Perspectives on Tornado Recovery in a Small Town: The Wadena Experience

Gary A. Goreham
Department of Sociology and Anthropology
and
Daniel Klenow
Department of Emergency Management
North Dakota State University

Presented at the Community Capitals Framework Institute
November 5-7, 2014
Lincoln, NE
**Introduction**

Natural disasters often cannot be predicted, yet they affect scores of communities every year.

- How do natural disasters impact small communities?
- How (how well) do they recover from those disasters?
- What resources/assets are available in smaller communities from which to draw for recovery efforts?

Case studies can provide windows into community dynamics and offer insights for practical applications in similar communities.
Four Phases of Emergency Management

- Mitigation
- Preparedness
- Recovery
- Response
Wadena, MN
Why Wadena, Minnesota?

• Recently experienced a tornado.
• Small community.
• Data had been well recorded.
• Recovery defined as a “success.”
• Potential for other communities to apply Wadena’s experience to their own development efforts.
**Wadena, MN**

**Human Capital**
- 4,088 population; Government officials; Education; Health care

**Natural Capital**
- 5.2 sq mi; Agricultural lands; Wetlands; City parks

**Financial Capital**
- Agriculture, manufacturing, healthcare industries; Poverty

**Built Capital**
- 2,010 homes; Downtown; Schools; Infrastructure; Fair grounds; Tri-county Health; City-owned utilities

**Cultural Capital**
- History; 15 churches; Community celebrations; Worldview/values: Gemeinschaft, self-help AND common good

**Social Capital**
- Active churches; K-12 schools; MN State Comm/Tech College

**Political Capital**
- Participation in local government; Degree of diversity and inclusion; County seat

**Human Capital**
- 4,088 population; Government officials; Education; Health care
Research Questions

1. In what ways were community capitals initially impacted by the tornado?

2. How were community capitals leveraged in the response process?

3. How were community capitals leveraged in the recovery process?

4. What does the Wadena tornado experience suggest regarding tornado recovery?
Case Study Research Methods

• **Interviews**: city officials, organizational leaders, and community residents.

• **Documentary data**: printed documents, internet sites, newspaper reports, official FEMA and Emergency Management records.

• **Photographic data**: personal photographs, photos from residents, photos from internet sites.

• **Secondary data**: Census.

• **Participant observation**: City government meetings, school-related meetings.

• **Mixed methods data analysis**: asset mapping and ripple mapping.
1. In what ways were community capitals initially impacted by the tornado?
Twin EF4 Tornados: June 17, 2010

- 3:45 p.m. EF4 tornado with 175 mph winds in eastern Otter Tail County, killing one person.
- 5:00-5:18 p.m. EF4 tornado 3 miles SW of Wadena; continuous damage path through Wadena; lifted 7 miles NNE.
- Damage 1.1 miles wide along a 10 mile path.
- Peak winds estimated at 170 mph.
Tornado tracks for the Wadena and Almora-Bluffton EF4s

Radar reflectivity for Wadena EF4
FC: 19 businesses; 4 nonprofits; farms; credit union; restaurants

BC: homes and apartments; infrastructure; county fairgrounds; community center, pool, ice rink; Wadena-Deer Creek High School; MSCTC; bus garage

SC: Wadena-Deer Creek High School; church roof; cemetery; day care center

NC: 1,300 truckloads of trees moved within four days
Wadena, MN

Built Capital
Houses and apartments, infrastructure, fairgrounds, church, cemetery, school, college damaged or destroyed.

Financial Capital
Businesses/farms damaged, destroyed, and/or displaced.

Political Capital
Government functions disrupted.

Social Capital
High school reunion affected. Various associations, organizations, societies disrupted.

Natural Capital
City trees, forests, shelterbelts damaged.

Cultural Capital
Sports/church functions disrupted.

Human Capital
100 people displaced, 34 injured NO ONE killed; daycare center damaged; disruption for parents.
2. How were community capitals leveraged in the **response** process?

“All a half hour after the storm moved through, chainsaws could be heard all through Wadena.”

*Wadena Pioneer Journal 5/26/10*
**Wadena, MN**

**Built Capital**
- Emergency Operations Center; trucks and specialized equipment

**Natural Capital**
- Worldview and values

**Cultural Capital**
- First responders (fire chief, police chief, county emergency management director); residents; sheriffs department; dispatch; volunteers

**Human Capital**
- Radio communications; Red Cross; Salvation Army; churches

**Social Capital**
- City/county first responders; County emergency management director; Public works; FEMA

**Financial Capital**
- Contributions

**Political Capital**
- Built Capital
- Natural Capital
- Cultural Capital
- Human Capital
- Social Capital
- Financial Capital
3. How were community capitals leveraged in the **recovery** process?

“The tornado may have been one of the best things that ever happened to Wadena.”

