, like the one in the sample survey provided by the EPHT staff, the team set about editing the survey. A computer with a draft of the survey was connected to a projector, so team members could see the survey on the wall. Using this visual, the group walked through the survey, deleting and editing questions. By the end of the meeting, the team had created a 63-question environmental health survey.

After completing a first draft of the survey, EPHT staff and epidemiologists reviewed the survey and provided editing suggestions. After incorporating these suggestions, CEHAT members administered 10 trial surveys. These initial respondents were asked, after taking the survey, about clarity of questions, formatting issues, time commitment, and other considerations. After making some minor adjustments, such as spacing and capitalization, 500 copies of the final

survey were made on green paper – it is an environmental survey, after all (see attachment A-31)!

The CEHAT team decided to facilitate the survey in person, asking respondents to fill out a written survey on the spot. The team agreed that this method would be less time consuming and less expensive than a mail or phone survey, and would increase the number of respondents. In order to ensure survey respondents represented the county equally, CEHAT members created a two week grid, organizing how many surveys would be handed and where and at what times. This grid was designed to ensure a representative sample of the entire county, and a random sampling of residents. Public locations such as the courthouse, post office, grocery store, gas stations, and convenience stores were chosen as the main targets (see attachment A-35). CEHAT members and AmeriCorps*VISTA volunteers facilitated the survey collection. Unfortunately, this plan did not work as planned. Surveyors found that patrons at gas stations, grocery stores, and other public locations did not have time or interest to fill out a survey. Most were simply in too much of a rush, both in Sidney and the smaller county communities. At the end of the two-week period, only 200 of the required 400 surveys had been collected, mostly from women living in Sidney.

To address this deficiency, CEHAT members held an emergency meeting to revise their strategy, and decided to each take a handful of surveys to local organizations and public events, such as high school basketball games and parent/teacher conferences. This group effort was enough to fill the quota and get a representative sample of the county's demographics. The survey was open for three weeks.

Data entry and result analysis was completed using the SPSS statistical analysis software program. Daniel Farr, principal at Sidney High School, had recently completed graduate level coursework for which he had used SPSS, and owned a copy. He graciously donated his personal copy of SPSS for CEHAT use. Data input took a couple days, and the analysis took an additional day or two.

After analyzing survey results, the CEHAT team was pleased to see that the number of surveys collected from each town in the county was reasonably close to the representative percentage needed, as calculated from the population. For example, there are 9,464 people living in Richland County, 53% of whom live in Sidney. Of the 400 required surveys, 212 were needed

from Sidney (.53 x 400 = 212). In actuality, 272 surveys were collected from Sidney, 60 more than the required number. The number collected from each town is as follows:

Crane – 13
Savage – 22
Fairview – 40
Lambert – 56
Sidney – 273

Of the 404 complete surveys, 40% were completed by men while 60% were completed by women. Statistically, Richland County has a 50/50 ratio of men to women, so this representation was close, but not entirely accurate. 8.2% of respondents were under 25, 35.4% were between 26-45, 45% were 46-65 years old, and 11.1% were over 65. This is an accurate representation of the county's age distribution. Additional survey analysis is included in the "Results and Conclusions" section of this report.

Next, the CEHAT team decided to find the top ten environmental health concerns in the county, using a mean concern level score. This score was calculated for each question, as respondent concern was rated on a 1-4 scale (see attachment A-37). Using this rating system, the top ten environmental health concerns in Richland County were:

1. Illegal Drugs
2. Road Safety
3. Alcohol Use / Abuse
4. Crime
5. Oil/Gas Development
6. Unsafe Drivers
7. Domestic Violence
8. Water Quality
9. Maintaining Quality of Medical Facilities
10. Outdoor Air Quality

These environmental health assessment results, along with a description of the assessment process, were published in the two local newspapers, the Sidney Herald and the Round-Up. These articles were simply a continuation of the positive relationship that has existed between the CEHAT committee and the local media throughout the duration of this project. Ellen Robinson, a local reporter, has attended several of the CEHAT meetings in order to keep the public abreast of its progression, and both papers have been more than willing to publish articles or press releases submitted by CEHAT. This continuous publicity aided the survey collection, as several participants mentioned they had read about the project in the paper. This

awareness increased the likelihood that members of the public would participate in the survey. While most publicity was positive, the downside was that the connection between the MAPP Steering Committee, a group facilitating a community assessment, and CEHAT was not always clear. While the CEHAT and MAPP committees did not always work directly together, they collaborated on many aspects of both projects. With so many assessment activities underway in the county, it was important for the public to understand that they were linked – an understanding that was sometimes lost in the articles focused on the environmental or community health issue at hand (see attachment A-43).

