

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

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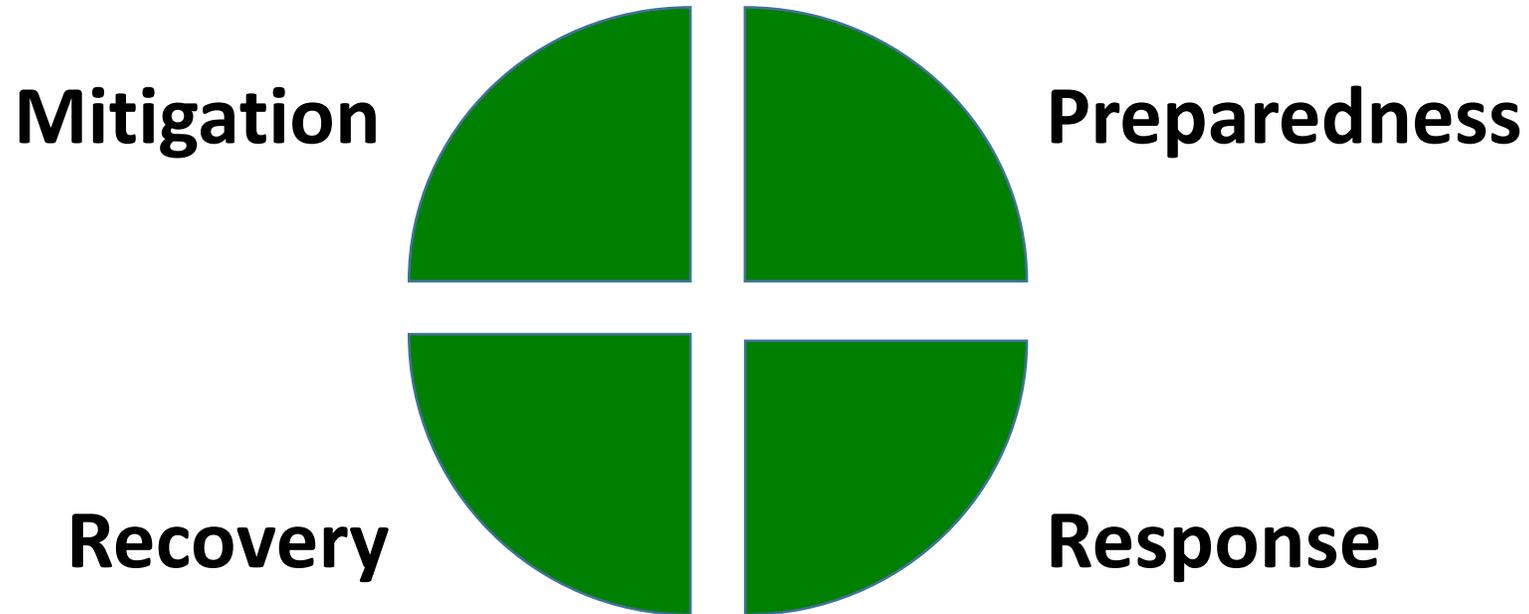
Introduction

