11.5

United States Department of the Interior National Park Service



# 1216

### National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).

1. Name of Property		
historic name Hawkeye Valley Mill		
other names/site number		
2. Location		
street & number SE ¼ of Section 23, Township 106N, Range 65W		not for publication
	X	
city or town Wessington Springs		vicinity
state South Dakota code SD county Jerauld code 073	zip code	e <u>57382</u>
3. State/Federal Agency Certification		
As the designated authority under the National Historic Preservation Act, as amended,		
I hereby certify that this X nomination request for determination of eligibility meets for registering properties in the National Register of Historic Places and meets the proced requirements set forth in 36 CFR Part 60.		
In my opinion, the property <u>X</u> meets <u></u> does not meet the National Register Criteria. be considered significant at the following level(s) of significance:	I recom	mend that this property
national statewideX_local		
Signature of certifying official/Title Date	-	
State or Federal agency/bureau or Tribal Government		
In my opinion, the propertymeets does not meet the National Register criteria.		
Jay D. Vogt 11-29-2012		
Signature of confinenting official Date		
SO SHPO	4.35.16	
Title State or Federal agency/bureau or Tribal Go	vernment	
4. National Park Service Certification		
I hereby certify that this property is:		
entered in the National Register determined eligible for the Na	itional Regi	ister
determined not eligible for the National Register removed from the National R	egister	
Jon Coson H. Begll 1.25.	13	3
Signature of the Keeper Date of Action	/	

(Expires 5/31/2012)

Hawkeye Valley Mill Name of Property		4	Jerauld County, County and State	South Dakota
5. Classification				
Ownership of Property (Check as many boxes as apply.)	Category of Property (Check only one box.)	Number of Res	ources within Prolously listed resources	operty in the count.)
X private public - Local public - State public - Federal	building(s) district site structure object	Contributing  1 0 0 1 1 Number of cont	Noncontributin  0 0 0 0 0 0 ributing resource	buildings sites structures objects Total
(Enter "N/A" if property is not part of a		listed in the Nat	ional Register	,
N/A			N/A	
6. Function or Use				
Historic Functions (Enter categories from instructions.)		Current Functio (Enter categories from		
PROCESSING/manufacturing	facility	NOT IN USE		
INDUSTRY/energy facility				
7. Description				
Architectural Classification		Materials		
(Enter categories from instructions.)		(Enter categories fron	n instructions.)	
NO STYLE		foundation: NO	TVISIBLE	
	h	walls: WOOD: \	Weatherboard	
		roof: WOOD: S	Shingle	
		other:		

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota County and State

#### Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with a summary paragraph that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

#### Summary Paragraph

The Hawkeye Valley Mill, constructed in 1894, is a two-story wood frame building with an interior windmill tower in the northern half of the building. <sup>1</sup> It is a small gable roof building built with post construction and board-and-batten siding. The windmill tower is built with wood beam legs and cross braces, and it has the remnant of a Monitor W-Series wheel and gear box. The Hawkeye Valley Mill was historically used to shell corn, grind feed, sharpen tools, and pump water. The original wheel was a Challenge Single Header wood wheel that was replaced in the late 1930s or early 1940s when it was converted to a pump mill. The mill is located in Anina Township, Jerauld County, south of the town of Wessington Springs, in the Hawkeye Valley of the Wessington Hills, and just northwest of Firesteel Creek. It sits within a irregularly-shaped grassed area in the far northeast corner of the southeast quarter of Section 23, Township 106N, Range 65W, and is surrounded by a small woodlot to the north, a row of trees to the west, a small creek running south through the area, and cultivated fields on all sides. There is a highly-deteriorated outbuilding and two half-buried antique cars directly to the west of the mill. Though not definitive, it is likely there was no residence in that quarter-section as indicated by the 1909 county atlas.<sup>2</sup>

The Hawkeye Valley Mill has suffered somewhat from its abandonment over an extended period of time. It does have missing doors, weather-exposed siding and shingles, a broken wheel, and only partial interior machinery. However, it does have integrity of design with its internal wind tower enclosed within the barn building; of location and setting in an agricultural landscape; of feeling and association through that landscape and the utilitarian character of the building; and integrity of materials and workmanship for the majority of the structure that remains. Additionally, the rarity of the resource in the Upper Plains compels its eligibility for the National Register of Historic Places. Most were demolished or dramatically altered after gasoline and electric-powered equipment made them obsolete. From communication with the State Historic Preservation Offices in Montana, North Dakota, Nebraska, Minnesota, and Iowa, and other specialists recommended by those offices, only one other extant example was identified—a wind-powered mill attached to an 1857 house recorded a time ago in Fayette County, Iowa.<sup>3</sup>

#### Narrative Description

The Hawkeye Valley Mill is a two-story wood frame building with an interior windmill. The simple rectangular building is approximately fourteen feet by eighteen feet in area and is approximately eighteen feet high at the gable peak. It has a gable roof with wood shingles and open eaves, post construction, four board-and-batten walls with molded battens, and board-and-batten gable ends that are lapped over the walls. In the northern half of the building, there is an interior wooden windmill rising through the roof above the building.

On the east elevation, there is an entrance on the northern side of the first floor, there are two square openings centered on the first and second floors, and there are two small circular holes cut out of the southern side of the second floor. There is some siding missing beneath the square opening on the first floor. On the north elevation, there is a square opening located centrally just below the gable end; part of the machinery of the mill is still located within that opening. Some of the boards are deteriorated at the base of this elevation. On the west elevation, there is a large opening on the southern side of the second floor that used to have double doors, and there is a square opening on the southern side of the south elevation, there is a door-sized opening on the eastern side of the second floor and one door hinge remains attached to the wall.