The Sidney Herald is published twice a week, while the Round-Up is a weekly paper. To maintain favor with both papers, we only published articles weekly. Survey results were published in both papers, followed by a schedule of community follow-up meetings the next week. This second article detailed the purpose and logistical information regarding the meetings. Posters and fliers were also distributed through every town in Richland County (see attachment A-48). The CEHAT committee decided that in order to get a representation from the entire county, it would be best to hold a meeting in every community. The team decided that evening meetings in public locations were the best time and place; therefore, meetings were scheduled in Savage, Fairview, Lambert, Sidney, and Girard at 6:30pm in the local hall, senior center, or other public building. The purpose of these meetings was to gather more information about the top ten environmental health issues, namely, why those issues were concerning, what was being done to address the issue, and what needed to be done to alleviate the situation. The project manager facilitated the meetings.

At each community meeting, the facilitator began by presenting participants with a list of the top ten county issues compared to the top ten in each community (see attachment A-49). This was for informative purposes only, as the goal of the meeting was to talk about county concerns. Focusing on the list of county issues, participants picked three that concerned them the most, and focused their conversation on these three topics through the rest of the meeting. For each of the three topics that were picked, participants were asked to jot their thoughts on a worksheet about 1) Specifically why this issue was concerning, 2) What, if anything, was being done to address it, and 3) What should be done to address the issue (see attachment A-50). Discussion about these three points ensued, while a note taker recorded the ideas. Some communities decided that many of the topics were too closely connected to separate them, and lumped several of the top

concerns under one category. For example, participants in Savage identified illegal drugs, alcohol, crime, unsafe drivers, and domestic violence as law enforcement issues, and completed the worksheet and meeting discussing law enforcement in terms of the identified topics.

The last portion of each meeting was devoted to two topics requested by Anne Cossit, the contractor hired to develop the growth policy for Richland County. Through discussions with Anne about her needs, CEHAT discovered that she intended to hold community meetings in each town to ask residents which environmental topics they were most concerned about. Instead of duplicating this process, Anne agreed to let CEHAT facilitate the meetings and share the results with her. However, there were two questions she needed for the growth policy that CEHAT had not intended on asking. These questions were: “Name 3 (or more) places and/or aspects that you would like to keep in your community. These could be things like historical structures or friendly atmosphere...” and “What do you want for the future of your community? Namely, what could change that would make your life better?” These questions were asked of participants in closing.

Attendance was smaller than hoped, with an average of 5 people at each meeting, including facilitators. However, the weather was very nice in the two weeks in early May when these meetings were held. Early May is generally when most farmers are in the fields planting, end of the school year activities occur, and people take advantage of the first good weather in months. Unfortunately, due to grant requirements and the timeline established by CEHAT, these meetings could not be pushed back. On the upside, with a small group, those present were able to openly express their opinion and we were able to have some very informative and beneficial discussions.

Each community focused on different issues, with many overlapping points of interest. Water Quality was of particular interest only in Savage, while the social issues (Alcohol, Illegal Drugs, Crime, and Domestic Violence) were of high concern in four of five communities. Oil and Gas was also raised as a concern, as it related directly to other issues. For example, the impact oil drilling has on water quality, increased road traffic, and a changing demographic with the influx of young, single men from out of state were all identified as factors directly as a result of the oil activity that had influence on other areas of our community.

After all five community meetings were completed, the notes and results were compiled and distributed to CEHAT team members (see attachment A-51). Everyone reviewed the

meeting notes and compared these comments to the survey results. At the next meeting, the team completed a prioritization process using survey results and community meeting notes.

