

Lesson Title	Lesson 6 - Flooding Causes
Time	1-50 min class period If you have access to stream tables – combine this lesson with lessons 4 and 5 to allow students to have more access to the stream tables with smaller group sizes. For example - on day 4 of this unit, have two small groups of students at stream tables working on “Lesson 4 - Young Stream and Stream Cutoffs” and have two groups of students working on “Lesson 6 - Flooding Causes”. The following day, swap these two groups. On days 6 and 7, split groups between “Lesson 5 - The Great Flood” and “Lesson 7 - Flood Risk Management”.
Resources	<ul style="list-style-type: none"> ● Flooding Causes Worksheet ● Inforum Article PDFs
Objective	SWBAT interpret information from primary source documents to define the causes that lead to flooding.
Standard	HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
Plan	<p>Introduction (10 min)</p> <ul style="list-style-type: none"> ● Students will be introduced to factors that can cause flooding using a spinner activity with discussion questions. ● Students will look at table with flooding issues. They will spin the spinner and write if it is a +1, 0 or -1. Then they will add the numbers together, with the more positive numbers demonstrating that it is more likely a flood will occur. ● Students will then discuss the factors and why they could increase the chance for flooding. <p>Activity (30 min)</p> <ul style="list-style-type: none"> ● Students will work as groups to research a timeline of events from either the 1997 flood or the 2009 flood to determine the factors that caused either flood. ● Students will choose one event to focus on. They will read an article or watch a video that discusses the factors that led to either flood. ● Additional background consists of pictures of each flood from the NDSU website and information from past floods. <p>Closing (10 min)</p> <ul style="list-style-type: none"> ● Students will record a short newscast describing the events that caused the flood they chose using the rubric attached.



Authors	Amanda Oanes and Jill Wold – West Fargo Public Schools
Acknowledgements:	The curriculum was developed under National Science Foundation RET grant #1953102. However, these contents do not necessarily represent the policies of the National Science Foundation, and you should not assume endorsement by the federal government.

Factor	4	3	2	1
ORGANIZATION	Students present information in logical, interesting sequence which audience can follow. All of the 5W's (What, Where, Who, When, Why, and possibly How) are answered.	Student presents information in logical sequence which audience can follow. Four of the 5W's (What, Where, Who, When, Why, and possibly How) are answered	Audience has difficulty following the presentation because three or less of the 5W's (What, Where, Who, When, Why, and possibly How) are answered. Students jump around.	Audience cannot understand presentation because only one or two of the 5W's (What, Where, Who, When, Why, and possibly How) are answered. There is no sequence of information.
CONTENT	Students demonstrate full knowledge of the causes of flooding and engages the audience with enthusiasm.	Students are comfortable with the causes of flooding and has an easy flow within the message.	Students are uncomfortable with causes of flooding and the message does not flow.	Students do not understand the causes of flooding or there is a gap in their research.
VISUAL	Audience can see and hear speakers clearly. Speaker uses pauses and verbal intonation that work effectively.	Audience could see and hear speakers clearly. Speaker uses good verbal intonation.	Audience could see and hear most of presentation. Speakers seems uncertain of themselves.	Speakers did not speak to the audience/camera and read presentation from paper. Poorly timed. Appears to have not practiced.
TOTAL				/12



Flooding Causes

PART 1: Flooding Causes

Adapted from Project Wet: Discover a Watershed -The Missouri

Directions: Go to the following link for the spinner. For each factor, spin the spinner and record your result in the table below. The higher the number, the more likely it is to flood in your community.

[Spinner Link](#)

Factor	+1	0	-1	Spinner Value
Fall Precipitation	Above average	Average	Below average	
Snowpack (amount of snow that falls in the winter)	Above average	Average	Below average	
Spring Snowmelt Time	Quick melting over few days	Average spring snowmelt	Slow snowmelt over a number of days	
Spring Temperatures	High	Average	Low	
Spring Precipitation	Above average	Average	Low	
Elevation change of river	Low elevation change	Average change	High elevation change	
Direction of River Flow	North	East/west	South	
Total				

Discussion:

1. Based on your value from the spinner above, why do you think it may or may not flood in your community?
2. Why do you think a north flowing river would bring a higher value for flooding than a south flowing river?
3. How do you think high fall precipitation contributes to a spring flood?
4. The Red River flows over glacial Lake Agassiz. How do you think that impacts flooding in the Red River Valley?
5. The tributaries leading to the Red River have a larger gradient (steepness) than the main channel of the Red River. During the spring how could this impact flooding?

PART 2: Historical Flooding in the Red River Valley

Directions:

- Research one of the big floods that have occurred in the Red River Valley – 1997 or 2009
- Construct a timeline of events and what factors contributed to severe flooding (Hint: Use the Part 1 for ideas!)
- Create a short weather newscast describing the events that led to flood you researched

1997 Flood

[Never Ending Snow: The Record Smashing Snowfall of '96-'97 – KVRN Local News](#)

[Photographs of Flooding in F-M Region - NDSU](#)

[Fargo Forum Article – A look at the conditions that led to previous major flood years in Fargo \(March 18, 2019\)](#)

2009 Flood

[2009 Red River Flood Summary](#)

[Photographs of Flooding in F-M Region - NDSU](#)

[Fargo Forum Article – Ten years later, flood of '09 paid for with sweat, tears \(March 17, 2019\)](#)

[Fargo Forum Article – A look at the conditions that led to previous major flood years in Fargo \(March 18, 2019\)](#)

Monthly Total Precipitation for Fargo, ND

Year	Oct	Nov	Dec	Jan	Feb	Mar	April	Season
1997	2.41	2.38	1.27	1.79	0.59	1.89	3.12	13.45
2009	4.46	1.13	1.80	0.55	1.29	4.62	0.81	14.66

