

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: Denbury Onshore, LLC. 5320 Legacy Dr. Plano, TX 75024
2. Type of action: Application for Beneficial Water Use Permit 42L 30072206
3. Water source name: Groundwater
4. Location affected by project: Sections 1 and 12 T7N R59E, sections 4-9, 15-22 and 26-30 T7N R60E, sections 2-4, 9-15, 22-26, and 36 T8N R59E, sections 19, 20 and 28-33 T8N R60E, Fallon County.
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The Applicant proposes to re-complete two oil wells as water wells in the Dakota Sandstone to provide water to flood an existing oil field. The application is for two water supply wells from which water will be injected into approximately one hundred injection wells. The application is for 310 GPM up to 500 AF/YR. 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:
(include agencies with overlapping jurisdiction)

Montana Department of Natural Resources and Conservation
Montana Natural Heritage Program
United States Fish and Wildlife Service
United States Bureau of Land Management

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity – Department hydrogeologists modeled the groundwater flux through the zone of influence at 11,396 AF/YR. The applicant is requesting 500 AF/YR. No net depletion to any surface water source is predicted.

Determination: No Impact.

Water quality – All water from the proposed wells would be re-injected and have no impact on surface water quality.

Determination: No Impact.

Groundwater – The project withdraws water from the Dakota Sandstone at approximately 4,500 feet below the ground surface and injects the water into the Red River Formation at approximately 9,000 feet below ground surface. Modeling suggests that the groundwater supply is sufficient and no specific impact to groundwater quality is indicated. No net depletion to surface water is predicted.

Determination: No Impact.

DIVERSION WORKS – The diversion would be through two wells drilled as oil wells and re-completed as water supply wells. The wells are far removed from any surface water and will not affect channels, riparian areas, flow or dams. Pipelines that connect the wells to the water injection system cross sparsely vegetated upland areas and are unlikely to create barriers to wildlife movement.

Determination: No Impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species – There are 24 species of concern in Fallon County according to the Montana Natural Heritage Program. There are five plant species of concern. Because the proposed project uses existing wells, has no surface discharge and is not predicted to have any impact on surface water, it is unlikely that any animal or plant species would be affected.

Determination: No Impact.

Wetlands – Wetlands in the area of the project are limited to man-made impoundments of ephemeral streams. These water bodies would not be affected by the use of wells to obtain groundwater from a deep aquifer.

Determination: No Impact.

Ponds – There are no ponds associated with the proposed project and no existing impoundments within at least one mile of the proposed water supply wells.

Determination: No Impact.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE – Withdrawal of groundwater to be re-injected for oil well flooding has no potential to affect soil quality, stability or moisture.

Determination: No Impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - Withdrawal of groundwater from existing wells to be re-injected for oil well flooding has no potential to affect vegetative cover or introduce noxious weeds.

Determination: No Impact.

AIR QUALITY - Withdrawal of groundwater from existing wells to be re-injected for oil well flooding has no potential to affect air quality.

Determination: No Impact.

HISTORICAL AND ARCHEOLOGICAL SITES – The proposed project uses existing infrastructure including well pads and service roads. Pipelines are in place because the wells were used as production wells in the past. No surface disruption is proposed as part of this project. According to Patrick Rennie, Montana State Archeologist, the nature of the proposed developments will have no effect to heritage properties.

Determination: No Impact.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY – No additional effects or demands on environmental resources are recognized.

Determination: No Impact.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS – There are no known locally adopted environmental plans or goals.

Determination: No Impact.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES – There are no local wilderness or recreational sites. The proposed project does not affect access to any activities.

Determination: No Impact.

HUMAN HEALTH – The proposed project has no recognized potential to affect human health.

Determination: No Impact.

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.

Determination: Not Applicable.

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 Impact.
- (b) Local and state tax base and tax revenues? No Impact.
- (c) Existing land uses? No Impact.
- (d) Quantity and distribution of employment? No Impact.
- (e) Distribution and density of population and housing? No Impact.
- (f) Demands for government services? No Impact.
- (g) Industrial and commercial activity? No Impact.
- (h) Utilities? No Impact.
- (i) Transportation? No Impact.
- (j) Safety? No Impact.
- (k) Other appropriate social and economic circumstances? No Impact.

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

Secondary Impacts: No secondary impacts are recognized.

Cumulative Impacts: No cumulative impacts of this project are recognized.

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

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 alternative to the proposed project is the no action alternative. The no action alternative prevents the Applicant from beneficial use of existing wells and available water to flood their oil field.

PART III. Conclusion

1. **Preferred Alternative:** issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

2. **Comments and Responses:** None

3. **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 environmental impacts resulting from the recompletion of oil well as water supply wells were recognized. An Environmental Assessment is the appropriate level of analysis and an EIS is not required.

Name of person(s) responsible for preparation of EA:

Name: Mark Elison

Title: Hydrologist

Date: 5/19/2015