CEHAT completed the prioritization process using a worksheet that was adapted from the PACE-EH handbook. This worksheet asked participants to rank the severity of the environmental issue compared to state and national situations, the number of people impacted, the effect on sensitive populations, the improving or worsening trend of the issue, and a number of political and social considerations. Team members worked together to complete the prioritization worksheets, discussing points of difference, and ultimately agreeing upon a concern rating of high, medium, or low for each topic. Of the ten issues in the prioritization process, seven were rated as “high importance,” including Illegal Drugs, Alcohol Use / Abuse, Domestic Violence, Water Quality, Maintaining Quality of Medical Facilities, Oil / Gas Development, and Unsafe Drivers (see attachment A-62).

The identified priorities varied slightly from the original survey results for several reasons. After dissecting the underlying reason behind resident concerns, CEHAT realized that several of the top concerns identified in the survey were concerns about future changes, not the current situation. Because this was not as urgent, these topics were bumped to a lower priority level. Number of people affected, vulnerable populations, and other similar considerations also changed the priority order from the survey results to the order in the priority list.

Members of the CEHAT team created the action plan for each of the topics through two meetings; at the first, an action plan for the social issues (illegal drugs, alcohol, and domestic violence) and the quality of medical facilities was created, while water quality, oil and gas development, and unsafe drivers were covered at the second meeting.

The plans were created using a worksheet adapted from the Kansas Community Toolbox and the Radiant Communications Strategic Communications Workshop, hosted by the Robert Wood Johnson Foundation. The original worksheets were used as guidance, and pieces of both were combined to meet the needs of Richland County (see attachment A-72). This adapted action plan worksheet was completed for each priority issue, and required participants to consider specific factors relating to each issue, including Knowledge & Skills, Experience & History, Biology & Genetics, Support & Services, Access, Barriers, & Opportunities, Consequences of Efforts, and Policies & Living Conditions. For each of these specific factors, participants brainstormed how that factor contributed to the problem or goal, targets of change, agents of

change, and ultimately solutions or strategies for change. These strategies for change became the action plan, for which participants identified acting agencies and target dates.

This final action plan was emailed out to all CEHAT members so that everyone, especially those unable to attend the plan drafting meetings, could have input. After receiving changes and suggestions from CEHAT members, the action plan was brought before the Board of Health, on which all three County Commissioners sit. The Board of Health and CEHAT members reviewed the plan together, and agreed upon a final draft (see attachment A-73).

This draft action plan was emailed to the CEHAT team and Anne Cossit for inclusion in the growth policy. Copies of this plan were also given to members of the Communities in Action Steering Committee to incorporate with their strategic planning process. By communicating with these different groups, CEHAT hopes to collaborate to complete the action plan. CEHAT will continue to meet to complete the action plan, while at least one member of CEHAT will sit on the Communities in Action Steering Committee. This representative will keep the CIA and CEHAT groups streamlined, and will act as a liaison between the two. With more organizations working for the same goal – community betterment – the likelihood of success increases.

RESULTS / CONCLUSIONS

The Protocol for Assessing Community Excellence in Environmental Health (PACE-EH) process in 2005/2006 was the first community-based environmental health assessment in Richland County. For this reason, there is no past data available to compare survey results against, making this community assessment a protocol-establishing process. The timing of this assessment was good for Richland County as well, as the county is in the midst of an oil boom. This sudden increase in oil production has changed the landscape of the county and the smaller communities within it. Gaining the public's perspective on their environment in the middle of the oil boom will be very telling when compared to similar data in the future.

After surveying 404 people from all areas of the county, the top ten environmental health issues that emerged were:

1. Illegal Drugs
2. Road Safety
3. Alcohol Use/Abuse
4. Crime
5. Oil / Gas Development
6. Unsafe Drivers
7. Domestic Violence
8. Water Quality
9. Quality of Medical Facilities
10. Outdoor Air Quality

These issues came out of the survey, where respondents were asked to rate their level of concern about various topics on a scale of 1-4. The mean concern scores produced the list above. Five of the above issues, illegal drugs, alcohol, crime, unsafe drivers, and domestic violence, were listed in the social section of the survey, making social issues the largest concern for Richland County residents. The other issues were spread evenly between the Ecological, Industrial, and Infrastructure sections. Very little changed when the results were broken down by town (see attachment A-75). Respondents were also given the opportunity to add their own comments to the surveys. These responses were recorded, tallied, and included in the survey results. They were also referenced as CEHAT proceeded through the prioritization process.