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

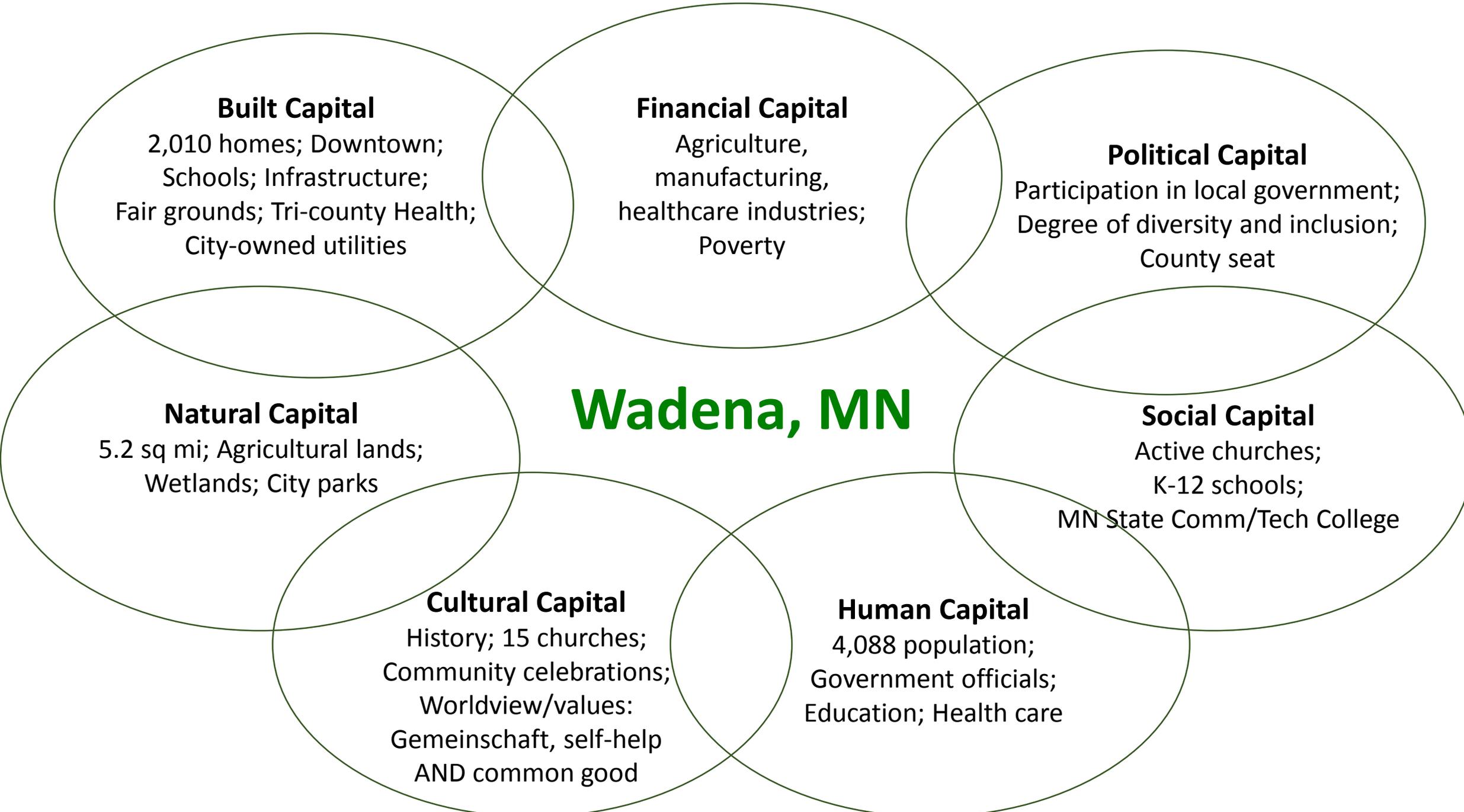


Wadena, MN



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

Built Capital

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

Financial Capital

Agriculture,
manufacturing,
healthcare industries;
Poverty

Political Capital

Participation in local government;
Degree of diversity and inclusion;
County seat

Natural Capital

5.2 sq mi; Agricultural lands;
Wetlands; City parks

Social Capital

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

Cultural Capital

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

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.