Rubric:

Factor	4	3	2	1
ORGANIZATION	Students present information in logical, interesting sequence which audience can follow. All of the 5W's (What, Where, Who, When, Why, and possibly How) are answered.	Student presents information in logical sequence which audience can follow. Four of the 5W's (What, Where, Who, When, Why, and possibly How) are answered	Audience has difficulty following the presentation because three or less of the 5W's (What, Where, Who, When, Why, and possibly How) are answered. Students jump around.	Audience cannot understand presentation because only one or two of the 5W's (What, Where, Who, When, Why, and possibly How) are answered. There is no sequence of information.
CONTENT	Students demonstrate full knowledge of the causes of flooding and engages the audience with enthusiasm.	Students are comfortable with the causes of flooding and has an easy flow within the message.	Students are uncomfortable with causes of flooding and the message does not flow.	Students do not understand the causes of flooding or there is a gap in their research.
VISUAL	Audience can see and hear speakers clearly. Speaker uses pauses and verbal intonation that work effectively.	Audience could see and hear speakers clearly. Speaker uses good verbal intonation.	Audience could see and hear most of presentation. Speakers seems uncertain of themselves.	Speakers did not speak to the audience/camera and read presentation from paper. Poorly timed. Appears to have not practiced.
TOTAL				/12

Key

Based on your value from the spinner above, why do you think it may or may not flood in your community?

The higher the value, the more likely the flood.

Why do you think a north flowing river would bring a higher value for flooding than a south flowing river?

When rivers flow north, the southern part could melt faster putting more water into the river. Ice jams can also form from the water moving north.

How do you think high fall precipitation contributes to a spring flood?

The soil can become saturated, so when the snow melts in the spring there is nowhere for the water to go, so the runoff into the river increases.

The Red River flows over glacial Lake Agassiz. How do you think that impacts flooding in the Red River Valley?

Lake Agassiz is a very flat land area, so when the river overflows its banks it just spreads out and slowly inundates a larger area of land.

The tributaries leading to the Red River have a larger gradient (steepness) than the main channel of the Red River.

During the spring how could this impact flooding?

The water from the tributaries will run into the main channel of the river faster then it can move the water downstream causing flooding.

List of factors from the readings that students could include in their newscast:

- North flowing river
 - Melts south to north
 - Could cause ice jams
- River flows over the very flat lake bed of glacial Lake Agassiz
 - Permits overland flooding
 - Floodwaters move VERY slow
- Tributaries of Red have a 10 times higher gradient than the main channel of the Red so water moves into the main channel faster than it can be removed increasing flooding
- Above average rainfall in the fall
 - Fills the surface water and ground water storage
- Cold weather prior to first snowfall allows ground to freeze and lock moisture in the clay soil creating an impermeable surface in the spring so more water runs off.
- Lots of snowfall
- Quick spring snowmelt in April-May

THE Forum

FOORHEAD

LATE EDITION

MONDAY, MARCH 18, 2019

INFORUM.COM

'A PROUD PEOPLE'



David Samson / The Forum

Marvel Von Hagen talks about receiving government assistance to help pay her heating bills and weatherize her home in Kindred on Wednesday, March 13.

Need heating assistance?

In North Dakota, call 1-800-755-2716.
In Minnesota, call 1-800-657-3710.

MOST NORTH DAKOTANS, MINNESOTANS WHO QUALIFY FOR HEATING ASSISTANCE DON'T SEEK IT

By April Baumgarten
abaumgarten@forumcomm.com

Kindred, N.D.

Marvel Von Hagen and her love of 37 years were living the good life.

The 60-year-old woman built hotels for a living while her man worked as a plumber. The couple who have lived in their Kindred home for 29 years were never ones to ask for help, even after medical bills started to roll in for her back and his diagnosis of colorectal cancer.

But as money became tight, she sold many of her personal belongings and watched every penny. "We gave up what we thought was important in life, then you find out what really is important," she said.

She heard from a friend about the low-income home energy assistance program, or LIHEAP, that provides federal funds to help eligible residents pay to heat their homes. Before Von Hagen applied for heating assistance this winter, she kept the house heated at 55 degrees.

Of the 55,358 households eligible for heating assistance in North Dakota, only 22

percent (12,331 households) received it in 2017, according to the most recent analysis by the National Energy and Utility Affordability Coalition (NEUAC).

In Minnesota, 393,788 households qualify for LIHEAP, and only 32 percent (126,149 households) received such assistance in 2017, according to NEUAC.

There are numerous reasons qualified residents may not apply for LIHEAP, said Ross Corson, former spokesman for the Minnesota Commerce Department, which administers the state's heating assistance program. Households simply may not know the program exists, others don't want to be considered low income, and some feel they can "get by" and "should leave the money for needier households," he said via email.

"There are not too many people who want to go in and say, 'Hey, I need help.' We're a proud people," said Brandon Kjelden, energy and rehab program coordinator for the Southeastern North Dakota Community Action Agency.

HEATING: Back Page



Institute for Regional Studies

North Dakota State University / Special to The Forum

During the 1897 flood in Fargo, the river crested at 39.1 feet on April 7.

A look at the conditions that led to previous major flood years in Fargo

By Gigi Wood
gwood@forumcomm.com

FARGO — As record flooding saturates South Dakota, Nebraska, Minnesota and Iowa along the Missouri and Mississippi rivers, anxiety is heightening along the banks of the Red River.

When hazarding a guess about the severity of flooding this year in Fargo, several factors come into play. There's fall precipitation, winter snowpack totals, the timing of spring thaws, potential spring storms and streamflow, among others.