During the community meetings, in which participants were asked to pick their three top concerns from the list above, at least one social issue was picked in every town. Each of the

remaining topics were identified as a high concern by at least one community. There was no topic that emerged as an undisputed “top priority.”

In discussions with the CEHAT team and community residents, many people noticed the interconnectedness of the identified environmental health concerns, especially when investigating root causes. This was especially noticeable in the case of illegal drugs, alcohol, crime, unsafe drivers, and domestic violence. The same factors influence one’s choices regarding each of these issues, including, but not limited to, community morals, family values, cultural norms, school performance, and parental involvement and support. The concerns that were raised about outdoor air quality, water quality, unsafe drivers, and road safety were predominantly spawned by concern about oil and gas development in Richland County. When looking at the root causes of environmental health concerns, it became clear that the community was concerned about social norms and the impact of the oil boom. While these concerns are actualized in different ways, the community’s concern comes back to these two main themes.

The county’s basal concerns correlate directly to the top ten concerns in each town. These top concerns were nearly identical in each town, but in different orders (see attachment A-49). The only outlier was in Savage, where Loss of Hunttable Wildlife was listed as the number one concern, a topic not identified in other areas. Upon further investigation, it became evident that the majority of the respondents in Savage were men who enjoyed hunting and fishing, and were concerned about the privatization of land along a stretch of the Yellowstone River where they frequently hunted and fished. Despite this single outlier, the similarity in environmental health concerns between towns is significant because it means that policy makers can focus on the county as a whole when creating an action plan, rather than targeting smaller areas.

After comparing each survey question to each demographic consideration, several “significant” relationships emerged from the Chi-Square Test (see attachment A-37). The most noticeable cross-tab was that women respondents were more concerned about every topic than their male counterparts. Another significant relationship was that respondents’ concern about water quality increased with age, until they reached age 65, at which point mean concern levels dropped. Additionally, residents in Fairview and Sidney, the only two incorporated towns in Richland County, were much more concerned about Domestic Violence than other non-incorporated communities. Of the towns, Savage was the least concerned about alcohol use and abuse. Coincidentally, Savage is also the only town in Richland County without a bar. No

investigation was conducted to explain these correlations, so for reporting purposes we can only say that there were significant relationships.

Community members on the Community Environmental Health Assessment Team (CEHAT) were very representative of the county. The original Environmental Health Steering Committee made a concerted effort to invite representatives from every town, community, and local industry. This effort paid off, as every city, town, and community, was represented at the introductory meeting. Sidney, Fairview, Lambert, Savage, and Crane were the five main cities and towns represented, while the 4-Mile, Girard, Charlie Creek, Enid, and Andes communities were also spoken for. This broad representation was important, as there is a feeling of animosity in the county because many residents, especially those living outside of Sidney, feel that all “county” projects are in fact “Sidney” projects. By ensuring representation from all areas, the Environmental Health steering committee hoped to change this perception. The same strategy was employed in the industrial sector by inviting representatives from the major local industries, including Montana-Dakota Utilities Co., Busch Agriculture, Heddington Oil, the Westmoreland Coal Co., and others. By gaining representation from the major local industries and each community, the Environmental Health steering committee was able to establish a community team that was representative of the demographic spread in the area.

Unfortunately, the timing of the grant period was not conducive to maintaining this participation through the project period. The spring and summer months in Richland County are hectic in every industry, especially those dealing with farming (seeding), ranching (calving). Other spring and summer events, such as school activities, increased industry production, and an increasingly busy social schedule, had a negative impact on the participation on the CEHAT committee. Therefore, while the CEHAT team was large and representative of the community in the winter months, when the team developed and administered the survey, the members involved with the community meetings and strategic planning only represented a small section of the population.