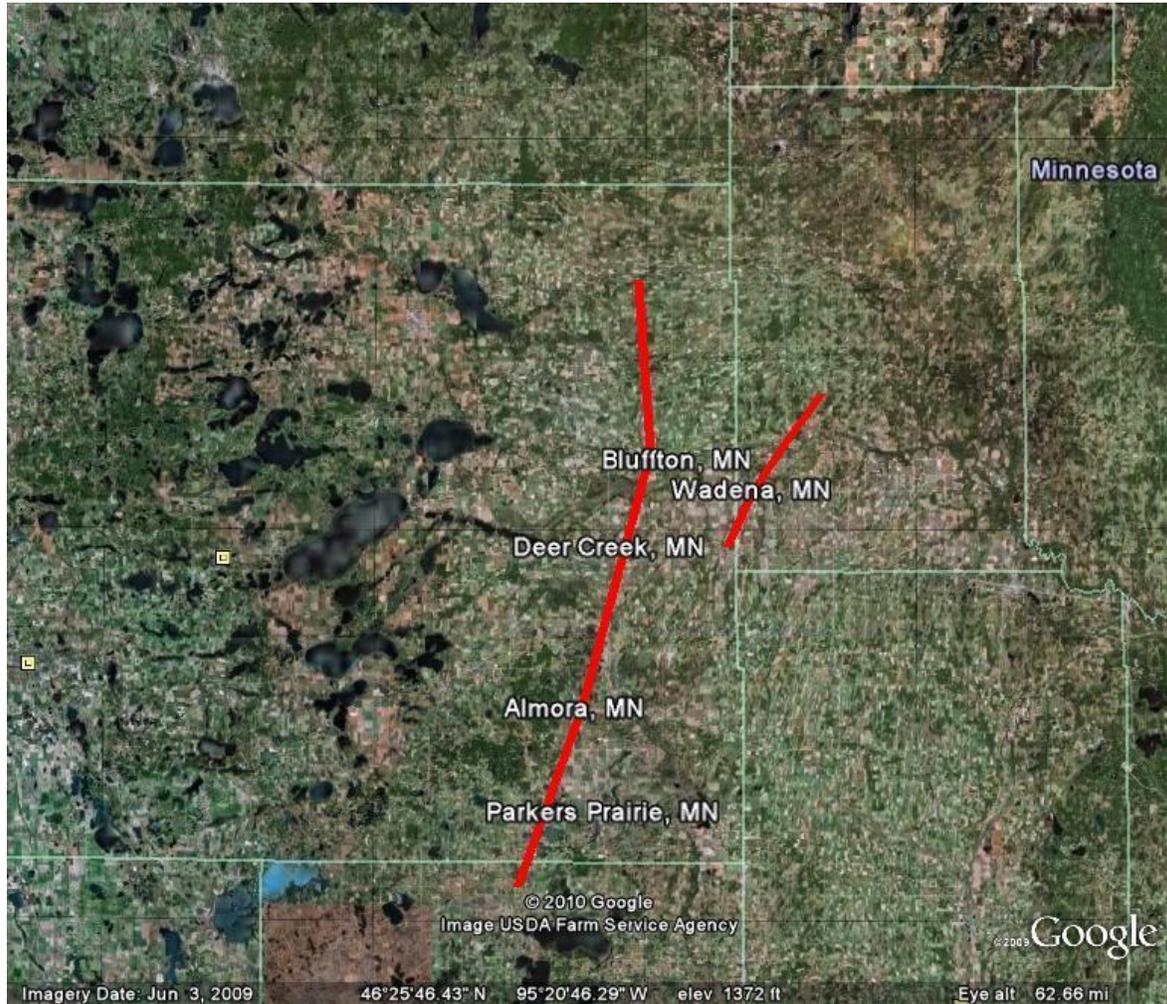
1. In what ways were community capitals initially impacted by the tornado?