According to the National Weather Service's (NWS) updated spring flood outlook, released Friday, moderate to major river flooding is "nearly guaranteed" this year. For the 2018-2019 season, fall precipitation was high, winter frost is deep and snowpack is very high. The risk of spring rain storms is high and an expected late spring thaw likely means there will be a lot of runoff at once.

As of March 15, Fargo had received 59.1 inches of snowfall for the season, 3.7 inches above normal. The Red River water level is at 15.02 feet, compared to the flood stage of 18 feet and major flood stage at 30 feet. Water levels of the nearby streams and creeks that feed into the Red River are high and ice jams are likely.

There's a lot riding on the spring thaw. If the snow melts slowly, that



A Decade Later

could help the flood outlook immensely, the NWS stated. Whether there are several major spring storms will also affect the outcome.

During Fargo's most severe floods, streamflow played a major role. In 2009, 1897, 1997, 2011 and 1969, streamflows were above 20,000 cubic feet per second (cfs). In a quiet year, Red River streamflow is below 10,000 cfs. Streamflow, the rate at which the water in the river is flowing, is at a standstill this year; the river is frozen.

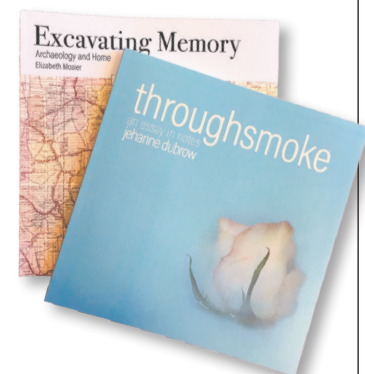
Historic floods

This season's snowfall of 59.1 inches is far from the 79.7 inches that fell in 2008-2009, in the lead up to that spring's 40.84 river crest, Fargo's most severe flood to date.

About 117 inches of snow fell during the 1996-1997 season, when the river crested at 39.72 feet. There were 88.4 inches of snow during the

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INSIDE TODAY'S FORUM



LIFE: Spring book launch marks 51 years of publishing for MSUM's New Rivers Press. **PAGE B1**

ND lawmakers eyeing increased fees to fight aquatic invaders

By John Hageman
Forum News Service

BISMARCK — About 15 years ago, few people in North Dakota were aware of "aquatic nuisance species," the water-based invaders that can hamper recreational opportunities and clog water systems.

But amid increased concerns about their proliferation, "ignorance is no excuse anymore," said Greg Power, the

fisheries division chief for the North Dakota Game and Fish Department.

State lawmakers are eyeing a proposal to raise fees for fishing licenses and other related permits to provide the department with a dedicated funding source for programs to curb the spread of unwelcome pests.

Power said the agency has reshuffled

INVASERS: Back Page

Today's weather



Cloudy



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Auction	Location	Date
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242 Acres Crop/Pasture	McLean County, ND	March 20, 2019
200 Acres Cropland	McLean County, ND	March 20, 2019
Farm Machinery	Mott, ND	March 21, 2019
480 Acres CRP Land	Ramsey County, ND	March 26, 2019
304 Acres Cropland	Ward County, ND	March 26, 2019
156 Acres Crop/Pasture	Cass County, ND	March 27, 2019
Ag/Construction Equip.	Steele, ND	March 28, 2019

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**Institute for Regional Studies
North Dakota State University / Special to The Forum**
A Fargo family abandons their home during the 1897 flood.

Forum file photo
Water fills most of a field near these homes south of West Fargo in March 2009, as the snow melt continues.

FLOODS

From Page A1

2010-2011 season, when the flood crest hit 38.81 feet.

In 1897, when the river crested at 39.1 feet, the area received 79 inches of snowfall.

And in 1969, when the flood crest was 37.34 feet, the area had received only 41.4 inches. Instead, frequent ground blizzards, large snow drifts and a late thaw in April were to blame, according to WDAY Chief Meteorologist John Wheeler.

Snowfall doesn't always predict major flooding, however. In 1993-1994, the area received 89.1 inches of snow and the river crested at 26.69 feet

that spring.

Heavy rains in the fall often create high soil moisture conditions going into winter, which has been a factor in each of Fargo's historic floods. Fall 2018 precipitation was fairly normal, although mid-October snowfall brought about 2 inches of snow to Fargo and several more to northern and western parts of the state.

One potential silver lining: from Oct. 1, 2018, through March 15, 2019, rain and snowfall totals were nowhere near levels in 1997 and 2009, according to last week's NWS report.

Upstream, however, thick ice, which could lead to ice jams that cause river surges, is being reported along the Red

Monthly Total Precipitation for Fargo Area, ND (ThreadEx)

Click column heading to sort ascending, click again to sort descending

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Season
1995-1996	2.04	0.99	0.73	1.82	0.94	0.41	0.21	7.14
1996-1997	2.41	2.38	1.27	1.79	0.59	1.89	3.12	13.45
2008-2009	4.46	1.13	1.80	0.55	1.29	4.62	0.81	14.66
2009-2010	5.44	0.41	1.85	1.57	0.86	1.41	1.49	13.03
2010-2011	1.91	0.73	1.75	0.90	0.08	1.84	2.02	9.23
2012-2013	2.22	0.59	0.37	0.97	1.22	1.44	2.11	8.92
2017-2018	0.77	0.33	0.77	0.21	0.83	1.93	0.37	5.21
2018-2019	2.70	0.61	1.13	0.59	1.69	1.66	M	8.38
Mean	2.74	0.90	1.21	1.05	0.94	1.90	1.45	10.00
Max	5.44	2.38	1.85	1.82	1.69	4.62	3.12	14.66
Min	0.77	0.33	0.37	0.21	0.08	0.41	0.21	5.21

River in Winnipeg, Manitoba, Canada.

Spring storms and thaws

Whether flooding will be moderate, major or historic in Fargo will likely depend on spring storms and how

quickly the snow thaws.