Exhibit sign, Dunham Historical Society, Wessington Springs, SD.

<sup>2</sup> Standard Atlas of Jerauld County, South Dakota (Chicago: Geo. A. Ogle & Co., 1909), 41.

<sup>&</sup>lt;sup>3</sup> Personal communication with Lorna Meidinger, Architectural Historian/NR Coordinator, State Historical Society of North Dakota, December 1, 2011; John Boughton, NR Program, Montana SHPO, December 1, 2011; Patrick Haynes, Historic Resources Survey & Inventory Coordinator, Nebraska State Historical Society, December 1, 2011; Michael Koop, MN SHPO, January 6, 2012; Jeff Carr, Architectural Historian, et al. State Historical Society of Iowa, June 27, 2012; Bob Frame, Senior Historian, Mead & Hunt, Inc., January 9, 2012; Marlin Ingalls, Archaeologist, Iowa Office of the State Archaeologist, University of Iowa, June 27, 2012.

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota
County and State

The interior on the first floor currently has a dirt floor (drifted dirt has covered the base of the building), and the bottom of the windmill takes up most of the space. None of the walls are finished on the interior. Stairs on the northwestern corner lead up to the second floor. The second floor has a wood tongue-and-groove floor, board partitions in the southwest and northeast corners, and a remaining portion of a chute on the southern end of the building is all that is left of the machinery above ground. It is possible that drifting soil has covered other pieces of the mill's workings as it has the building's foundation.<sup>4</sup>

The windmill is located in the northern half of the building and is entirely wood post and beam construction, excepting the wheel itself which has a gear box, remnant vane, steel band, five arms, and two partial blades. The tower is constructed with legs of 6" x 6" square posts using 2" x 6" cross-braces. The remaining crankshaft is made of wood pieces secured together and bolted at the second floor to a large lever that extends out the window frame on the north wall. The tower itself has vertical wood board siding and a small square platform just below the apex; some of this siding and platform have deteriorated.

In 1990, Margaret Schmidt completed an oil painting of the mill to capture its appearance around the 1920s (see Figure 1). She used oral history done with Lawrence Dusek and other older community members who remembered the features of the mill.<sup>5</sup> It indicates that the Hawkeye Valley Mill had a board door in a wood surround on the northern side of the east elevation, two four-pane square wood windows centered on the first and second floors of the east elevation, and a batten door on the second floor of the south elevation. The original 14-foot vaneless sectional-wheel windmill had six sections of thin blades and two small wood wheels on either side of the gear box that directed the rotation of the wheel head. The painting also indicates that grain was unloaded from wagons into double doors on the west side of the building, and water was pumped into a tank on the north side.<sup>6</sup> The original wheel was replaced in the late 1930s or 1940s with the smaller steel solid-wheel Monitor WC Series, which was responsible only for pumping water.<sup>7</sup>

<sup>&</sup>lt;sup>4</sup> In the 1930s, there was heavy erosion in southeastern parts of the county. South Dakota State Planning Board and Jerauld County Planning Board (SDSPB/JCPB), *Economic and Social Survey of Jerauld County* (Brookings, SD: Central Office, 1937), 25.

<sup>&</sup>lt;sup>5</sup> Exhibit sign, Dunham Historical Society.

<sup>&</sup>lt;sup>6</sup> Ibid.

<sup>&</sup>lt;sup>7</sup> Ibid.

(Expires 5/31/2012)

Hawkeye Valley Mill
Name of Property

Jerauld County, South Dakota County and State

8. Sta	tement of Significance	
(Mark ">	cable National Register Criteria " in one or more boxes for the criteria qualifying the property onal Register listing.)	Areas of Significance (Enter categories from instructions.) AGRICULTURE
Х	Property is associated with events that have made a significant contribution to the broad patterns of our history.	
В	Property is associated with the lives of persons significant in our past.	
С	Property embodies the distinctive characteristics of a type, period, or method of construction or	
	represents the work of a master, or possesses high artistic values, or represents a significant	Period of Significance
	and distinguishable entity whose components lack individual distinction.	1894-1930
D	Property has yielded, or is likely to yield, information important in prehistory or history.	Significant Dates
		1894
	a Considerations 'in all the boxes that apply.)	
	h. in.	Significant Person
roper	y is.	(Complete only if Criterion B is marked above.)
A	Owned by a religious institution or used for religious purposes.	N/A
В	removed from its original location.	Cultural Affiliation
С	a birthplace or grave.	N/A
D	a cemetery.	
E	a reconstructed building, object, or structure.	Architect/Builder
F	a commemorative property.	Lyle, Elwood C.
G	less than 50 years old or achieving significance within the past 50 years.	

#### Period of Significance (justification)

The period of significance spans from the reported date of construction through the period when it operated as a power mill—prior to its conversion to solely a pump mill.

#### Criteria Considerations (explanation, if necessary)

N/A

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota County and State

**Statement of Significance Summary Paragraph** (Provide a summary paragraph that includes level of significance and applicable criteria.)