Twin EF4 Tornadoes: June 17, 2010

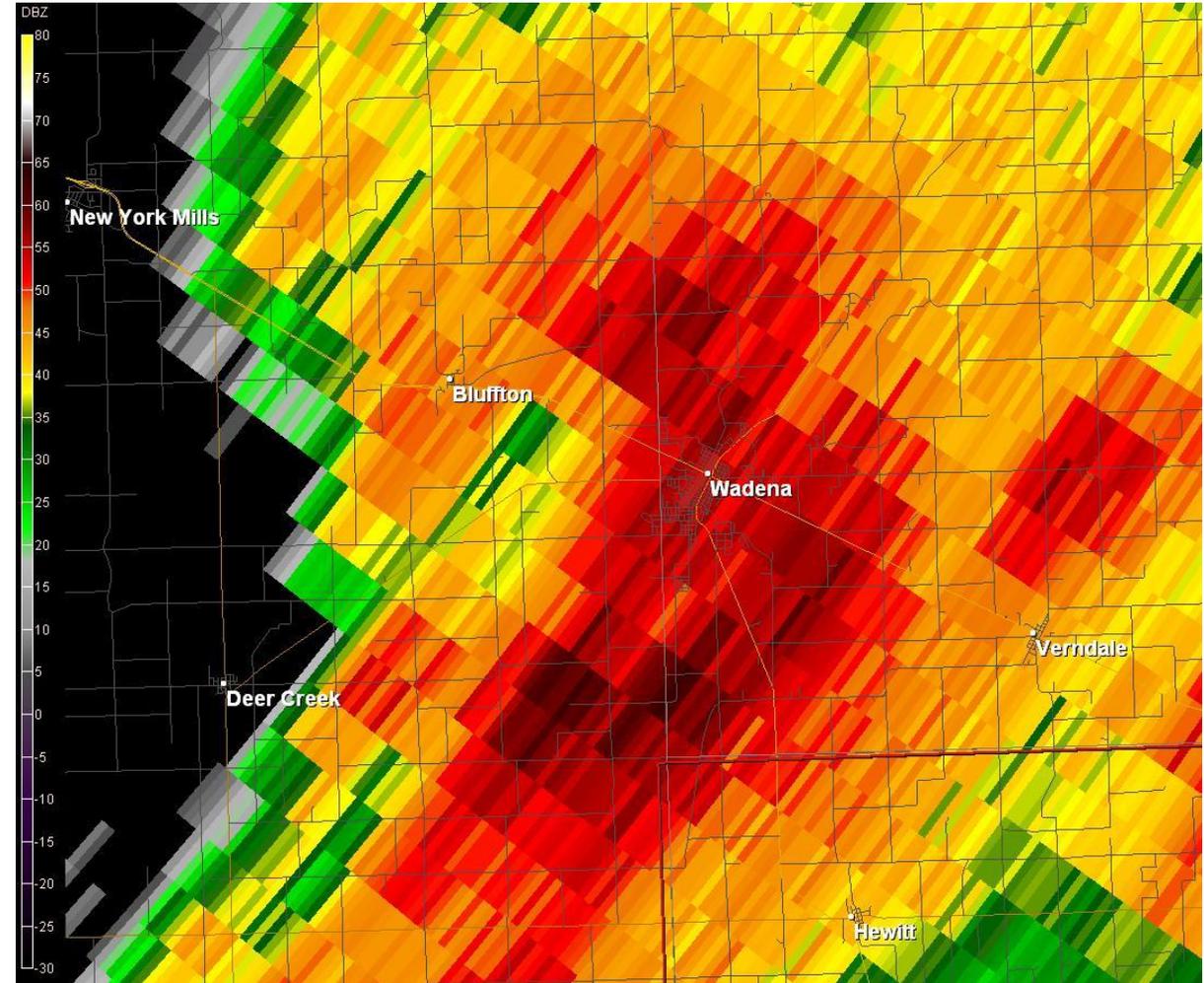
- 3:45 p.m. EF4 tornado with 175 mph winds in eastern Otter Tail County, killing one person.
- 5:00-5:18 p.m. EF4 tornado 3 miles SW of Wadena; continuous damage path through Wadena; lifted 7 miles NNE.
- Damage 1.1 miles wide along a 10 mile path.
- Peak winds estimated at 170 mph.



Tornado tracks for the Wadena and Almora-Bluffton EF4s



Radar reflectivity for Wadena EF4



**FC: 19 businesses; 4 nonprofits; farms;
credit union; restaurants**



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



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



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



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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.

Natural Capital

City trees, forests, shelterbelts damaged.

Social Capital

High school reunion affected. Various associations, organizations, societies disrupted. Restaurants damaged. Cell phone service disrupted.

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?

“Not a half hour after the storm moved through, chainsaws could be heard all through Wadena.”

Wadena Pioneer Journal 5/26/10

Emergency Operations Center



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Radio Communications



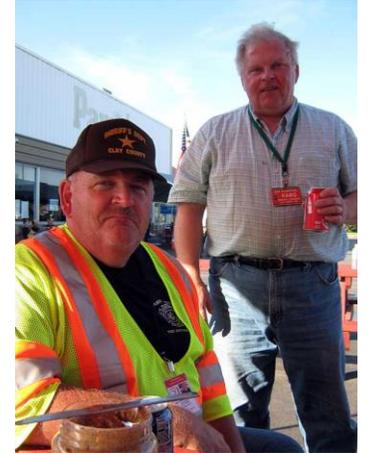
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Volunteers



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Sheriff's Department



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Scott McKellep, W. Co. Emgt Mgt Dir;
Dean Uselman, Fire Chief