The NWS is predicting a late spring thaw that favors a "fast thaw cycle," more rain and a top 10 runoff year. If the next several weeks maintain cold temperatures, slowing the thaw, flooding

TOP 5 FARGO FLOODS

- 2009:** Red River crested at 40.84 feet on March 28, 88.4 inches of seasonal snowfall, streamflow at 29,500 cfs.
 - 1997:** Red River crested at 39.72 feet on April 18, 117 inches of seasonal snowfall, streamflow at 28,000 cfs.
 - 1897:** Red River crested at 39.1 feet on April 7, 79 inches of seasonal snowfall, streamflow at 29,500 cfs.
 - 2011:** Red River crested at 38.81 feet on April 9, 88.4 inches of seasonal snowfall, streamflow at 27,200 cfs.
 - 1969:** Red River crested at 37.34 feet on April 15, 41.4 inches of seasonal snowfall, streamflow at 25,300 cfs.
- Compared to today:
- 2019:** Red River at 15.02 feet, 59.1 inches of seasonal snowfall, streamflow minimal due to ice.

Major flood years

Years when the flood stage was 30 feet or above along the Red River in Fargo.

- 2009:** 40.84 feet
- 2010:** 36.99 feet
- 2013:** 33.18 feet
- 1897:** 40.1 feet
- 2001:** 36.63 feet
- 2007:** 30.84 feet
- 1997:** 39.72 feet
- 1989:** 35.39 feet
- 1965:** 30.50 feet
- 2011:** 38.81 feet
- 1979:** 34.93 feet
- 1966:** 30.16 feet
- 1969:** 37.34 feet
- 1978:** 34.41 feet
- 2006:** 37.13 feet
- 1975:** 33.26 feet

Sources: National Weather Service, North Dakota State Climate Office, U.S. Geological Survey, John Wheeler/WDAY

could be minimized, the report stated.

The Old Farmers' Almanac, which in August predicted a cold winter with plenty of snow, beating the Climate Prediction Center forecast, is anticipating a snowy, cold remainder to March with below average temperatures and below average precipitation. April,

the almanac predicts, will see average temperatures and precipitation.

Regardless of predictions, the city of Fargo is preparing for a major flood. Fargo Mayor Tim Mahoney announced Friday that the city will soon begin emergency operations exercises and make a call for sandbag volunteers.

BRIEFS

Free grief programs available in April

FARGO — Hospice of the Red River Valley will host free educational grief classes for youth and adults on separate dates in

April at their Fargo office, 1701 38th St. S.

Journeying Through Grief is a free three-session grief class for adults at 6 to 8 p.m. on Thursdays, April 4, 11, and 18,

at 1701 38th St. S. It will focus on the grief process, common grief reactions, taking care of yourself while grieving and embracing memories.

Youth Journeys is a daylong program at 9 a.m. to 3:30 p.m. on Saturday, April 6, for youth ages 7 to 18 who have lost a loved one. The day is split into sections, allowing youth to explore how the death of their loved one has

affected their lives, their feelings, self-care and how to embrace memories. Youth will have an opportunity to meet therapy dogs and the day will end with a celebration of life service. Food and snacks will be provided throughout the day.

Pre-registration is required for both adults and youth by Monday, April 1. To register, call 800-237-4629 or regis-

ter online.

Vandals damage nearly two dozen vehicles in Fargo

FARGO — The windows of almost two dozen vehicles were shattered over the weekend by an unknown suspect, according to the Fargo Police Department.

In a post on the department's Facebook page,

police said a BB gun or pellet gun was used to break the windows.

The department said the targeted vehicles were generally east of 25th Street and parked in driveways, in a parking ramp or on the street.

Police are encouraging anyone who observes suspicious behavior to call Red River Dispatch Center at 701-451-7660.

Riley Henry Rogers III



Devoted and loving husband, father, brother and friend, Riley Henry Rogers III died peacefully the morning of February 12, 2019 in his Fargo home at Sheyenne Crossing. He was 93.

Riley, son of Dr. Riley H Rogers II and Alice Mae (Wilson) was born in Chicago IL. December 28, 1925. He was the couple's only son but grew up with two older half-brothers Bill and Dan. As a young boy Riley enjoyed the benefits of both city life and the wonderful experiences of summer vacations with his Grandfather, Riley Rogers Sr, at the family farm in Lawrence KS. Riley loved the water and won numerous medals in Chicago Boys Club swimming and diving competitions. Later he became an open water lifeguard on Lake Michigan for the Chicago Park District. Riley also played semi pro football in Chicago and would enjoy earning some pocket change playing pool in his spare time.

Riley joined the navy and served during WWII as an aircraft mechanic on the USS Saratoga. Upon his return, and with the advice of a family friend, Riley headed to North Dakota and Jamestown College. It is there that he met and married the love of his life, Olive Ann (Stretch) Wanner. He successfully completed majors in Biology and Chemistry at Jamestown College where he was also a valuable asset on both the track and football teams.

While in Jamestown the couple added two children and a border collie to their growing family, Riley H Rogers IV, Vicki Lynn and Tinker. Educational pursuits lead the family to Grand Forks and then to Fargo where their third child, Roxanne, was born. In 1958 Riley was commissioned to install the first pharmacy at Mercy Hospital in Valley City. The original plan was to stay only one year but Riley and Stretch would live happily in Valley City for more than 50 years.