The Hawkeye Valley Mill was built in 1894 by Elwood C. Lyle and is eligible for the National Register of Historic Places on a local level for Criterion A in the area of Agriculture. It is located south of Wessington Springs, in the Hawkeye Valley of the Wessington Hills, just west of Firesteel Creek. The mill is a rare surviving example of small feed mills that used power windmills to perform tasks like shelling corn, grinding feed, and operating machines like saws for the owner's and neighbors' farming operations. It was built by an early township settler in a period of economic downturn and drought. The symbolic power of tall windmills on the prairie landscape, combined with the need to recognize the different scales of operations that supported the agricultural history of South Dakota, makes this mill able to tell a significant story.

#### Narrative Statement of Significance (Provide at least one paragraph for each area of significance.)

The Hawkeye Valley Mill was built in 1894 by Elwood C. Lyle who homesteaded that quarter-section in 1889. The mill is located in the Hawkeye Valley of Anina Township, Jerauld County, to the south east of the county seat, Wessington Springs. The Hawkeye Valley is the central valley of the Wessington Hills settled by several migrants from Iowa, the name possibly originated because of the "hawk's eye" view from the hills. In the 1930s, there were about twenty farm families in Hawkeye Valley, two one-room grade schools, a cemetery, and a church.

This power mill was part of a larger landscape of agricultural processing. There were several small grain or feed mills on farms in the county during the 1880s and 1890s, and the Jerauld County Milling Company was established in Wessington Springs in 1909. Lyle's smaller wind-powered mill and others like it could be used by their owner, family, and neighbors to conveniently and economically perform necessary tasks for their farms—a significant piece of the landscape of agriculture and industry on the Great Plains. Many farmers enclosed the base of their windmills, or installed a windmill atop a barn structure, to house mechanical operations like feed mills. One account, from a dairy operation north of the Hawkeye Valley in Beadle County, describes enclosing and roofing the base of a Challenge wind mill for a spring house where pumped water would keep milk cool. Lyle and neighboring farmers used the Hawkeye Valley Mill to shell corn, grind feed, sharpen tools, and pump water. The original wheel, depicted in a painting informed by oral histories, most closely resembled a Single Header design produced from 1879 through the 1890s by the Challenge Wind Mill and Feed Mill Company headquartered in Batavia, Illinois (see Figures 1 and 2). The Challenge Single Header was a thirteen-to twenty-foot section-wheel wooden mill with two side wheels, a weight instead of a vane or rudder, and vertical shafts that could run shellers, grinders, saws, churns, as well as pump water. It was a less expensive alternative to Challenge's

<sup>8</sup> Exhibit sign, Dunham Historical Society.

<sup>&</sup>lt;sup>9</sup> Exhibit sign, Dunham Historical Society; Patent Record, filed October 7, 1889, Book 3, page 16. Register of Deeds, Jerauld County Courthouse.

<sup>10</sup> Federal Writers' Program, South Dakota Place-Names, vol. 4-6 (Vermillion: University of South Dakota, 1940), 517.
11 Margaret Arnott Olson, "Hawkeye Valley Remembered," in Footprints in Jorgald County - A Historical Undate of Jers

<sup>&</sup>lt;sup>11</sup> Margaret Arnott Olson, "Hawkeye Valley Remembered," in *Footprints in Jerauld County – A Historical Update of Jerauld County from 1980-2004* (Wessington Springs: Dunham Historical Society, 2004), 108.

N.J. Dunham, A History of Jerauld County, South Dakota to 1909 (Wessington Springs, SD: Self-published, 1910), 208, 267; Jack Marken, ed., The Making of a Community: A History of Jerauld County to 1980 (Wessington Springs: Dunham Historical Society, 1982), 134.

<sup>&</sup>lt;sup>13</sup> Kansas State Board of Agriculture, *Report of the Kansas State Board of Agriculture for the Quarter Ending September* 30, 1894, vol. 13 (Topeka: Hamilton Printing Company, 1894), 171.

<sup>&</sup>lt;sup>14</sup> T. Lindsay Baker, A Field Guide to American Windmills (Norman: University of Oklahoma Press, 1985), 98.

<sup>&</sup>lt;sup>15</sup> Beadle County County Commissioners, *Development and resources of Beadle County in the new state of South Dakota* (Huron: Beadle County Commissioners, 1889), 38.

<sup>&</sup>lt;sup>16</sup> Edward Charles Murphy, *The Windmill: Its Efficiency and Economic Use*. PhD Dissertation for Cornell University (Washington, D. C.: Government Printing Office, 1901), 99-100; Stacey L. Cisneros, and George H. Scheetz, eds. "Windmill City: A Guide to the Historic Windmills of Batavia, Illinois." Booklet (Batavia, IL: Board of Library Trustees of the Batavia Public Library District, 2008); Baker, *A Field Guide*, 164.

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota
County and State

showpiece Double Header, and it was most commonly used in the Midwest and on the Great Plains. <sup>17</sup> These "power mills" were less common than windmills used only to pump water on farmsteads, and their survival is even rarer. <sup>18</sup>

The wheel was replaced in the 1930s and was only used to pump water. The current wheel remnant is likely a Monitor W Series design made by the Baker Manufacturing Co. of Evansville, Wisconsin from 1933 into the 1960s—characteristic for its "Iron Vault" gear box case, the closeness of the wheel to the head, and the slight backwards tilt of the wheel. The W Series wheels were marketed to modernize older mills. According to local knowledge, the Hawkeye Valley Mill stopped operating altogether in the 1950s.