Comment from a Wadena resident, July 21, 2013

The “spiraling up” process was recognized by the community leaders and residents!
Human Capital

Virginia Dahlstrom
David Evert
Diane Leaders
Ann Pate, Lee Westrom, Bruce Boyne
Don Niles
Lori Gress
Cordell Schott
Nate Lore
Del Moen
Wayne Wolden
Brad Swenson
Dean Uselman
Joel Beiswenger

... to name a few!
Social, Cultural, and Political Capital

**Wadena Otter Tail Long Term Recovery Committee**
completed their work 10/14/2012

**Wadena 2.0**
Don Niles and others worked with state government to secure fund for public buildings, infrastructure, the Wellness Center, and other construction.

**Local Churches**
Rev. Del Moen, clergy, and local congregations provided meals, opened their facilities for use by the schools, hosted community meetings, and formed the WOTLTRC.

**Otter Tail - Wadena Community Action Council**
Assisted in creation of WOTLTRC
“Trees for Wadena” group
Headed by Anne Oldakowski, Soil & Water Conservation Service

Wadena-Deer Creek High School administrators, school board, faculty, and students
Wadena Otter Tail Long Term Recovery Committee
Collected over $600,000 contributions to assist residents with immediate needs, essential repairs, and replacement of furniture and appliances.

Otter Tail - Wadena Community Action Council
501(c)3 fiduciary for WOTLTRC and the Wadena Tornado Relief Fund

Lutheran Social Services
To assist with disaster recovery efforts in the aftermath of tornadoes in Wadena, Minnesota in June of 2010, the Lutheran Community Foundation, Disaster Response Fund gave a $6,000 grant to Lutheran Social Services of Minnesota.

Wadena 2.0
Don Niles, chair of the Wadena 2.0 steering committee, said that it is all about smart planning to rebuild the city. He emphasized the importance of the upcoming Minnesota Design Team visit to Wadena the weekend of Oct. 28-30. - See more at: http://dev1.echopress.com/event/article/id/78582/#sthash.fXyVw4nQ.dpuf

Contributions
Minnesota Initiative Foundation
Insurance Companies
FEMA ($5.1 million)
Local and State Government
Built Capital

Minnesota State Community and Technical College

Local church buildings: Immanuel Lutheran and St. Anne’s Catholic School/Church
Wadena City Airport on Sunnybrook Road
1,300 truck loads of trees hauled out in first four days. Items sorted into tree waste, masonry debris, scrap metal, glass, and miscellaneous.
Wadena, MN

**Social Capital**
- Local churches; Wadena Recovery Committee; Wadena 2.0; Trees for Wadena; Schools

**Built Capital**
- Local church buildings; MSCTC

**Natural Capital**
- Wadena City Airport

**Financial Capital**
- Contributions; Insurance payments; FEMA payments; State and local government money

**Human Capital**
- Local leaders in government, churches, business;

**Political Capital**
- Governmental participation

**Cultural Capital**
- Worldview and values: Gemeinschaft, self-help, AND common good

**Social Capital**
- Local churches; Wadena Recovery Committee; Wadena 2.0; Trees for Wadena; Schools

**Built Capital**
- Local church buildings; MSCTC

**Natural Capital**
- Wadena City Airport

**Financial Capital**
- Contributions; Insurance payments; FEMA payments; State and local government money

**Human Capital**
- Local leaders in government, churches, business;

**Political Capital**
- Governmental participation

**Cultural Capital**
- Worldview and values: Gemeinschaft, self-help, AND common good
4. What does the Wadena tornado experience suggest regarding tornado recovery?

Why was Wadena’s tornado recovery “successful?”

1. Wadena had capacity in each of the community capitals.

2. Shared cultural values: both self-help and common good.

3. Gemeinschaft: small community with social cohesion and visibility.

4. Strong human capital (leadership) was related to rapid leveraging of social and political capital, which were essential in the collection/use of financial capital.

5. Built capital and natural capital were readily leveraged.
Recommendations

1. Emergency management – Community development interface.
   a. Be aware of an area’s hazard risk profile. **Hazards are everybody’s business!**
   b. Note overlapping concerns among community economic developers, urban planners, and emergency managers.
   c. Observe natural linkages between public and private sectors to help create resilient communities.
   d. **Take mitigation and recovery principles into account** when planning community economic development projects.
   e. Planning must be sensitive to **principles of environmental sustainability**.
   f. Planning must be sensitive to **principles of community resilience**.
2. Create an updatable inventory of community assets to expand awareness of the full range of available CD and EM “capital.”

3. Strategize to build assets in each CCF area.

4. Communities able to leverage capitals may be positioned for a faster recovery, better community, and better able to mitigate future disasters.

5. Support grassroots recovery organizations as a “spiraling-up” strategy.


Rubin, Claire B., Martin D. Saperstein, and Daniel G. Barbee. 1985 *Community Recovery from a Major Disaster*. Program on Environment and Behavior Monograph #41. Institute of Behavioral Science, University of Colorado.