While the CEHAT team gained a significant amount of insight into the environmental health concerns of residents in the community, the most significant finding was that social issues are more concerning than traditional environmental health issues like air or water quality. However, this finding needs to be considered within the scope of the survey. The majority of the environmental impact from the oil and gas development is on the minority of the local

population – those living in the country. Because the country population is so low, the opinions of this group did not surface as majority concerns in the survey. Through the local community meetings, members of CEHAT came to understand the degree and extent of the impact on a small number of people, although it was not represented in the official survey results. Ultimately, oil and gas development was identified as a top concern in the county, although a relatively small number of residents are directly impacted by the rigs themselves.

The community, as a whole, has begun reminiscing about the last oil boom in the mid-80s, and is, not surprisingly, comparing the current boom to the past. Despite the complaints about various situations arising from the current oil boom, the community believes that this production boom is much better managed than past oil booms. Stories of rampant drug use, STDs, homeless families, displaced children, increased crime, and other social maladies of the past permeated survey comments and meetings, illustrating the community's opinion that despite the current social changes resulting from the increased oil traffic, the negative impacts are nothing like they were 25 years ago. This is also a contributing factor to the community's concern for the future. While the situation may not be that bad now, residents are aware of what could happen if no prevention or planning measures are established.

Concern for the future and maintenance of the current quality of life was raised as another top priority. This is evidence that the community recognizes the need for growth planning, particularly in light of the impending oil bust. When asked why particular issues were concerning, many residents explained that they were not necessarily concerned about the current situation, but would be concerned if it were to become worse. For example, if school quality declined, crime increased, or illicit drug use increased, residents would be very concerned about this change, although they may not be concerned about the current situation.

While these results are significant and provide a good insight into the opinions and concerns of Richland County residents, there are some limitations to the data. The people surveyed were those already out and about in the community, and those who had ten minutes to spend completing a survey. These tended to be older people, those without children, and those who already had reason to be concerned about the environment. The limitations of the community meetings are also noteworthy, as community residents were asked to give up 2 hours of their evening, with dessert as the only incentive, to spend discussing environmental concerns. As a result, participants at the meeting generally had a vested interest in the outcome.

CEHAT used a combination approach of random surveying at public locations and personal surveys in each community. Asking people personally, face to face, to complete the survey had higher yield than a mail or phone survey would have. The survey administrator was also available to answer questions from respondents, which helped increase community awareness. Richland County's first survey administration attempt was unsuccessful. The grocery store, gas station, court house, and post office, while public locations, were not lucrative for facilitating a survey. Visitors to these establishments were often running errands and were in a rush, and there was no convenient place to sit down. Completed survey yields were much higher after CEHAT regrouped and changed strategies so each CEHAT member administered surveys in their own town.

If Richland County repeats the survey process in the future, an incentive program will be included to entice residents to complete the survey. Whether this would be cash to all participants, a larger cash prize, gift certificates, a lottery, or another incentive, this would have increased participation. More organization in the survey facilitation would also help the process in the future. Instead of visiting grocery stores and the post office to collect surveys, surveyors would visit already established clubs and organizations, such as the various civic clubs in operation around the county. More media would be utilized – publicity in the newspapers, on the radio, and on the Mid-Rivers cable channel are all good resources. These changes would have helped the CEHAT team this year, and if the opportunity arises to repeat the process, these lessons will be utilized.

The CEHAT team learned a lot about the community by facilitating the PACE-EH process in Richland County. Most importantly, they realized that local residents really like living here, are tied to their land and the area, and are therefore very concerned about maintaining the high quality of life. This paints a portrait of a stable, invested, and forward thinking community, concerned about maintaining their quality of life.

RECOMMENDED PRIORITIES FOR ACTION AND ACTION STEPS

Recognizing the importance of creating a SMART – specific, measurable, agreed upon, realistic, and time-based - action plan, the CEHAT team decided to dissect the community's environmental health concerns into their component parts. After completing a prioritization worksheet adapted from the PACE-EH materials, the team identified five priority issues for which action plans were needed. These priorities were:

1. Illegal Drugs, Alcohol Abuse, and Domestic Violence
2. Water Quality
3. Quality of Medical Facilities
4. Oil and Gas Development
5. Unsafe Drivers

While Illegal Drugs, Alcohol Abuse, and Domestic Violence had been separate issues throughout the assessment process thus far, the CEHAT team identified the same causal factors for all three. They decided that creating one action plan to address all three issues would be more efficient and effective than creating a separate plan for each.