Elwood C. Lyle was born in June 1853 to Joseph M. and Olive Lyle, in Butler Township, Butler County, Iowa. 21 His parents were enumerated as farmers in 1856 and 1870, and they operated a small hotel in 1860.<sup>22</sup> In 1880, he was farming in Prairie City, Bates County, Missouri with two younger siblings. 23 Rejoining other family members, he moved to South Dakota between 1882 and 1884.<sup>24</sup> On April 24, 1889, Elwood took out a patent claim for a homestead on the southeast quarter of Section 23, Township 106N, and Range 65W. 25 His father homesteaded in Section 15, his brother-in-law Samuel S. Moore homesteaded directly to the north in Sections 23 and 24 in 1882, and his brother Herman homesteaded two quarters nearby in Sections 22 and 27.26 By 1909, Elwood had additionally acquired the southeastern quarter of Section 22 and the western half of Section 25.27 His farm in the Hawkeye Valley was worked by at least two other families, John Rea and Jane Arnott in the early 1900s, and Bill and Elsie Houwman. 28 Not a particularly well-documented historical figure, a short biographical entry on Elwood C. Lyle noted that "he was a builder in the early years and a successful farmer."29 From other records, we can know that his other ventures included building a horse racing track and serving as an assistant cashier officer for the Wessington Springs State Bank from 1918 to January 1920. 30 Elwood passed away in Wessington Springs, on March 15, 1928 of stomach cancer. 31 At the time of his death, he had some debts and owned several pieces of property worth about \$29,100; five in rural Jerauld County, one lot in the town of Wessington Springs, as well as two rural properties in central SD in Sully and Stanley Counties and a property in Morton County, North Dakota. Further, as an officer of the Wessington Springs State Bank, Elwood was liable for over \$28,000 in "excessive" mortgages held when the bank failed in 1924. Under litigation with the Superintendent of Banks of South Dakota at the time of his death in 1928, his brother Herman, as executor of Elwood's estate, could not resolve the probate until 1947. During that period, Herman recorded spending around twenty dollars on repairs and labor for the windmill and pump. The southeast quarter of Section 23 of Anina Township was willed to Herman who passed it to his son Milo in 1947. 33 In 1960, the

<sup>17</sup> Baker, A Field Guide, 164.

<sup>19</sup> Baker, *A Field Guide*, 142. <sup>20</sup> Baker, *A Field Guide*, 142.

<sup>23</sup> U.S. Census Bureau, *Tenth Census of the United States, 1880*, Prairie City, BatesCounty, Missouri, Enumeration District 161, page 3.

<sup>24</sup> U.S. Census Bureau, Tenth Census of the United States, 1880, page 3; Dunham, A History of Jerauld County, South Dakota to 1909, 27-39.

<sup>25</sup> Patent Record Book 3, page 16, filed October 7, 1889. Register of Deeds, Jerauld County Courthouse.

27 Standard Atlas of Jerauld County.

Marken, The Making of a Community, 448.

<sup>31</sup> Death Record, page 53. Entered March 24, 1928. Register of Deeds, Jerauld County Courthouse.

<sup>32</sup> Probate Record for Elwood C. Lyle, Clerk of Courts, Jerauld County Courthouse.

33 Deed book 41, page 352, Register of Deeds, Jerauld County Courthouse.

<sup>&</sup>lt;sup>18</sup> T. Lindsay Baker, "Turbine-Type Windmills of the Great Plains and Midwest," *Agricultural History* 54(1) (January 1980), 50; Communication with the State Historic Preservation Offices of Minnesota, North Dakota, Nebraska, and Montana, November 30, 2011-January 10, 2012.

Census of Iowa, 1856, Butler, Butler County, Iowa, page 452; U.S. Census Bureau. Twelfth Census of the United States, 1900, Schedule No. 1: Population, Anina Township, Jerauld County, South Dakota, Enumeration District 199, Sheet 5.

Census of Iowa, 1856, page 452; U.S. Census Bureau. Eighth Census of the United States, 1860, Schedule No. 1: Population, Butler Township, Butler County, Iowa, page 2; U.S. Census Bureau. Ninth Census of the United States, 1870, Population, Butler Township, Butler County, Iowa, page 6.

<sup>&</sup>lt;sup>26</sup> Atlas of Jerauld County (Watertown, SD: Centennial Atlas, 1990), J10; Dunham, A History of Jerauld County, South Dakota to 1909, 27.

<sup>&</sup>lt;sup>28</sup> Olson, "Hawkeye Valley Remembered," 109.

Wessington Springs Independent Jubilee Special (South Dakota), June 1957; Fred N. Dunham, A History of Jerauld County, South Dakota, 1909 to 1961 (Wessington Springs, SD: Self-published, 1963), 85.

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota
County and State

property was sold to Donald B. Thompson, and in 1984, it was passed to Paul C. Bunn before being turned over to Aetna Life Insurance in 1989.<sup>34</sup> In 1991, Lawrence LeRoy Grieve bought the quarter section and he passed it to his son, the current owner, David in 2005.<sup>35</sup>

#### Developmental history/additional historic context information (if appropriate)

#### JERAULD COUNTY: ANINA TOWNSHIP

Anina Township (T106N, R65W) was surveyed in 1872 but was not settled until 1882. The nearest town of Wessington Springs was established in 1880 by the Reverend A.B. Smart with a small group of Methodist settlers, and a plat was filed on May 26, 1882. The parallel County was organized by Dakota's territorial legislature in 1883. Natural springs on the eastern side of the Wessington Hills and woodlands in the hill valleys supported the new town and agricultural development in the area. The population grew most in the first years of "boom" settlement in the 1880s, had a small drop during the recession and drought of 1890-95, nearly doubled during the 1900s, and then began a trend of decline in the 1920s. The population of the 1920s are the population of the 1920s.

