EA Form R 1/2007

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Thatcher Company of North Dakota Inc
1905 Fortune Rd
Salt Lake City, UT 84104

2. Type of action: Application for Beneficial Water Use Permit No. 42M-30070792

3. Water source name: Groundwater

4. Location affected by project: SESWNESW Section 33, T16N, R55E, Dawson County
NESWNESW Section 33, T16N, R55E, Dawson County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The Applicant proposes to divert water from a groundwater aquifer by means of two wells (well #1-126 feet deep and Well #2- 160 feet deep) from January 1-December 31 at 79.6 GPM up to 120.6 AF, from points in the SESWNESW and NESWNESW Section 33, T16N, R55E, Dawson County, for industrial use (chemical redistribution plant) from January 1-December 31. The place of use is located in the NESW and NWSWSE Section 33, T16N, R55E, Dawson County. Water from the proposed diversion will be used for blending and diluting chemical products, such as hydrochloric acid and caustic soda. The chemical products will be then trucked to regional customers. The consumptive use of the proposed diversion is considered 100 percent.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:

Montana Department of Environmental Quality
Montana Natural Heritage Program
US Fish & Wildlife Service
USDA Web Soil Survey
National Wetlands Inventory

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The surface water depletion by the proposed groundwater pumping of the proposed wells will manifest within the Yellowstone River and Upper Sevenmile Creek throughout the year. The average depletion of 0.17 CFS (74.8 GPM) at the requested volume of 120.6 AF per year will be equally proportioned between the Yellowstone River and Upper Sevenmile Creek.

The Yellowstone River will have an average depletion rate of 0.08 cubic feet per second (CFS) at the volume of 60.3 acre-feet (AF). The Yellowstone River is not identified as a chronically or periodically dewatered stream by the Montana Department of Fish, Wildlife & Parks (DFWP). The DFWP has a water reservation on this portion of the Yellowstone River to maintain instream flows as outlined in the table below. The requested appropriation would have no significant impact on the surface water flows.

FWP Instream Flow Protection/Quantification Yellowstone River

Section: N.D. BORDER to TONGUE R **Type:** Water Reservation Granted **River Miles:** 15.3 to 183			
Begin Date	End Date	Flow (CFS)	Priority Date
01 / 01	01 / 31	3738	12/15/1978
02 / 01	02 / 31	4327	12/15/1978
03 / 01	03 / 31	6778	12/15/1978
04 / 01	04 / 31	6808	12/15/1978
05 / 01	05 / 31	11964	12/15/1978
06 / 01	06 / 31	25140	12/15/1978
07 / 01	07 / 31	10526	12/15/1978
08 / 01	08 / 31	2670	12/15/1978
09 / 01	09 / 31	3276	12/15/1978
10 / 01	10 / 31	6008	12/15/1978
11 / 01	11 / 31	5848	12/15/1978
12 / 01	12 / 31	3998	12/15/1978

Upper Sevenmile Creek will have an average depletion rate of 0.08 cubic feet per second (CFS) at the volume of 60.3 acre-feet (AF). Upper Sevenmile Creek is not identified as a chronically or periodically dewatered stream by the DFWP. The requested appropriation would have no significant impact on the surface water flows.

Determination: No significant impact

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: Not applicable – this application is for groundwater.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Modeling analysis by DNRC hydrologists shows that there is groundwater physically and legally available for appropriation at the point of diversion requested by the Applicant. The proposed appropriation will not significantly impact the ground water quality or supply. The groundwater aquifer indicated in this application has been shown to be hydraulically connected to the Yellowstone River and Upper Sevenmile Creek. It has been determined by DNRC hydrologists that there will be an annual net depletion of 120.6 AF at an average rate of 0.17 CFS (74.8 GPM) evenly divided between the Yellowstone River and Upper Sevenmile Creek due to pre-stream capture.

Determination: No significant impact

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The Applicant proposes to divert water from a groundwater aquifer by means of two wells (Well #1-126 feet deep and Well #2-160 feet deep) from January 1-December 31 at 79.6 GPM up to 129 AF. The wells were drilled by H&H Drilling, a licensed well driller in the State of Montana (Lic. No. WWC-310). Well #1 has a casing diameter of 4.5 inches and Well #2 has a casing diameter of 8 inches. Well #1 has a static water level of 10.5 feet and the screened portion of the well is from 86-121 feet below ground surface (BGS). Well #2 has a static water level of 24.3 feet and the screened portion of the well is from 132-152 feet below ground surface (BGS). The wells are completed in the fine to medium grained sandstone of the confined Fox Hills-Lower Hell Creek Aquifer.

Water will be pumped from Well #1 using a Grundfos 75S50-8 submersible pump. Water will be pumped from Well #2 using a Grundfos 25S30-15 submersible pump. Water will be conveyed via a 2 inch Schedule 80 PVC pipeline from each of the wells into storage tanks. The volume of water to be stored for plant operations will not exceed 60,000 gallons. Booster pumps will be used to maintain water pressure in the plants distribution system and deliver water to the administration building and the plant building. The majority of the water will be used for blending and dilution of the chemicals. The chemicals are then piped to storage tanks within the plant building or directly into trucks for delivery to customers. A separate 200,000-250,000 gallon storage tank will be filled with water. This tank will serve solely as fire suppression storage. Since this is a groundwater appropriation, there will be no channel impacts, flow modifications, barriers, dams, or riparian impacts to any surface waters.