CEHAT members created the action plan for each issue by using a worksheet adapted from the Kansas Community Toolbox and the Radiant Communications Strategic Communications Workshop, who provide training for the Robert Wood Johnson Foundation. As a group, team members considered various factors regarding each priority issue, including Knowledge, Experience, Genetics, Support Services, Barriers and Opportunities, Consequences, and Policies. For each of these considerations, team members listed: 1- How it contributed to the problem or goal, 2- Potential targets of change, 3- Potential agents of change, and 4- Potential solutions or strategies for change (see attachment A-72). Ideas presented in Potential Solutions or Strategies for Change became the action plan (see attachment A-73).

Illegal Drugs, Alcohol Abuse, and Domestic violence were identified as the top priority for change because of their concerning prevalence in the county, the large number of people affected, especially children and families, and the worsening situation. The inseparable relationship between all three social problems frequently surfaced as an additional concern, as those using illicit drugs are often problem drinkers, problem drinkers have a higher incidence of illegal drug use and domestic violence, and more often than not domestic violence situations involve drugs and alcohol. Unacceptable social norms was a common theme that ran through all

three social problems as the main causal factor. The over-arching goal to address these problems was to change the social norm.

To reach the goal of changing a social norm that frequently accepts drug and alcohol use and abuse, and turns a blind eye to domestic violence, the CEHAT team developed several action steps. The first step is to educate the community about the severity of the problem. Most of the information regarding these three social maladies is hearsay, so the first action step is to investigate the drug, alcohol, and domestic violence problems and determine what is being done about them. Using this knowledge as a foundation, the following action plan targets teachers, parents, and children to change the community's attitudes toward drug and alcohol use, and domestic violence.

To prevent domestic violence and help young couples understand what a healthy relationship is, CEHAT identified the need to assess what churches and the Justice of the Peace provide, or could provide, for young adults in regards to family and marriage counseling. Using this information, a plan will be developed to provide family and marriage counseling, if none is currently available, and inform the public about the available resources. Other opportunities include a family resource center. This center will provide information for parents, including resources on how to communicate clearly and effectively with their children, especially about drugs and alcohol. An AmeriCorps*VISTA will be arriving in Richland County in July 2006 to work with the family resource center, and will also adopt family and marriage counseling tasks. These action steps will address the community's lacking resources for couples and families to deal with marital problems and lacking or unclear communication about drugs and alcohol, and will be accomplished by December 2006.

While it is important for children to hear strong, positive, anti-drug and alcohol abuse messages from home, it is also important for this message to be supported at school. There is an identified lack of communication between parents and teachers. The first step to address this deficiency is to investigate why collaboration between teachers and parents is lacking, and develop a plan to increase collaboration. Other preliminary action plan steps call for additional investigation of ways to increase participation and benefit of parent/teacher conferences, of what teachers are willing to teach (sex ed, abstinence, D.A.R.E., etc.) and what kids are currently being taught, and what parents want their kids to be taught. By increasing communication and collaboration between parents and teachers, children will receive clear, unambiguous messages

about the detriments of alcohol abuse, illegal drug use, and domestic violence, potentially changing the social norm and developing a healthier community.

The second priority topic identified by the CEHAT team was water quality, an issue that, like the social issues, will primarily require investigation and increased collaboration. One resurfacing concern about water quality was the potential impact oil and gas development will have on the local water quality and supply. To address this concern, the team decided to investigate the current aquifer situation and educate the public about the findings. Creating a website or collaborating with area agencies to host a site to provide this information will be a sustainable and reliable source of information for the public about water quality. Information about well water testing will also be included. One advantage of hosting and/or maintaining a website is the ability to monitor the public's interests and concerns. A Frequently Asked Questions page would be a great mechanism to inform the public about top concerns. The public health department, the CEHAT committee, local media, and other community partners will be responsible for completing this action step by May 2007.