The Chicago, Milwaukee, and St. Paul Railway extended through the county and the first train reached Wessington Springs on September 20, 1903. 41 For most of its existence, Jerauld County has been around 90% agricultural; in 1935, around 60% of the county was under cultivation while another 34% was pasture or wild hay. 42 In the late nineteenth century, farmers in the county raised hogs and cattle, and they grew wheat and, to a lesser extent, corn, oats, and other grains; by the 1930s, corn had overtaken wheat. 43 At the time that this feed mill was built, Jerauld County, like the rest of the region, was suffering from a combination of a financial panic in 1893 that lasted through 1896, and a severe drought in 1894. County historian, N.J. Dunham vividly described the 1893 panic, saying that "a cyclone of adversity had swept the county and left ruin and despair everywhere" when prices crashed for grain and cattle, but "like wayfarers caught in a storm, the people adjusted themselves to the situation as best they could and waited for the tempest to pass."44 During the regional drought in 1894, Dunham described a fair crop in places and a resilient population, crediting the quality of Dakota soils, market prices that held steady from the year before, some agricultural diversification, and the farmers who stayed. The following winter of 1895-96 proceeded to be a heavy one, but afterwards conditions were generally good until the recession following World War I. Heavy mortgages given during that recession and bad conditions in the 1920s led to an agricultural recession that preceded the 1929 economic crisis and 1930s dust storms. In February and March of 1924, both of the banks failed in Wessington Springs; the first was Farmers State Bank and the second was the Wessington Springs State Bank. That, in combination with bad storms, deaths, and accidents in the community, caused one local historian to title it "The Tragic Year of 1924." Like elsewhere on the plains, county residents remembered bad times during the 1930s that included dust storms that left high drifts along fence lines.

<sup>&</sup>lt;sup>34</sup> Deed book 46, page 369; Deed book 51, page 481, Register of Deeds, Jerauld County Courthouse.

Deed book 53, page 615; Deed book 60, page 213, Register of Deeds, Jerauld County Courthouse.

<sup>&</sup>lt;sup>36</sup> Elwood's brother-in-law, Samuel S. Moore, was listed as one of the first settlers in that township. Dunham, A History of Jerauld County, South Dakota to 1909, 27; Marken, The Making of a Community, 67.

<sup>&</sup>lt;sup>37</sup> Federal Writer's Project, A South Dakota Guide (Pierre: South Dakota State Historical Society Press, 1993 [1938]), 382; Dunham, A History of Jerauld County, South Dakota to 1909, 30.

<sup>38</sup> Harry F. Thompson, A New South Dakota History, 2<sup>nd</sup> ed., (Sioux Falls: Center for Western Studies, 2009), 99.

<sup>&</sup>lt;sup>39</sup> Stephen Sargent Visher, *The Geography of South Dakota* (Chicago: The University of Chicago Libraries, 1918), 20.

<sup>&</sup>lt;sup>40</sup> SDSPB/JCPB, Economic and Social Survey, 2, 16.

<sup>&</sup>lt;sup>41</sup> Dunham, A History of Jerauld County, South Dakota to 1909, 286.

<sup>&</sup>lt;sup>42</sup> SDSPB/JCPB, Economic and Social Survey, 22.

<sup>&</sup>lt;sup>43</sup> Dunham, *A History of Jerauld County, South Dakota to 1909*, 206, 231; *Historical Atlas of South Dakota* (Vermillion, SD: E. Frank Peterson, 1904), 138; SDSPB/JCPB, *Economic and Social Survey*, 36.

<sup>&</sup>lt;sup>44</sup> Dunham, A History of Jerauld County, South Dakota to 1909, 231.

<sup>&</sup>lt;sup>45</sup> Ibid., 239.

<sup>&</sup>lt;sup>46</sup> Marken, The Making of a Community, 152.

<sup>&</sup>lt;sup>47</sup> Tom Barkdull, "Historical Vignettes," Wessington Springs Independent, compiled by Dunham Historical Society Bicentennial Committee.

<sup>&</sup>lt;sup>48</sup> Olson, "Hawkeye Valley Remembered," 109.

(Expires 5/31/2012)

Hawkeye Valley Mill Name of Property

Jerauld County, South Dakota County and State

The most prominent geographic feature in the area is the Wessington Hills, which extend across the county as well as south into Brule County and north into Hand County. They make up a chain with Ree Heights, the Coteau de Missouri, and the Bijou Hills on the western edge of the James River (formerly Dakota) Valley. 49 Crow Creek drains west to the Missouri River and Firesteel Creek drains east to the James River, the soil is mostly loam with clay subsoil, natural tree groves grow in the valleys, and an artesian basin lies under most of the county. 50 The Wessington Hills were said, in the early days, to have concealed "hide-out bands of horse rustlers and other renegades, the timber-lined draws affording excellent concealment for their movements, and the summits enabling them to discern approaching parties."51 The prairie was well suited to use wind-power successfully, and the Wessington Hills have been known for the strength of the wind there for many years. In the early 2000s, the hill summits were chosen for the location of the South Dakota PrairieWinds Project that erected wind turbines for energy-production. 52

#### WINDMILLS

In the built landscape of the Great Plains, structures like church steeples, grain elevators, and windmills that rise vertically in juxtaposition to the horizon line have become iconoclastic in the culture and aesthetic of the plains. The height of windmill use on the plains lasted from the 1880s to the 1920s. Windmills represent the long history of industry and engineering used to channel the power of nature into power over which humans could exert control, and they have come to symbolize the perseverance of small farmers who made a living on the plains in the days before expansive power infrastructure. The multivalent need for and symbolism of water has also made pump windmills important in the culture of those living on more arid lands.

