DEPARTMENT OF NATURAL RESOURCES

Threat Assessment for *Rubus stipulatus*

A threat assessment for *Rubus stipulatus* was conducted in Spring 2026 based on the IUCN Threats Classification Scheme (IUCN, 2022). The threats included are those deemed the most critical to address to reach the thresholds set in the recovery criteria. Threats in Minnesota were determined based on a species status assessment, information from the MN DNRs *Rubus stipulatus* Rare Species Guide profile (MN DNR, 2026), information from the *Rubus stipulatus* NatureServe Explorer profile (NatureServe, 2024), and local expert opinion.

Tables

Table 1. IUCN Threat Classification 1 - Residential and Commercial Development. Critical sub-threats are 1.1 – Housing and Urban Areas and 1.2 – Commercial and Industrial Areas.

Sub-Threats	Discussion
Housing and Urban Areas; Commercial and Industrial Areas	The core area of this species' range in MN is within the Anoka Sand Plain, an area experiencing explosive residential and commercial growth. As of 2026, there are 13 recorded residential or commercial development projects in Minnesota causing take of *R. stipulatus*. Unpermitted projects have likely also caused impacts. While direct mortality is a key stressor, there are also negative impacts through loss of surrounding habitat, habitat fragmentation, genetic isolation, and habitat degradation, particularly alteration in hydrology.

Table 2. IUCN Threat Classification 4 - Transportation and Service Corridors. Critical sub-threats are 4.1 – Roads and Railroads and 4.2 - Utility and Service Lines.

Sub-Threats	Discussion
Roads and Railroads; Utility and Service Lines	The construction and modification of roads associated with development is a source of past and likely future permitted takings. Also, there are several occurrences that have been reduced only to individuals remaining on degraded roadsides, right-of-way habitats, or utility corridors. *R. stipulatus* is not protected from taking in public road right of ways, so these occurrences are at particularly high risk.

Table 3: IUCN Threat Classification 7 – Natural Systems Modifications. Critical sub-threats are 7.1 - Fire and Fire Suppression, defined as "Suppression or increase in fire frequency and/or intensity outside of its natural range of variation," and 7.2 - Dams and Water Management or Use, defined as "Changing water flow patterns from their natural range of variation either deliberately or as a result of other activities."

Sub-Threats	Discussion
Fire and Fire Suppression	The natural system that *R. stipulatus* is a part of is maintained by regular disturbance, such as fire. Altering the frequency of natural disturbances can have negative impacts. Active habitat management can be used to lessen negative impacts. The tools needed to accomplish this goal will vary from site to site, but dormant season prescribed burns are preferred. Burns must be conducted at a minimum four-year rotation (three growing seasons of rest between burns). *R. stipulatus* is top killed by fire and needs time to recover after disturbance.
Dams and water management or use	Groundwater resource use and changes to surface water hydrology in the Anoka Sand Plain have increased with development. Ditches, drain tiles, borrow pits, impoundments, storm water ponds, dewatering during the growing season and other ground and surface water abstraction are all deleterious to *R. stipulatus'* habitat through changing ground or surface water dynamics. Even where populations occur on protected land, negative hydrologic impacts can occur if there is an insufficient buffer between the population and neighboring activities.

Table 4. IUCN Threat Classification 8 - Invasive and Other Problematic Species, Genes and Diseases. Critical sub-threats are 8.1 - Invasive Non-Native or Alien Species or Diseases and 8.2 - Problematic Native Species or Diseases.

Sub-Threats	Discussion
Invasive Non-Native or Alien Species; **Problematic Native Species**	The small, fragmented nature of *R. stipulatus'* habitat within a transition zone makes displacement by problematic species more likely due to edge effects. *Phalaris arundinacea* (Reed Canary Grass), exotic and aggressive native stands, and woody vegetation are the main concerns. If the extent of encroachment is limited, control methods should favor manual removal over use of chemical or heavy machinery, which carry additional risk to *R. stipulatus*.

References

IUCN. *Threats Classification Scheme* (Version 3.3). International Union for the Conservation of Nature. 2022. https://www.iucnredlist.org/resources/threat-classification-scheme

MN DNR. *Rubus stipulatus*. 2026. Minnesota Department of Natural Resources Rare Species Guide.

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https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.154280/Rubus_stipulatus