The second piece of the water quality action plan is to establish a system of water monitoring and control. This involves the Board of Health and other local, state, and federal regulatory agencies, and would establish a flow chart of which agencies are responsible for which regulatory actions and who has what information. Increased collaboration between the Local Emergency Planning Committee (LEPC) and the Board of Health would help create this system of monitoring and control. This system of monitoring and control will be established by May 2007.

CEHAT decided that maintaining the quality of Richland County's medical facilities was the third priority issue. The Sidney Health Center has been recognized locally and state wide as a high quality hospital, a large local employer, and a major community asset. Despite this recognition, or perhaps because of it, the community is concerned about the large number of doctors and specialists that will be retiring soon. They are also concerned about the hospital and community's ability to recruit and retain competent medical staff. The first step in working to alleviate this concern is to educate the community about current recruitment efforts, the achievements of current hospital staff, and the correlation between a healthy community and high quality medical facilities. This will be completed by March 2007. Helping the public understand this correlation will help other community development plans, as a generally healthy

community will help maintain high quality medical facilities by attracting needed medical staff to the area.

The fourth priority topic included in the action plan addresses community concerns about Oil and Gas Development in the county. While some of the concerns, such as impact on the water supply, were addressed in other action plan steps, the CEHAT group recognized the public's lack of information about what the oil industry is doing to regulate production and environmental impact. Recently, the Board of Oil and Gas appointed a full time employee to help facilitate environmental inspections of the oil industry. Members of the CEHAT group will educate the public about this new employee through radio, newspaper, fliers, and other media channels. This will be complete by December 2006.

The second action step to address Oil and Gas concerns relates to litter control. The Girard Homemakers volunteered to contact the American Petroleum Institute (API) about litter patrol and road safety promotional programs. Using the Adopt a Highway litter patrol program, the Homemakers will encourage the API to adopt and maintain the most frequently used, and littered, stretches of highway. However, this plan must be carried out cautiously, due to the possibility of methamphetamine disposal in roadside ditches. This litter control program will be in effect by December 2006.

The fifth, and last, priority issue included in the action plan addresses Unsafe Drivers. The main concerns that arose from the survey and community meetings were about underage drivers on off-road vehicles, school bus safety, and speeding. CEHAT developed two action steps to address these concerns. The concern about ATV safety will be addressed by organizing a safety course in collaboration with the Association for Biker Awareness, Training, and Educate (ABATE) around the 4th of July or the Richland County Fair. This course would stress helmet use, caution on gravel and other uneven surfaces, awareness of other vehicles, and crossing safety. Through education and training, CEHAT hopes to decrease the number of accidents that occur as a result of unsafe drivers on ATVs. This safety course will be ready by July 2007.

Unsafe Drivers, especially around school buses, are another major concern of county residents. To address this concern, CEHAT decided to increase awareness of school bus laws, through articles in the newspaper and radio announcements. They will also encourage community residents to record the license numbers of vehicles they witness speeding around school buses or driving in another reckless manor. Working with the newspapers, bus companies,

and oil companies, CEHAT will also lobby for stiffer penalties and more education for those driving recklessly around school buses. This will include investigating a photo ticket system, in which a camera would be installed at major speeding areas and take a photo of offending cars to issue a ticket by mail. Through education and policy enforcement, CEHAT hopes to reduce the number of reckless drivers in the county through a collaborative effort with media and other community organizations by September 2006.

After creating this action plan, CEHAT members met with representatives from the Board of Health to review the action plan. As a group, they discussed each action step and the implications, positive and negative, of each. Working closely with the Board of Health and county commissioners to create this action plan will help ensure that the plan is followed through in the future, and that local policy makers are aware of the PACE-EH environmental health assessment process and the active CEHAT group. This awareness will help the team in the future as they investigate local funding options or engage policy makers and the community in fulfilling some of the action steps listed above. Community awareness will also help CEHAT work with the Communities in Action (CIA) Steering Committee, a countywide community development group.

Both groups, CEHAT and CIA, have the overarching goal of creating a healthy community. While CIA is working on a larger vision of community health, encompassing every aspect as health, and CEHAT is focused more on the environmental side of community health, there are many overlapping factors. If both groups collaborate on projects, the end result will be better than either could produce working alone.