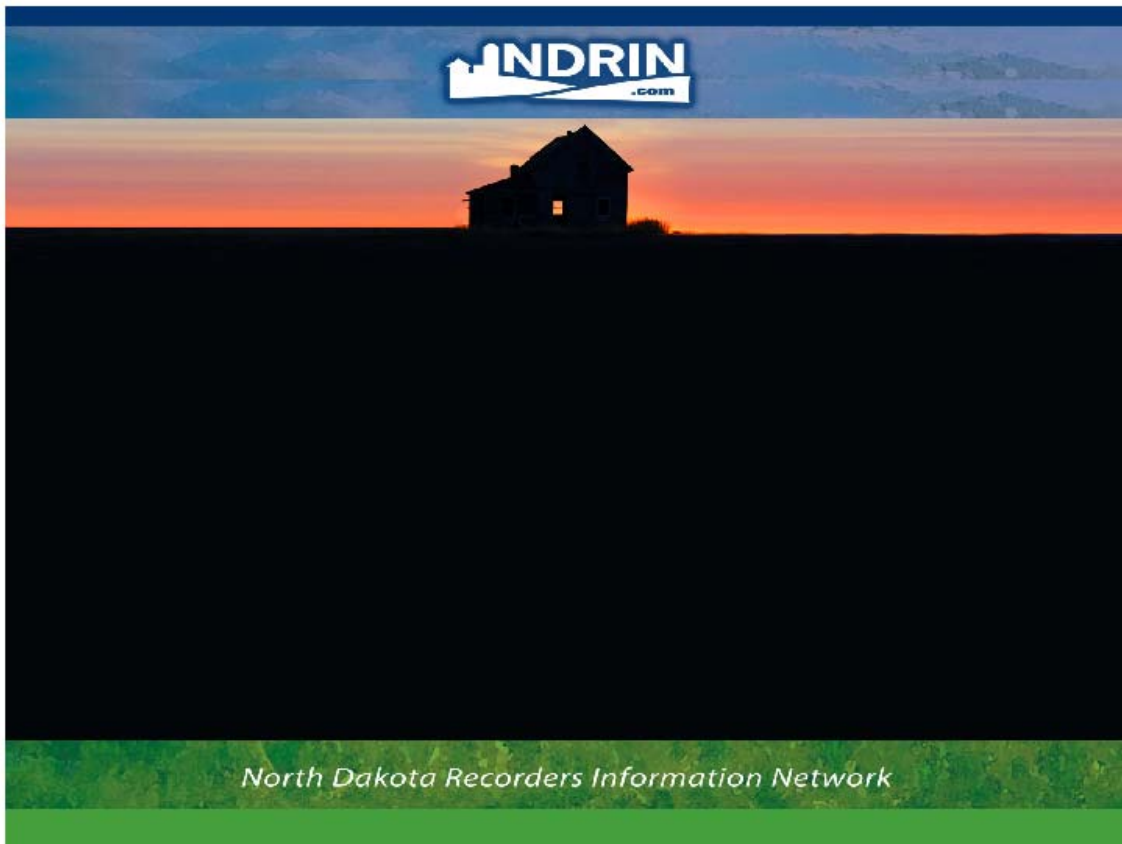


2010 Land Records Best Practice Application

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County Recorders Disaster Proof North Dakota Land Records with the North Dakota Recorder's Information Network (NDRIN)

The Red River Valley of the North has experienced historic flooding in three of the last 14 years. The most devastating was the flood of 1997 in which seventy percent of the city of Grand Forks was flooded. The flood waters inundated the historical downtown area causing fires that destroyed many city blocks. The Red River of the North has a propensity to flood each and every year. In fact, the floods of 2009 and 2010 were nearly as devastating to the Red River Valley as was the flood of 1997.

The flood of 1997 destroyed nearly all of the land records in stored in the Grand Forks County Recorder's Office. It was apparent after this disaster that the County Recorders' offices throughout North Dakota were lacking a method to provide adequate offsite backup of their electronic and paper documents. There was no efficient or reliable method to backup and/or recover the documents that maybe destroyed in a disaster.

Our solution to this problem was to disaster-proof the County Recorder's offices by creating an electronic central repository to collect and store electronic copies of County land records. Our goals involved in developing this solution were:

- Microfilm existing paper land records
- Design and build the central repository
- Publish land records to the internet
- Create microfilm from the digital records
- Develop a long term funding plan

We began the process of turning our "dream" of disaster proofing the North Dakota Recorders offices into "reality" by applying for a \$1.2 million dollar grant from the Federal Emergency Management Agency (FEMA) in 1998. In May of 1999 our grant application was approved and NDRIN was born. The total cost of the project amounted to \$1,200,000. The Federal share was \$900,000.00, the State of North Dakota's share was \$120,000 and \$180,000 was paid by the Counties, in kind.