Red Cross



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FEMA



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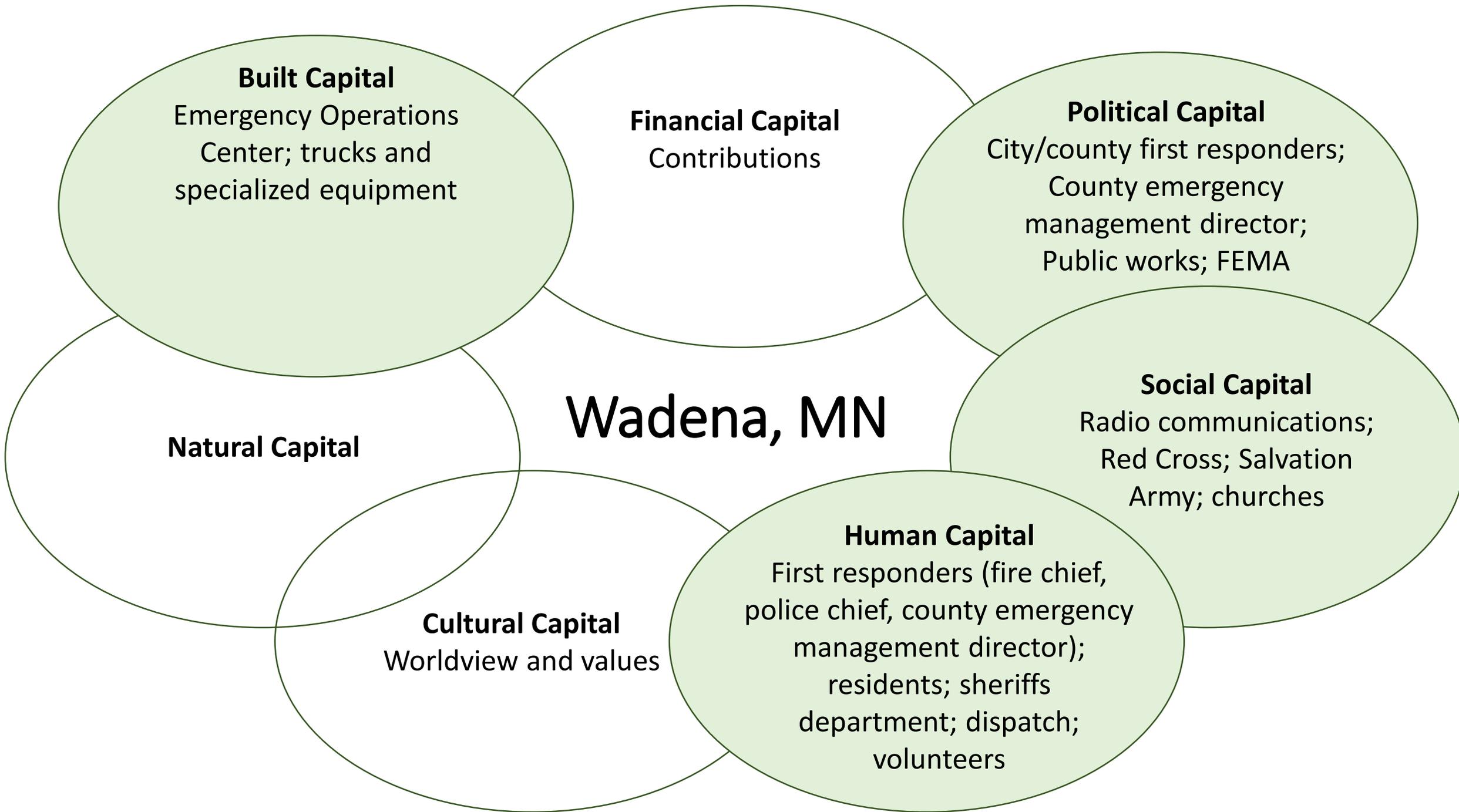
Salvation Army



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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 Dahlstom



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



Otter Tail - Wadena Community Action Council

Assisted in creation of WOTLTRC

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.



“Trees for Wadena” group
Headed by Anne Oldakowski, Soil &
Water Conservation Service

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**Wadena-Deer Creek High School administrators, school
board, faculty, and students**

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Financial Capital

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**

Natural Capital



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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

Built Capital

Local church buildings;
MSCTC

Financial Capital

Contributions;
Insurance payments;
FEMA payments;
State and local
government money

Political Capital

Governmental participation

Social Capital

Local churches; Wadena
Recovery Committee;
Wadena 2.0; Trees for
Wadena; Schools

Natural Capital

Wadena City Airport

Cultural Capital

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

Human Capital

Local leaders in government,
churches, business;

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.