Though windmills have an ancient history internationally, during the 1850s, the American popular and scientific press actively promoted the development of wind-power as a cheaper alternative to steam, animal, or human power; over fifty U.S. patents were filed for windmills or improvements on windmills in that decade. <sup>53</sup> The first commercially successful self-governing American windmill was invented in 1854 by New England mechanic, Daniel Halladay, and engineer, John Burnham.<sup>54</sup> Before that time, the large windmills inspired by European traditions had to be monitored and manually adjusted as the winds changed. Self-governing mechanism made windmills a viable tool on the expanding American agricultural landscape for commercial and community projects as well as individual farms.

Most early farm windmills were made entirely of wood except for select working parts that were made of cast iron, wrought iron, or steel. 55 A major style of windmill in the nineteenth and early twentieth centuries, produced first by Halladay's company, was the sectional-wheel windmill on which sections of blades could pivot as needed to catch the wind or fold to allow strong, damaging winds to pass through the center.<sup>58</sup> In the 1870s, vaneless section-wheel windmills became more common and are often associated with the Dempster Company.<sup>57</sup> The other windmill type that originated in the nineteenth century was a solid-wheel pattern that angled itself to adjust to the wind instead of folding; these Eclipse mills were first produced by L.H. Wheeler & Son and its successors—although most companies eventually produced some variety of solid-wheel design. 58 Some farmers built their own windmills from lumber and materials they had available on the farm. 59 Through the 1890s until World War I, there was a gradual increase in production of all-metal windmills. This occurred earlier than, but not as quickly as the wood-to-metal transition for other agricultural implements. 60 Wood windmills continued to be used because they were thought to be stronger and they were easier for owners to repair on their own, but

<sup>&</sup>lt;sup>49</sup> Visher, *The Geography of South Dakota*, 34-35.

<sup>&</sup>lt;sup>50</sup> O.H. Holt, Dakota: "behold I show you a delightsome land," (Chicago: Rand, McNally & Co. 1885), 65; Historical Atlas of South Dakota, 138.

<sup>&</sup>lt;sup>51</sup> Federal Writer's Project, A South Dakota Guide, 382; Dunham, A History of Jerauld County, South Dakota to 1909, 7. <sup>52</sup> USDA Rural Utilities Service and US Department of Energy Western Area Power Administration. *Final Environmental* Impact Statement for the South Dakota PrairieWinds Project, DOE/EIS #0418 (July 2010).

<sup>&</sup>lt;sup>53</sup> Baker, A Field Guide, 5.

<sup>&</sup>lt;sup>54</sup> Ibid., 5.

<sup>&</sup>lt;sup>55</sup> Ibid., 16.

<sup>&</sup>lt;sup>56</sup> Ibid., 8.

<sup>&</sup>lt;sup>57</sup> Ibid., 9-10.

<sup>&</sup>lt;sup>58</sup> Ibid., 10-11. <sup>59</sup> Ibid., 29.

<sup>&</sup>lt;sup>60</sup> United States Department of Agriculture (USDA), Report No. 117: The Substitution of Other Materials for Wood: Studies of the Lumber Industry, Part XI (Washington, DC: Government Printing Office, 1917), 54; Baker, A Field Guide, 33.

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota
County and State

the combination of the production and marketing capacity of the Aermotor Company and a self-oiling design by the Elgin Wind Power and Pump Company made all-metal windmills increasingly popular. <sup>61</sup> Also, adoption of fuel motor pumps which used gasoline led to an overall decrease of windmill production beginning around 1914, speeded along by general agricultural decline in the 1920s and rural electrification projects during the 1930s. <sup>62</sup>

The primary need for windmills on the plains was pumping water, but there was a notable demand for power mills that could produce mechanical power for grinding grain and other tasks. <sup>63</sup> Pumping mills used "a pump rod with an up and down motion" and power mills "[gave] a rotary motion to a vertical shaft, and this, in turn, to a horizontal shaft which [drove] the grinder or other machine." <sup>64</sup> The most common were 12- or 14-foot size wheels used to grind grain for livestock feed, but also were used for "sawing wood, operating churns, cutting fodder, shelling corn, turning grindstones, and operating other small machines." <sup>65</sup> Enclosing or having a structure at the base of a windmill tower could serve to create work space for operations powered by the mill. <sup>66</sup> The Hawkeye Valley Mill has a full-height tower enclosed with a frame barn structure, but it was also common to attach a windmill head to the top of an existing barn. Some historic photographs of power mills in Kansas and Nebraska show their integration with mill buildings of medium to large size; many smaller mills were likely never photographed. <sup>67</sup>

#### 9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Atlas of Jerauld County. Watertown, SD: Centennial Atlas, 1990.

Baker, T. Lindsay. A Field Guide to American Windmills. Norman: University of Oklahoma Press, 1985.