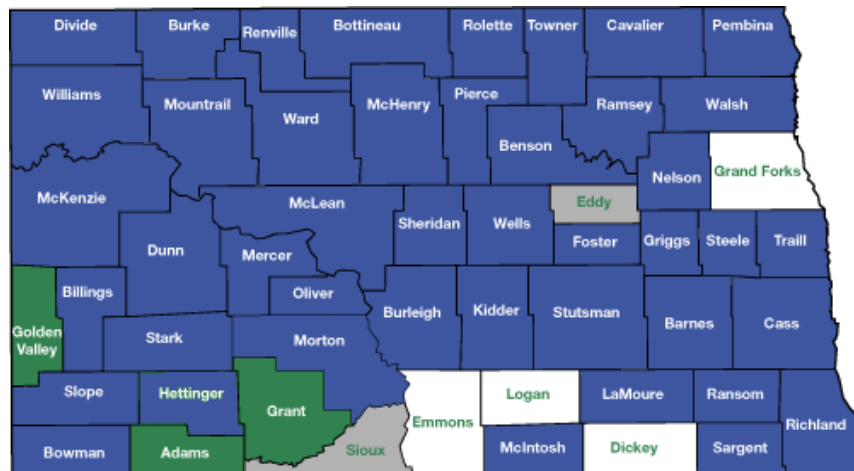
The NDRIN Board of Directors was established and a technology company was hired to manage the day-to-day operations of NDRIN. Over the next 2 ½ years we undertook an aggressive schedule to meet the project goals and to have a fully operational electronic central repository by the start of 2001.

NDRIN's first task was to undertake the process of microfilming all existing paper land records. By the end of 2001 we had traveled to every corner of the state and completed the process of microfilming over 5.5 million pages of land records.

NDRIN's next major task was to design, develop, and test the electronic central repository that when complete would allow the publishing of land records to the Internet. Our biggest challenge was to make the central repository software application vendor agnostic. We needed to be certain that any software application being utilized by the North Dakota County Recorders offices would be able to export and store their data to the central repository. Once the central repository was complete we add another level of disaster proofing to NDRIN by creating microfilm copies of all the digital land records being stored in the central repository. The microfilm is provided to the County Recorder and must be permanently stored in an NDRIN approved storage location.

NDRIN's final and probably most important task was to develop a long term funding plan. During the 2005 legislative session the North Dakota Recorders lobbied the legislature to include a new \$3/document preservation fee to North Dakota recording fees structure. The document preservation fee was approved but not before the legislature added a sunset clause. Over the next four years every county tracked and reported the uses of these funds until during the 2009 legislative session the sunset clause was removed and document preservation fee became permanent. The NDRIN member counties are contributing \$1 of the document preservation fee to NDRIN while the remaining \$2 stays in their county for other document preservation needs. NDRIN then established a fee-based subscription service to allow access to the land records stored in the central repository via the Internet. NDRIN currently has over 1,000 subscribers that have access to our central repository 24 hours a day 365 days per year. NDRIN's long term funding plan has been so successful that we have been able to refund approximately \$400,000.00 back to the member counties.

On January 1, 2001 with all our goals attained the NDRIN disaster proofing went live. Initially we were collecting data from seven pilot counties. In January of 2002 we began collecting data from non pilot counties. The map below shows the current status of the North Dakota counties. Counties indicated in blue are participating in the central repository and publishing data to the internet. The counties in green are participating in the central repository but do not publish to the internet. The counties in gray are contributing money to help fund the NDRIN central repository but are not currently NDRIN members.



NDRIN now has a reliable and efficient solution to disaster proof the Dakota land records. In an effort to continue NDRIN's commitment to disaster proofing North Dakota land records, we have created redundant data centers separated by 200 miles.

We have standardized on IBM Hardware, Windows software, and VMWare software to implement our disaster proofing solution. Each of our data centers utilizes the following hardware and software:

- Data Center Hardware
 - ◆ IBM BladeCenter H
 - ◆ IBM HS22 Blade Servers
 - ◆ IBM nSeries storage
 - ◆ IBM tape library
 - ◆ IBM Windows Servers in member counties
- Data Center Software
 - ◆ Eagle Recorder by Tyler Technologies
 - ◆ VMWare ESX
 - ◆ VMWare Site Recovery Manger (SRM)
 - ◆ Veritas backup software
- Data Center Power Protection
 - ◆ APC Uninterruptable Power Supplies
- Microfilming Equipment
 - ◆ Kodak Archive Writer

NDRIN's dream has become a reality and the benefits derived from our high expectations are many and continues to evolve. We took an aggressive approach and developed a plan to successfully disaster proofing North Dakota land records. By developing this solution ourselves we eliminated the possibility of our solution becoming another state unfunded mandate. Our solution was created to accept electronic data from multiple vendors, thus allowing the County Recorders to use the program that is best for them. Additionally all digital records stored at the repository are microfilmed and provided to the counties who in turn store them off-site at an NDRIN approved storage facility in compliance with our joint powers agreement.

The Central repository continues to expand beyond its original intentions; by including things such ND Recorders Association website where we can place minutes to meetings, post events, fee schedules, list our officers, as well as individual County information pages. The project continues to be managed by a board of 5 member Recorders and the management and staff of High Plains Technologies.

Subscribers to the NDRIN system are able to view and print records from the member counties 24 hours a day 365 days per year without leaving their home or office. With the current oil boom in North Dakota it is impossible for county offices to provide enough work stations for record researches but with the aid of the NDRIN website researchers are able to research an individual counties records and then print the records they need.

NDRIN is nearing the end of our year-long eCommerce development project which will go live on September 1, 2010. The eCommerce module will allow potential NDRIN customers to subscribe and maintain their accounts entirely online. This will eliminate the manual task of having to register and bill subscribers.

We have far exceeded all expectations for the NDRIN disaster proofing project. NDRIN has grown beyond our wildest dreams from only 7 pilot counties and 12 subscribers to 48 of 53 counties exporting data to NDRIN and 1000+ paying subscribers. We have successfully disaster proofed the North Dakota land records and we now have the ability to restore data, in the event of a disaster.

While normally being an individual best practice award category, we feel the state of North Dakota has shown how counties uniting can accomplish great things as a whole and are proud to present our submission for your Best Practice Award in the Land Records category.