References:

- Dynes, Russell R. 2006. "Social capital dealing with community emergencies." *Homeland Security Affairs* 2(2):1-26. Available at: <http://hdl.handle.net/10945/25095>.
- Emery, Mary and Cornelia Flora. 2006. "Spiraling-up: mapping community transformation with community capitals framework." *Community Development* 37(1): 19-35.
- Flint, Courtney G. and M.A. Brennan. 2007. "Rural communities and disasters: research from the southern United States." *Southern Rural Sociology* 22(2): 1-5.
- King, Tim. nd. *Long-term Disaster Recover Best Practices: As Told by the Wadena-Otter Tail Long Term Recovery Committee*. Retrieved 7/17/2014. Available at: <https://dps.mn.gov/divisions/hsem/disaster-recovery/Documents/LTRecoverybestpractice052212.pdf>.
- Montano, Samantha J. 2014. "Formation and Lifespan of Emergent Recovery Groups in Post-Katrina New Orleans. M.S. thesis. Department of Emergency Management, North Dakota State University, Fargo.
- Neal, David M. 2004. "Transition from response to recovery after the Lancaster, TX, tornado: an empirical description." *Journal of Emergency Management* 2(1): 47-51.
- 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.
- Schulz, Steve. 2010. "After the EF4." *Wadena Pioneer Journal* Special Tornado Recovery Edition. 133(16, June 26): 1A-3A.
- Smith, Gavin. 2011 *Planning for Post-Disaster Recovery: A Review of the United States Disaster Assistance Framework*. Fairfax: Public Entity Risk Institute.
- Stofferahn, Curtis W. 2012. "Community capitals and disaster recovery: Northwood ND recovers from an EF 4 tornado." *Community Development* 43(5): 581-598.

Graphics Sources:

1. www.google.com/search?q=wadena+tornado+pictures&client=firefox-a&hs=SLE&rls=org.mozilla:en-US:official&channel=sb&source=lnms&tbn=isch&sa=X&ei=N2BiU6OhHuOAYwPY3oDwAg&ved=0CAgQ_AUoAQ&biw=1280&bih=920#facrc=_&imgdii=_&imgrc=OiS-mDptzbVyZM%253A%3BUQHYUy9cmJs_IM%3Bhttp%253A%252F%252Fs2.hubimg.com%252Fu%252F3334665_f520.jpg%3Bhttp%253A%252F%252Fhubpages.com%252Fhub%252FPhotos-and-Facts-About-Tornadoes%3B520%3B390
2. www.lakesnwoods.com/Wadena.htm; www.landsat.com/wadena-county-minnesota-aerial-photography-2008.html
3. www.crh.noaa.gov/fgf/?n=20100617_tor_wadena
4. http://www.crh.noaa.gov/dlh/?n=17june2010_tornadoes
5. www.crh.noaa.gov/images/fgf/news/20100617_TOR/Wadena_Alмора/100_1354.jpg
6. <http://piconet3925.com/piconet2/media/wadena54l.jpg/>
7. www.crh.noaa.gov/images/fgf/news/20100617_TOR/Wadena_Alмора/Wadena_Alмора_Damage_17June2010.007.jpg
8. www.crh.noaa.gov/images/fgf/news/20100617_TOR/Wadena_Alмора/100_1338.jpg
9. <http://piconet3925.com/piconet2/media/wadena5l.jpg>
10. <http://piconet3925.com/piconet2/media/wadena11l.jpg>
11. <http://piconet3925.com/piconet2/media/wadena23l.jpg>
12. <http://piconet3925.com/piconet2/media/wadena59l.jpg>
13. <http://piconet3925.com/piconet2/media/wadena29l.jpg>
14. www.mprnews.org/story/2010/06/24/wadena-tornado-damage-assessment
15. www.mprnews.org/story/2010/07/13/wadena-rebuilding
16. www.inforum.com/event/photogallery/id/2060
17. www.wadenapj.com/content/room-more
18. www.razoo.com/story/Wdc-Class-Of-1940-Fundraising-For-Wadena-Wellness-Center-Fundraiser-1
19. <http://www.mnflyer.com/story/2014/03/01/airport-of-the-month/airport-of-the-month-wadena/179.html>
20. www.wadenapj.com/content/tree-planting-underway-tornado-damaged-areas