Riley was a civic minded man and through the years he became an active member both in the community and the state. He had memberships in the Elks, Eagles and Masons, was a past president of Rotary, served on the State University Advisory Board, had a place on the Valley City Multi-District Vocational Center Health Occupations Committee, held every office and served at some capacity on every committee of the North Dakota Board of Pharmacy, he also served on The Red River Basin Board, was a past president of the League of Cities and served on the Board of Trustees of the Congregational United Church of Christ. Riley served as mayor of Valley City for 12 years and also acted as the Pharmacy Compliance Officer for the State of North Dakota for several years. He was proud to be part of the important work of the city and the state and was humbled by the integrity of the many people with whom he worked side by side. He is quoted saying, "Valley City is the finest in the country, and I've worked with some of the finest people. That's been the story of my life. Who could ask for more than that?"

Riley and Stretch enjoyed each other's company tremendously and in their leisure time they would go flying, boating, traveling, taking photographs and listening to a variety of music. Riley Rogers will be remembered for his warmth, kindness and welcoming disposition as well as his easy smile and carefully timed jokes. We are finding it hard to imagine life without him but we find comfort imagining him reunited with Olive Ann, the love of his life.

Riley is preceded in death by his wife, parents and brothers.

Riley is survived by: son Riley H Rogers IV, daughters Vicki Lynn (Gary) Sizemore and Roxanne (Harve) Rogers. Grand children: Tracy (Sean) Ochester, Aaron Sizemore, Kelly Sizemore, Riley H (Mary) Rogers V and Olivia (John) Rogers. Great Grandchildren: Kelly and Amelia.

Join us as we celebrate the life of Riley H. Rogers III Friday 3:00pm, March 22nd, 2019

Congregational United Church of Christ in Valley City 217 4th st NW

Clay County marriage licenses for February:
Kellie Jo Goschen, and Daniel Lee Otto, Dilworth, Minn.
Ashley Lee Fenske, Fargo, and Ethan Theodore Wentzel, Underwood, Minn.
Robert Anthony Beitel and Mary Josephine Goulet, Moorhead
Jourdan Laura Joyce Rudd and Chad Thomas Fischer, Moorhead
Stacy Mae Willprecht and Benjamin John Frank, Fargo

Kalyn Thomas Bjorgum and Amyjo Baggestross, Hawley, Minn.
Tyler Joe Bjerken and Amanda Jo Hansen, Moorhead
Mark Richard Kemper and Tonya Ann Poole, Moorhead
Adam Dominic Forness, Crookston, Minn., and Kacie Lee Hall, West Fargo
Brenna Sierra Johnson and Zachary Raymond Dolan, Moorhead
Kevin Joseph Dahme and Nicolle Lynne Wieka-

mp, Fargo
Mckenzie Katherine Rudolph and Adam William Schueller, Fargo
Samantha Samone Becker and Paul Cameron Ferrell, Moorhead
Kristin Rose Kriale and Michael James Knorr, Moorhead
Keegan Michael Ahern and Megan Laurel Germondson, Moorhead
Amber Mae Gabbard and Daniel Gerardo Sanchez, Fargo

MARRIAGE LICENSES

DEATHS

Elgene Belle Armstrong Graves

Sept. 3, 1922 - Feb. 23, 2019
ALEXANDRIA, Minn. - Elgene Belle Armstrong Graves, 96, Alexandria, died Saturday, Feb. 23, in Grand Arbor.

Services were previously held.

Arrangements by Lind Family Funeral & Cremation Service.

Glenmore Gust

June 6, 1937 - March 16, 2019
FARGO, N.D. - Glenmore Gust, 81, Alice, N.D., died Saturday, March 16, in Elim Care Center.

Visitation will be from 5-7 p.m., followed by the funeral at 7 p.m., Thursday, March 21, at West Funeral Home Chapel in West Fargo, N.D. Burial will be in Tabor Cemetery near Embden, N.D.

Arrangements by West Funeral Home & Life Tribute Center.

Marlyn N. Langerud

Sept. 10, 1926 - March 16, 2019
ULEN, Minn. - Marlyn N. Langerud, 92, Hawley, Minn., died Saturday, March 16, in Viking Manor.

Visitation will be from 5-7 p.m. Wednesday, March 20, at Wright Funeral Home in Hawley. The Mass of Christian Burial will be 11 a.m. Thursday, March 21, at St. Andrew's Catholic Church in Hawley. Burial will be at a later date in Hawley Cemetery. Arrangements by Wright Funeral Home.

Lucile E. Albert

April 10, 1921 - March 16, 2019
BRECKENRIDGE, Minn. - Lucile E. Albert, 97, Erie, N.D., died Saturday, March 16, in Saint Francis Healthcare Campus.

Visitation will be from 1-2 p.m., followed by the funeral at 2 p.m., Thursday, March 21, at Arthur (N.D.) United Methodist Church. Burial will be in the spring in Erie Cemetery.

Arrangements by West Funeral Home & Life Tribute Center in West Fargo, N.D.

Alma Berg

Alma Berg, 92, of Fargo, ND and formerly of Leeds, ND passed away on Wednesday, March 13, 2019 at the Bethany Retirement Living Center in Fargo, ND. Funeral Services will be held at 1:00 PM Saturday, March 23, 2019 at the Leeds Lutheran Church in Leeds, ND with Pastor Richard Budd officiating. Visitation will begin two hours before the service. Burial will take place at the Leeds Lutheran Cemetery in Leeds, ND in the spring. In lieu of flowers, memorials are preferred to the Leeds Lutheran Church: 250 1st Avenue SE Leeds, ND 58346.

Alma Berg was born in Springfield Township on May 11, 1926 to Albert and Lena (Somdalen) Berg. She attended country grade schools and was confirmed at Hurricane Lake Lutheran Church in 1941. In 1944, she graduated from Tioga High School and returned home to help on the family farm in Rolette County.

After her father's death in 1950, Alma continued to care for her mother in York and Rugby where she worked at the Rugby Hospital. Following her mother's death, she moved to Leeds where her only sibling, Lillian (Toots) Berg Marsaa lived. The sisters together moved to Heartland Care in Devils Lake and finally to Bethany Retirement Home in Fargo.