- ----. "Turbine-Type Windmills of the Great Plains and Midwest." Agricultural History 54(1) (January 1980), 38-51.
- -----. "Windmills," 400. In David J. Wishart, Ed. *Encyclopedia of the Great Plains*. Lincoln: University of Nebraska Press, 2004.
- Barkdull, Tom. "Historical Vignettes." Wessington Springs Independent, compiled by Dunham Historical Society Bicentennial Committee.
- Beadle County County Commissioners. *Development and resources of Beadle County in the new state of South Dakota*. Huron: Beadle County Commissioners, 1889.

Buecker, Tom. "Wind-Powered Flour Mills in Nebraska." Old Mill News (April 1982), 12-13.

Census of Iowa, 1856, 1856.

- Cisneros, Stacey L. and George H. Scheetz, Eds. "Windmill City: A Guide to the Historic Windmills of Batavia, Illinois." Booklet. Batavia, IL: Board of Library Trustees of the Batavia Public Library District, 2008.
- Dunham, Fred N. A History of Jerauld County, South Dakota, 1909 to 1961. Wessington Springs, SD: Self-published, 1963.

Dunham, N.J. A History of Jerauld County, South Dakota to 1909. Wessington Springs, SD: Self-published, 1910.

Exhibit sign, Dunham Historical Society, Wessington Springs, SD.

<sup>&</sup>lt;sup>61</sup> Baker, A Field Guide, 33, 38, 43.

<sup>&</sup>lt;sup>62</sup> USDA, Report No. 117, 54; T. Lindsay Baker, "Windmills," in David J. Wishart, ed., Encyclopedia of the Great Plains (Lincoln: University of Nebraska Press, 2004), 400.

<sup>63</sup> Baker, A Field Guide, 19-20; Baker, "Windmills," 400; Baker, "Turbine-Type Windmills," 50.

<sup>&</sup>lt;sup>64</sup> Murphy, The Windmill, 22, 81.

<sup>65</sup> Baker, A Field Guide, 20.

<sup>66</sup> Baker, A Field Guide, 98.

<sup>&</sup>lt;sup>67</sup> Tom Buecker, "Wind-Powered Flour Mills in Nebraska," Old Mill News (April 1982), 13.

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota
County and State

Federal Writer's Project. A South Dakota Guide. Pierre: South Dakota State Historical Society Press, 1993 [1938].

-----. South Dakota Place-Names, Vol. 4-6. Vermillion: University of South Dakota, 1940.

Historical Atlas of South Dakota. Vermillion, SD: E. Frank Peterson, 1904.

Holt, O.H. Compiled by. Dakota: "behold I show you a delightsome land." Chicago: Rand, McNally & Co. 1885.

Kansas State Board of Agriculture. Report of the Kansas State Board of Agriculture for the Quarter Ending September 30, 1894, Vol. 13. Topeka: Hamilton Printing Company, 1894.

Marken, Jack. Ed. *The Making of a Community: A History of Jerauld County to 1980*. Wessington Springs: Dunham Historical Society, 1982.

Murphy, Edward Charles. *The Windmill: Its Efficiency and Economic Use*. PhD Dissertation for Cornell University. Washington, D. C.: Government Printing Office, 1901.

Olson, Margaret Arnott. "Hawkeye Valley Remembered." In Footprints in Jerauld County – A Historical Update of Jerauld County from 1980-2004. Wessington Springs: Dunham Historical Society, 2004.

#### Personal Communication with:

Lorna Meidinger, Architectural Historian/NR Coordinator, State Historical Society of North Dakota, December 1, 2011.

John Boughton, NR Program, Montana SHPO, December 1, 2011.

Patrick Haynes, Historic Resources Survey & Inventory Coordinator, Nebraska State Historical Society, December 1, 2011.

Michael Koop, MN SHPO Office, January 6, 2012.

Jeff Carr, Architectural Historian, et al. State Historical Society of Iowa, June 27, 2012.

Bob Frame, Senior Historian, Mead & Hunt, Inc., January 9, 2012.

Marlin Ingalls, Archaeologist, Iowa Office of the State Archaeologist, University of Iowa, June 27, 2012.

Records of the Register of Deeds and Clerk of Courts, Jerauld County Courthouse.

South Dakota State Planning Board and Jerauld County Planning Board (SDSPB/JCPB). *Economic and Social Survey of Jerauld County*. Brookings, SD: Central Office, 1937.

Standard Atlas of Jerauld County, South Dakota. Chicago: Geo. A. Ogle & Co., 1909.

Thompson, Harry F. A New South Dakota History. 2<sup>nd</sup> Ed. Sioux Falls: Center for Western Studies, 2009.

United States Census Bureau. Eighth Census of the United States, 1860, Schedule 1. Washington D.C., 1860.

- ----. Ninth Census of the United States, 1870, Population, Washington D.C., 1870.
- ----. Tenth Census of the United States, 1880. Washington D.C., 1880.
- ----. Twelfth Census of the United States, Schedule No. 1: Population. Washington D.C., 1900.
- United States Department of Agriculture (USDA). Report No. 117: The Substitution of Other Materials for Wood: Studies of the Lumber Industry, Part XI. Washington, DC: Government Printing Office, 1917.

