



**Montana Department of Transportation
Biological Resources Report
Addendum**

District Biologist: Paul Sturm

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Project: Gore Hill Interchange
STPX 15 5(141)278
UPN 9345001

The Biological Resource Report (BRR) for this project was originally completed in December of 2019, linked here:
<https://app.mdt.mt.gov/pcms/bigDocument/search/61aaf06632cf1c406a2128ea/9345000ENBRRFNL.PDF>

A BRR Addendum for the wetland delineation was completed in March of 2020, linked here:
<https://app.mdt.mt.gov/pcms/bigDocument/search/61aaf24232cf1c406a227926/9345000ENBRRADD.PDF>

This addendum to the original BRR listed above only addresses the changes in the Biological Assessment-Threatened & Endangered Species and Proposed/Candidate Species that May Occur in the Project Area Section.

The determinations and discussion for grizzly bear (*Ursus arctos horribilis*) in the original BRR is still valid and has not changed.

Since the original BRR was completed, the wolverine (*Gulo gulo*) has been removed from the Proposed status that it was under. Since wolverine is no longer a proposed species under the Endangered Species Act (ESA), it is no longer being addressed under the ESA for this project.

The monarch butterfly (*Danaus plexippus*) has been designated as a Candidate species under the ESA since the original BRR was completed. An evaluation of the monarch butterfly follows.

Monarch (*Danaus plexippus*, Candidate)

Species Description

The monarch is a large species of butterfly with bright orange wings surrounded by a black border and covered with black veins. The black border has a double row of white

spots, present on the upper side of the wings. Adult monarchs are sexually dimorphic, with males having narrower wing venation and scent patches (USFWS 2020).

Status and Distribution

The monarch occurs in North, Central, and South America as well on Pacific Islands, Australia, and New Zealand, among other areas of the world (USFWS 2020, MNHP and FWP 2021). In Montana, the monarch is reported statewide (MNHP and FWP 2021). The monarch is a candidate species wherever it is found and is not yet listed or proposed for listing. There are generally no Section 7 requirements for candidate species, but listing may occur before the expected project completion timeframe.

Life History and Habitat Requirements

Monarchs may occur in native prairie, foothills, open valley bottoms, open weedy fields, roadsides, pastures, marshes, suburban areas, and rarely above treeline in alpine terrain during migration. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.), or other larval food plants, including dogbane (*Apocynum*) and other genera in the dogbane family (*Apocynaceae*) (USFWS 2020, MNHP and FWP 2021). Larvae emerge after two to five days and develop over a period of 9 to 18 days, feeding on milkweed and sequestering toxic cardenolides as a defense against predators. The larva then pupate into chrysalis before emerging 6 to 14 days later as an adult butterfly. Adult monarchs feed on a variety of common flowering plants. Multiple generations of monarchs are produced during the breeding season. Most adult butterflies live approximately two to five weeks, but overwintering adults enter into suspended reproduction and may live six to nine months (USFWS 2020). Monarchs are frost-intolerant and migrate long distances from summer feeding and egg-laying habitat to overwinter in Mexico or southern California.

Reasons for Decline

USFWS lists the following reasons for decline of monarch populations: loss and degradation of habitat (from conversion of grasslands to agriculture, widespread use of herbicides, logging/thinning at overwintering sites in Mexico, senescence and incompatible management of overwintering sites in California, urban development, and drought), continued exposure to insecticides, and effects of climate change (USFWS 2020).

Environmental Baseline/Occurrence in the Project Area

Monarchs have been reported throughout Montana. No recorded occurrences of monarchs were included in the MNHP MapViewer Database (MNHP) in the vicinity of the project, but observations of insects are not as likely to be recorded as those of larger animals. Presence of monarchs at the project site is unknown but could include adults feeding and reproducing at the site, as the project site contains some *Asclepias* (milkweed) species, which are considered suitable larval food species. No monarchs have been observed during field investigations at the project site.

Cumulative Effects Analysis

No other projects are known that would affect monarchs at or near the project site. This project would pose no cumulative impacts to the monarch.

Effects of the Action/Impacts Analysis

Monarchs are frost-intolerant and typically do not arrive in Montana until June or July (MNHP and FWP 2021). Any vegetation to be removed by the project will likely have been removed by June, precluding monarch from using the project area while construction is occurring. The project site contains no overwintering habitat for monarch. An abundance of habitat containing preferred larval and adult food species occurs adjacent to the project extent. No impact is expected to the monarch from the proposed project.

Avoidance, Minimization, and Recommended Conservation Measures

Vegetation clearing will be limited to the minimum necessary to follow the project design. Vegetation will likely be cleared prior to June and therefore will be completed before monarchs complete their migration to Montana.

Proposed Determination of Effect

Based on the lack of suitable overwintering habitat, timing of vegetation clearing in relation to the timing of the arrival of monarchs in Montana, and the abundance of habitat containing adult and larval food species adjacent to the project area, the proposed project will have **No Impact** on the monarch. The project is **unlikely to jeopardize the continued existence of** the monarch. In the event that the monarch becomes listed prior to the project completion, this project would have **no effect** to monarch.

Sources Cited

Montana Natural Heritage Program (MNHP) MapViewer Database. 2022. Website accesses on April 7, 2022.

Montana Natural Heritage Program and Montana Fish, Wildlife, and Parks (MNHP and MFWP). 2021. Montana Field Guide. Accessed April 2022 at: <http://fieldguide.mt.gov/>

U.S. Fish and Wildlife Service. 2020. Monarch (*Danaus plexippus*) Species Status Assessment Report. V2.1 96 pp + appendices.