Alma was an avid fan of sports and country western music. Her special gifts included being the family letter writer, having a green thumb, and cheering up others through her keen sense of humor.

Alma Berg is survived by her niece, Donna (Ralph) Lemar; great-nephew, James (Martha) Lemar; great-nieces, Corrina and Carmen Lemar; 8 great-great nieces and nephews; her beloved cousins. She was preceded in death by her parents; her sister and brother-in-law, Toots and Dick Marsaa; great-nephew, Randall Lemar. Online condolences may be left at www.thenelsonfuneralhome.com. Nelson Funeral Home of Leeds, ND is in charge of arrangements.

Roger Langseth

Aug. 25, 1949 - March 14, 2019
FARGO, N.D. - Roger Langseth, 69, Fargo, died Thursday, March 14, in Sanford Health on Broadway.

Visitation will be from 5-7 p.m., with a prayer service at 7 p.m., Friday, March 22, at West Funeral Home in West Fargo, N.D. Visitation will continue from 10-11 a.m., followed by the funeral at 11 a.m., Saturday, March 23, at Hope Lutheran Church, South Campus, in Fargo. Burial will be in Herby Lutheran Cemetery near Argusville, N.D.

Memorials are preferred to Oak Grove, Hope Lutheran Church, Great Plains Harmony, Herby Lutheran Church or a charity of the donor's choice.

Arrangements by West Funeral Home & Life Tribute Center.

Barbara Brinkman

May 19, 1939 - March 15, 2019
MCINTOSH, Minn. - Barbara Brinkman, 79, Fosston, Minn., died Friday, March 15, in McIntosh Senior Living.

Visitation will be from 5-7 p.m., with a prayer service at 7 p.m., today, March 18, at Carlin Funeral Home in Fosston. Visitation will continue from 10-11 a.m., followed by the funeral at 11 a.m., Tuesday, March 19, at Calvary Free Lutheran Church in Fosston. The Rev. Alan Arneson will officiate. Interment will be in the spring in Kingo Lutheran Cemetery in Fosston.

Arrangements by Carlin Family Funeral Service.

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Happy St. Patrick's Day!

More photos from the F-M parade, A8

The Forum

OF FARGO

SUNDAY EDITION

SUNDAY, MARCH 17, 2019

INFORUM.COM

OUR HIGH-WATER MARK



WILL OVER WATER
A Decade Later

EDITOR'S NOTE: This is the first of several stories looking back at the historic flood of 2009 and its impact on the region. More online elements will be available at inforum.com, which is powered by both The Forum and WDAY News.

Tens years later, flood of '09 remembered as a victory paid for with sweat, tears

By Dave Olson
dolson@forumcomm.com

WHEN the flood of 2009 hit, Pete and Debra Livdahl's rural Moorhead business, Building and Grounds Management, was in the thick of the battle to preserve area homes.

In the process, the Livdahls paid a price. "My husband saved a lot of places and we flooded. We've been struggling ever since," Debra Livdahl said, recalling the damage their business suffered a decade ago when water entered their shop buildings that housed equipment.

When the flood was over, the Livdahls were able to replace their equipment with the help of FEMA loan money.

However, they only recently made their final payment on the loan and, before they did, every check they wrote was a reminder of what

they went through in 2009.

"We've had a struggle, I tell ya," Debra Livdahl said.

The Livdahls weren't the only ones to suffer water damage when the Red River flooded in 2009, but when it comes to the big picture, the metro area escaped widespread disaster, thanks largely to an army of volunteers that worked day and night to fill and place millions of sandbags.

About three or four million of those sandbags went to Oakport Township north of Moorhead.

Greg Anderson was chairman of the township board in 2009 when flood waters took a number of homes in Oakport and came close to claiming many more, including Anderson's.

'Nothing left in us'

For Anderson, the magnitude of the flood really hit home the night



Forum file photo

Volunteers fill sandbags at the Fargodome in 2009 after officials warned flood levels would climb higher than initially forecast.

he called his wife, Julie, and told her: "You have to evacuate the house, I think we're going to lose it."

The family packed their most important belongings in suitcases and headed to their lake home, thinking it was the last time they would see their Oakport house intact.

But after a night of sleep, they decided to keep fighting and, ultimately, the family saved their house.

"There was that point where we said, 'We don't have anything left in us,'" Anderson said, recalling the despair they felt at the height of the flood.

But he said after

FLOOD: Page A6



David Samson / The Forum

Fargo Mayor Dennis Walaker, far right, meets with members of the local and national media during a press conference at Fargo City Hall during the 2009 flood.

Changing Fargo skyline: Block 9 to add a story every 2 to 3 weeks as construction accelerates

By Barry Amundson
bamundson@forumcomm.com

FARGO — With steel and concrete work accelerating, the \$117 million Block 9 building in downtown Fargo is well out of the ground and on schedule.

In the coming months, expect another story to be added to the main tower of the building every two to three weeks.

By September, all 18 stories or 235 feet of the mixed-use building's main tower, which is currently 18

percent completed, will have shot up into the skyline and will be enclosed, ready for interior work.

Also by late summer or early this fall, the 379-stall parking garage, which is currently 65 percent complete and being pieced together like a Lego set with precast concrete, will be open for business and available to the public for downtown parking.

Once the glass-covered main tower is up with its tan and gray exterior trim, workers can complete steel work that wraps around the Broad-

way and Third Avenue sides of the building. That portion will house the R.D. Offutt and Co. corporate headquarters and other office space as well as two or three retail business locations. That part of the project is six stories high.

"We're at one of the pivotal points where we are getting above the ground level," said General Manager Derek Hoeschen of McGough Construction Co. of Fargo in an interview

BLOCK 9: Page A7



Special to The Forum

An artist rendering shows what the parking garage will look like as well as a view of the north side of the Block 9 building.