United States Department of the Interio	Or .
National Park Service / National Regis	ter of Historic Places Registration Form
NPS Form 10-900	OMB No. 1024-0018

organization SD State Historic Preservation Office

(Expires 5/31/2012)

	wkeye ' ne of Pro	Valley Mill	4:				Jerauld ( County and	County, South Dakota	
			e and US Department of Energ	av V	Vestern /				I
			or the South Dakota PrairieWii						
Vis	her, Ste	ephen Sargent. <i>Ti</i>	he Geography of South Dakota	a. C	hicago:	The University	y of Chica	ago Libraries, 1918.	
We	essingto	on Springs Indepe	ndent Jubilee Special (South I	Dak	ota), Jur	e 1957.			
Pre	_prelimin requeste _previous _previous _designa recorded _recorded	ed) sly listed in the Nation sly determined eligible ted a National Historic d by Historic Americal d by Historic Americal	ndividual listing (36 CFR 67 has been al Register e by the National Register	1	X 	nary location of State Historic P Other State age Federal agency Local governme University Other ne of repository:	reservation ency ent <u>Dunham</u>		
Hie	toric Re	ecurces Survey N	Number (if assigned): JE01400	200°	1				
1115	tone ive	sources ourvey i	Number (ii assigned). 3E01400	300	-				
10.	Geogr	aphical Data							
(Pla	<b>VI Refe</b> ice additio		on a continuation sheet.) 4868906.6	3	14	532788.2		4868910.8	
	Zone	Easting	Northing	Ū	Zone	Easting	-	Northing	6
2	14	532698.5	4868918.7	4	14	532780.3		4868833.8	
	Zone	Easting	Northing		Zone	Easting		Northing	
The sour 532 and Bou The	bounda theast of 698.5, N (6) E: 5	ary of the nominal juarter of Section N: 4868918.7; (3) 332712.0, N: 4868 <b>Justification</b> (Exp	on (Describe the boundaries of the placed property is restricted to the 23, Township 106, Range 65, E: 532788.2, N: 4868910.8; (48801.8.	Ha def (4) E:	wkeye V ined by l : 532780	JTM points (1 .3, N: 486883	I) E: 5326 33.8; (5) E	684.0, N: 4868906.6; (2) E ∃: 532724.5, N: 4868796.	
11.	Form P	repared By							
nam	e/title	Liz J. Almlie							

date <u>08/13/2012</u>

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota County and State

street & number 900 Governors Drive telephone 605-773-6056

city or town Pierre

state SD

zip code 57501

e-mail

Liz.almlie@state.sd.us

#### **Additional Documentation**

Submit the following items with the completed form:

Maps: A USGS map (7.5 or 15 minute series) indicating the property's location.

A Sketch map for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Continuation Sheets**
- Additional items: (Check with the SHPO or FPO for any additional items.)

#### Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property: Hawkeye Valley Mill

City or Vicinity: Wessington Springs

County: Jerauld

State: South Dakota

Photographer: Liz J. Almlie

Date Photographed: November 18, 2011

#### Description of Photograph(s) and number:

SD\_Jerauld County\_Hawkeye Valley Mill\_0001 North and west elevations and setting, camera facing southeast.

SD\_Jerauld County\_Hawkeye Valley Mill\_0002 East elevation, camera facing west.

SD\_Jerauld County\_Hawkeye Valley Mill\_0003 North and west elevations, camera facing southeast.

SD\_Jerauld County\_Hawkeye Valley Mill\_0004 South elevation and setting, camera facing north.

SD\_Jerauld County\_Hawkeye Valley Mill\_0005 West elevation, camera facing east.

(Expires 5/31/2012)

Hawkeye Valley Mill

Name of Property

Jerauld County, South Dakota
County and State

SD\_Jerauld County\_Hawkeye Valley Mill\_0006 Exterior of windmill tower, camera facing east.

SD\_Jerauld County\_Hawkeye Valley Mill\_0007
Exterior of windmill tower, camera facing northwest, taken through small missing portion of the roof.

SD\_Jerauld County\_Hawkeye Valley Mill\_0008 Interior of first floor, camera facing northeast.

SD\_Jerauld County\_Hawkeye Valley Mill\_0009 Interior of second floor, camera facing north.

SD\_Jerauld County\_Hawkeye Valley Mill\_0010 Interior of windmill tower, camera facing south.

Property Owner:	
(Complete this item at the request of the SHPO or FPO.)	
name David Leroy Grieve	
street & number 38489 SD Hwy 34	telephone 605-539-1369
city or town Wessington Springs	state SD zip code 57382

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

## **United States Department of the Interior**National Park Service

## National Register of Historic Places Continuation Sheet

O C	7 0	D	4
Section number	7,8	Page	1

Name of Prope	erty
Jerauld County	y, South Dakota
County and St	ate

#### **UTM References**

(Place additional UTM references on a continuation sheet.)

5 <u>14</u> Zone 532724.5 Easting 4868796.0 Northing 6 <u>14</u> Zone

532712.0 Easting 4868801.8

Northing



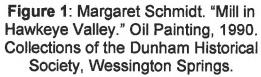




Figure 2: The Cultivator & Country Gentleman 54 (Albany NY: Luther Tucker & Son, 1889), 270.

# HAWKEYE VALLEY MILL ANINA TOWNSHIP WESSINGTON SPRINGS VIC. JERAULD COUNTY SOUTH DAKOTA STATE HISTORICAL SOCIETY National Register Boundary SOUTH DAKOTA COUNTIES Department of Tourism NOMINATION FOR: Hawkeye Valley Mill Photo Location NATIONAL REGISTER OF HISTORIC PLACES NOMINATION REVIEW MAP **UTM Point** Legend 380 AVE #3 # 0 49 00 99 9 60 Meters #2 8 8 5