Determination: No significant impact

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Based on a report from the Montana Natural Heritage Program, twelve animal species were identified as species of special concern. The species identified are the Spotted Bat, Preble's Shrew, Great Blue Heron, Least Tern, Spiny Softshell, Northern Redbelly Dace, Blue Sucker, Sturgeon Chub, Sicklefin Chub, Paddlefish, Sauger, and Pallid Sturgeon within the general area of the project. The Least Tern and Pallid Sturgeon are listed as endangered by the US Fish & Wildlife Service. There are no plant species of special concern within the project area. As this project is located on an existing industrial lot in Glendive, pumping water from the wells is unlikely to have a significant impact on these species of special concern.

Determination: No significant impact

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Based on the National Wetland Inventory, there is a palustrine emergent wetland alongside Upper Sevenmile Creek, approximately 165 feet to the west of the project. The flow regime for this type of wetland is temporarily flooded with water present for brief periods during the growing season. Surface water is present for brief periods during growing season, but the water table usually lies well below the soil surface for most of the growing season. Plants that grow both in uplands and wetlands may be characteristic of this water regime. Construction of the project will not impact this wetland.

Determination: No significant impact

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Not Applicable.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE *- Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

The USDA Web Soil Survey indicates that the major soil type at the proposed project (Section 33, T16N, R55E) is Attewan Loam with 0-2% slopes. This soil type is identified as well drained and a non-saline to very slightly saline soil. This soil type is rated 0.05 (somewhat limited) for commercial buildings due to the shrink-swell element of the soil. The rating of "somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation.

Determination: No significant impact

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Ground disturbance will occur at the site during construction. Disturbed areas should be revegetated with appropriate native species. Enact best management practices to avoid and minimize the spread of noxious weeds within the proposed project area. The control of noxious weeds is the responsibility of the land owner.

Determination: No significant impact

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: No deterioration in air quality or adverse effects on vegetation due to increased air pollutants are anticipated with this proposed project.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: NA- Project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No significant impacts to other environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: No known environmental plans or goals will be impacted by this project.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: This project will not have any significant impact on the quality of recreational or wilderness activities.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: The proposed project will have no significant impact on human health.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No significant impacts identified

(*b)* *Local and state tax base and tax revenues?* No significant impacts identified

(c) *Existing land uses?* No significant impacts identified

(*d)* *Quantity and distribution of employment?* No significant impacts identified

(e) *Distribution and density of population and housing?* No significant impacts identified

(f) *Demands for government services?* No significant impacts identified

(g) *Industrial and commercial activity?* No significant impacts identified

(h) *Utilities?* No significant impacts identified

(i) *Transportation?* If this permit is granted truck traffic within the area may increase.

(j) *Safety?* No significant impacts identified

(k) *Other appropriate social and economic circumstances?* No significant impacts identified

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts No secondary impacts were identified

Cumulative Impacts Cumulative Impacts of pending or recently permitted rights impacting the Yellowstone River have been examined. The area of examination includes the Lower Yellowstone River from Glendive down to where the river enters North Dakota. The following table shows pending and unperfected water right permits and the expected depletion (AF) to surface water on the Yellowstone River.

WR Number	Name	GW or SW	Annual Depletion (AF)
30062767	Montana H2O	GW	585
30064201	Ames/Bell	SW	645
30064191	Thiel	GW	23.2
30064941	Wick	GW	50
30065439	Exploration Drilling	GW	617.2
30066962	Bradley	GW	272
30066963	CR 126 Water	GW	322
30066151	Main Street Water	GW	367.8
30068052	IAP Worldwide Services	GW	66.9
30103504	Knife River	GW	13.2
30104121	Candee Angus Farm Inc	GW	650
30070792	Thatcher Co. of North Dakota Inc	GW	60.3
		Total Depletion	3672.3

Based on an annual depletion of 3612 AF, the average depletion from the Yellowstone River for pending or unperfected permits is 5.0 CFS. Since physical and legal availability of surface water can be shown for the Yellowstone River during all months of the year in excess of the combined depletion of 5.0 CFS for pending and unperfected permits, the Department finds the cumulative impacts of pending or unperfected permits will have no significant impact on the water of the Yellowstone River.

3. ***Describe any mitigation/stipulation measures:*** None identified

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

The only other alternative identified would be the no action alternative. This alternative would not allow the Applicant the benefit of utilizing water from their wells to develop their business.

PART III. Conclusion

1. Preferred Alternative

Issue a beneficial water use permit if the Applicant proves the criteria in §85-2-311 MCA are met.

Finding:

*Yes___ No_**X**__ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified.

Name of person(s) responsible for preparation of EA:
Name: Denise Biggar
Title: Regional Manager
Date: April 6, 2016