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Today's weather
30°
14°
 Partly cloudy; Flurries
 Details, D6

\$2.50
 (Suggested retail price)
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SPORTS:
 Perham beats Hawley to earn trip to the Minnesota state boys basketball tournament
PAGE D1

Fargo Park District to sell land along busy 45th Street

By Kim Hyatt
khyatt@forumcomm.com

FARGO — The Fargo Park District is accepting bids for 16.7 acres in Anderson Park appraised at \$8.6 million.

Selling the park district-owned land along 45th Street South, a busy and growing part of the city, has been discussed over the past decade among park staff and commissioners.

Joel Vettel, executive director of the park district, said the district's plan was to sell the land after completing the softball complex in north Fargo, 6101 45th St. N. — a project that

wrapped up last summer. Construction of that complex kicked off in 2015 and the 18 fields will be available for games this year.

The parcel for sale consists of four baseball fields and a gravel parking lot. To the east, there are eight adult and youth baseball fields closer to 42nd Street South that will not be affected by the potential sale.

The property for sale is zoned as general commercial, so potential future use would be similar to what exists along the corridor. Businesses near the property include a Sonic Drive-In, Pizza Ranch and Famous Dave's BBQ.

Bidding is open until April 4, and bids will be considered at the park board meeting Tuesday, April 9. Park board commissioners unanimously approved seeking bids at a meeting on March 12.

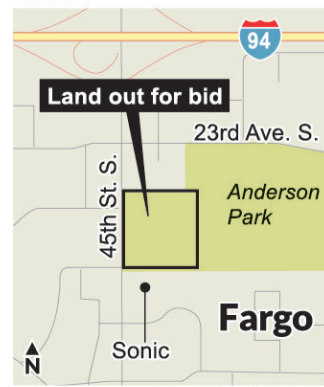
Vettel said the district has owned a lot of land near 45th Street South since at least the 1980s, including the ice arena and Red River Zoo land that's leased by the park district to the zoo. South of the zoo is Anderson Park, which was built about 30 years ago, Vettel guessed.

"When it was built, it was a fairly rural area.

LAND: Page A5

Park land for sale

The Fargo Park District is seeking bids on 16.7 acres of land at 2500 45th St. S. The property, which currently holds four ballfields, is valued at \$8.6 million.



Forum News Service



David Samson / The Forum

Volunteers work to raise the level of a dike at Eighth Avenue North and Oak Street near Mickelson Field in Fargo during the 2009 flood.

FLOOD

From Page A1

getting a restful night of sleep the sense of defeat gave way to a different thought: "We're not giving up."

Setting the table

The 2009 flood began, in a sense, in the fall of 2008, when autumn rains left soils saturated and ditches and culverts choked with ice.

Then the snow started falling.

Record snow fell in December 2008 and by late February 2009 forecasters were predicting a 60 percent chance the Red River would rise above 35.1 feet and a 10 percent chance it would top 38.5 feet, about a foot shy of the record 1997 crest of 39.72 feet.

On March 10, 2009, a storm dropped more than 10 inches of snow and brought the flood threat

into sharp focus.

Nine days later, Fargo-Moorhead residents were told they had roughly a week to prepare for a flood that could rival 1997.

As municipal employees and volunteers scrambled to fill, transport and place millions of sandbags, ominous predictions flowed from the National Weather Service.

The weather service warned at one point of a possible crest of 43 feet, more than three feet above the 1997 record flood.

When the crest finally arrived on March 28, 2009, it reached 40.84 feet, setting a record that stands to this day.

The hard work of metro-area residents had paid off, however, as much of the metro area was spared serious damage.

Still, not all properties escaped.

Uniting communities

Many houses in the Forest River area south of

Fargo flooded, including the home belonging to Chris and Rachel Ebeling.

After days of sandbagging with help from friends and co-workers, the Ebelings had to watch as water found its way under the sandbags and flooded their basement.

Nine sump pumps couldn't stay ahead of the water, Chris Ebeling recalled, adding that his family was grateful for a group of friends who hauled furniture and other items from the basement to upper levels of the home, limiting the impact of the flooding.

Following the flood, the Ebelings ultimately accepted a buyout and now live in a different house in south Fargo.

Looking back on 2009, Chris Ebeling said what stands out most clearly to him was the effort and time that so many people expended in helping others.

He said the flood preparation and sandbagging was a blur, but there was a moment after that and before the Red River actually hit his home when he had a moment to think about all that had been done to help his family and their neighborhood.

"A lot of emotion hit at that point, because of all the friends and co-workers and everyone who came out," Ebeling said.

Anderson felt it, too. "Everybody helped," Anderson said.

"The city of Moorhead gave us support. The city of Fargo gave us support. Everybody was in it as a community; there were no boundaries," Anderson added.

And the community effort didn't end with the flood.

Anderson said just as families in Oakport were trying to figure out how they were going to tear

down their sandbag dikes, a busload of students from California showed up.

He recalled the relief expressed by one elderly couple who were the recipients of the students' assistance.

"It was just unbelievable," Anderson said.

'You don't have a choice'

The flood of 2009 will be remembered for many firsts, like the evacuation of a number of nursing homes in the Fargo-Moorhead area, as well as the evacuation of entire neighborhoods in Moorhead.

The flood will also be remembered for the efforts of Fargo's late Mayor Dennis Walaker, the man who became the face of the 2009 flood.

Walaker, who died in 2014, had joked during the flood battle that if the people of Fargo were successful in warding

off disaster, he'd buy everyone a beer.

The promise was later fulfilled, in a symbolic way, when Walaker handed out 9,000 "Denny Dollars," coupons that, through the generosity of Miller Lite, could be redeemed at a nightclub in Fargo for \$1 off beers.

At one point at the height of the flood fight, Walaker reacted strongly to news that the weather service was predicting a crest of just over 41 feet, a prediction that didn't come true, but nonetheless left many feeling deflated.

"Your mind doesn't want to deal with it," Walaker said at the time. "Your mind wants to tell you it's impossible. But you don't have a choice."

Note: The historic flood of 2009 was chronicled in a Forum book called "Will Over Water" that is available for purchase at inforum.com/2009flood.

Readers can reach Forum reporter Dave Olson at 701.241-5555.



03.30.2009

Special to The Forum

This photo was taken during the 2009 flood and shows the Red River outside the home of Roger and Barbara Sipson in south Moorhead. The Sipsons and a number of their neighbors on Rivershore Drive accepted buyouts after the flood.

Fargo nonprofit helping felons live successfully in community expands in Fargo, Grand Forks

By Alex Derosier and Alyssa Kelly

FARGO — Between moving to a new office as well as opening a new women's house in Fargo and a new home for male felons in Grand Forks, F5 Project has had a busy couple of months.

The Fargo-based nonprofit helps recovering addicts and felons re-integrate into the community.

Founder Adam Martin, a recovering addict and five-time felon who turned his life around and has a successful marketing career, said an increase in private donations has been a big part of the expansion.

"It was the people in Fargo that surrounded us and helped build up,"

he said of the new women's home that serves as a replacement for an earlier women's home the organization ran in the city. The home can now accommodate three residents instead of two. Housing director Kristy Johnson said the organization aims to "empower the women" who live there.

The new six-bedroom men's home in Grand Forks was backed by a \$10,000 federal grant, but Martin said he's traditionally preferred private donors because government money often involves specific stipulations about its use.

Martin said more donors have been attracted to the organization as it demonstrates successes.

There isn't yet an official count, but Martin noted that of a sample of 25 F5 residents from the last two years, only three went back to jail. F5 project has housed approximately 200 residents in two years.

Some foundations won't back newer nonprofits that don't have much of a history, he said, so it was initially tough to find financial support from major charitable trusts.

Martin said the organization raised more than \$111,000 on Giving Hearts Day alone in 2019; the amount is more than half of what the organization's total budget was when it first started, according to previous tax filings.

The organization has grown quickly; it had just

one house in Fargo in 2016 and now has eight locations across North Dakota, including Bismarck, Devils Lake and Grand Forks.

Martin said more private donors are becoming interested in the nonprofit as it has been around longer, and he hinted that plans for the organization could be ambitious.

Ron Robson, a former chief operating officer for Fargo biotech company Aldevron, recently joined the team as a volunteer at F5, a move Martin said will help streamline the organization as well as plan for an eventual regional or national expansion.

"(We're) figuring out who we are and where we're going in the future," Martin said.



Dennis Krull / Special to The Forum

Adam Martin, founder of the F5 Project, shares his story at the 2016 United Way of Cass-Clay kickoff event at the Holiday Inn in Fargo.

BRIEFS

Pollinator workshop March 19 & 26 in Moorhead

MOORHEAD — Pollination conservation groups are partnering to host a two-day Pollinator Habitat Workshop from 6 to 8 p.m. on Tuesday, March 19, and Tuesday, March 26, at Probstfield Center for Education, 2410 14th St. S.

River Keepers, Clay County Soil and Water Conservation District and Cass County Soil Conservation District are hosting the workshop, which will teach the benefits of pollinator habitats and how to design a prairie garden.

Pollinators and pollinator habitats provide food, improve biodiversity, help with soil stability, improve water quality and more for bees, birds and insects.

The workshop will cover the basics of pollinator habitats and explain the importance of landscaping with native plants. Participants will also learn the process of installing their own pollinator habitat from start to finish. They will leave with the start of a design plan and a pollinator-friendly kit, which is included in the

ticket fee.

The cost is \$19 or \$14 for Moorhead residents. Register online through Moorhead Community Education at <https://moorhead-communityed.ce.eleyo.com>.

17th Avenue South open house March 19

FARGO — A public input meeting will be held from 5 to 7 p.m. Tuesday, March 19, at the Hilton Garden Inn, 4351 17th Ave. S. The meeting will include a formal presentation at 5:30.

The purpose of the meeting is to discuss the recommended street improvement plan, which was derived from the first two public input meetings and a survey.

If unable to attend the meeting, written statements or comments can be mailed to Mike Bittner, PE; KLJ Project Manager; 728 Beaton Drive, West Fargo, 58078, or emailed to mike.bittner@kljeng.com with "17th Avenue Public Input" in the email subject heading. The deadline for comments and written statements is Friday, April 5.

To request accommodations, contact Savanna

Leach, Metro COG Executive Secretary, at 701-232-3242 or leach@fmmetro-cog.org. TTY users may use Relay North Dakota at 711 or 1-800-366-6888.

cog.org. TTY users may use Relay North Dakota at 711 or 1-800-366-6888.

Place your City Briefs at citybriefs.forumcomm.com

For the Love of Gardens
Sat, March 23, 1:30 pm
Learn how to capture the beauty of flowers in photos with Kari Barchenger of Memories Forever Photography.
West Fargo Public Library
109 3rd St E, West Fargo

Thanks for reading
The Forum
OF FARGO-MOORHEAD

Beginning Experience, is a support group for widowed, separated and divorced persons. Coping With Life Alone will be offered Monday evenings beginning on March 18th. Registration starts at 6:30 PM and program begins at 7 PM. This 10 week program will be at Liberty Lutheran Brethren Church, 1702 32nd Ave S, Fargo, ND. Program cost: \$40. Questions please call (701) 277-8784 and leave a message.

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