

**XX. HIERARCHY PLACEMENT UNDETERMINED**

***VII.C.XX. ERICAMERIA NAUSEOSA SAND DEPOSIT SPARSE VEGETATION [PROVISIONAL]***

**Rubber Rabbitbrush Slide Deposit Sparse Vegetation [Provisional]**

**Rubber Rabbitbrush Slide Deposit Sparse Vegetation [Provisional]**

**ELEMENT CONCEPT**

**GLOBAL SUMMARY:** This association has only been described from Zion National Park and Ouray National Wildlife Refuge in Utah, but is likely more common in similar habitats throughout the interior western U.S. At Zion, a stand was described from a colluvial slope below a sandstone cliff in sandy soil derived from sandstone residuum. Whereas, at Ouray it was described from sand dunes on slopes below the bluff along the river and on sand sheets in flatter areas. Sites are generally gentle to moderately sloping, but range from flat to steep and may occur on any aspect. The vegetation is characterized by a typically sparse short shrub layer 5-20% cover (but may range up to 30% cover) that is dominated by *Ericameria nauseosa* (at least half the cover). Other shrubs or dwarf-shrubs may include *Artemisia dracunculus*, *Atriplex canescens*, *Chrysothamnus viscidiflorus*, *Ephedra torreyana*, *Eriogonum corymbosum*, *Ipomopsis congesta*, *Gutierrezia sarothrae*, *Opuntia polyacantha*, or *Yucca elata* var. *utahensis*. The herbaceous layer generally sparse and is dominated by perennial graminoids such as *Achnatherum hymenoides*, *Aristida purpurea*, *Hesperostipa comata*, and *Sporobolus cryptandrus*. Forb cover is sparse.

**USFWS Wetland System:** TERRESTRIAL

**Ouray National Wildlife Refuge Environment:** Sand is deposited into dunes on the midslopes and knolls of badlands bluffs, which are present on both sides of the Green River Valley. Short-statured *Ericameria nauseosa* shrubs dominate these sites, serving to stabilize the dunes from blow-out formation. Dune erosion still occurs, on one site the shrubs were described as pedestaled due to sand removal by wind. Typically the dunes are moderately steep, to 5% slope, but one site of 20% slope was also sampled.

**Global Environment:** This association has only been described from Ouray National Wildlife and Ouray National Wildlife Refuge in Utah, but is likely more common in similar habitats throughout the interior western U.S. Elevation ranges from 1430-1920 m (4700-6300 feet). At Zion, a stand was described from a colluvial slope below a sandstone cliff in sandy soil derived from sandstone residuum. Whereas, at Ouray it was described from sand dunes on slope below the bluff along the river and on sand sheets in flatter areas. Sites are generally gentle to moderately sloping, but range from flat to steep and may occur on any aspect.

**VEGETATION DESCRIPTION**

**Ouray National Wildlife Refuge Vegetation:** *Ericameria nauseosa* Sand Deposit Sparse Vegetation vegetation typically provides from 10-30% foliar cover, about 50% of that is provided by *Ericameria nauseosa*. Where this type occurs on knolls extending from bluff edges dominated by *Ephedra torreyana* Dwarf-shrubland, *Ephedra torreyana*, *Artemisia dracunculus*, and *Leptodactylon pungens* comprise a portion (up to 5%) of the foliar cover of the stand. Shrub associates of *Ericameria nauseosa* include *Chrysothamnus viscidiflorus*, *Atriplex canescens*, *Gutierrezia sarothrae*, and *Opuntia polyacantha*. Common grass species of the sand dunes are bunchgrasses, including *Achnatherum hymenoides*, *Sporobolus cryptandrus*, and *Aristida purpurea*. *Sophora stenophylla* is a common forb on these sites.

**Global Vegetation:** This association is characterized by a typically sparse short shrub layer 5-20% cover (but may range up to 30% cover) that is dominated by *Ericameria nauseosa* (at least half the cover). Other shrubs or dwarf-shrubs may include *Artemisia dracunculus*, *Atriplex canescens*, *Chrysothamnus viscidiflorus*, *Ephedra torreyana*, *Eriogonum corymbosum*, *Ipomopsis congesta*, *Gutierrezia sarothrae*, *Opuntia polyacantha*, or *Yucca elata* var. *utahensis*. The herbaceous layer generally sparse and is dominated by perennial graminoids such as *Achnatherum hymenoides*, *Aristida purpurea*, *Hesperostipa comata*, and *Sporobolus cryptandrus*. Forb associates may include *Chamaesyce glyptosperma*, *Cirsium* spp., *Heterotheca villosa*, *Penstemon palmeri*, *Phacelia heterophylla*, and *Sophora stenophylla*.

**Global Dynamics:** The sandy substrate is an important environmental variable whether created by active eolian processes or from sandstone residuum.

## Ouray National Wildlife Refuge Vegetation Mapping Project

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### MOST ABUNDANT SPECIES

#### Ouray National Wildlife Refuge

| <i>Stratum</i> | <i>Species</i>   |
|----------------|--|
| SHRUB          | <i>Ericameria nauseosa</i> , <i>Chrysothamnus viscidiflorus</i> , <i>Ephedra torreyana</i> |
| GRAMINOID      | <i>Achnatherum hymenoides</i> , <i>Sporobolus cryptandrus</i> , <i>Aristida purpurea</i> , |
| FORB           | <i>Sophora stenophylla</i>   |

#### Global

| <i>Stratum</i> | <i>Species</i>  |
|----------------|---|
| SHRUB          | <i>Ericameria nauseos</i> , <i>Atriplex canescens</i> , <i>Chrysothamnus viscidiflorus</i> , <i>Ephedra torreyana</i> ,<br><i>Gutierrezia sarothrae</i> , <i>Opuntia polykantha</i> |
| GRAMINOID      | <i>Achnatherum hymenoides</i> , <i>Aristida purpurea</i> , <i>Hesperostipa comata</i> , <i>Sporobolus</i><br><i>cryptandrus</i>   |
| FORB           | <i>Heterotheca villosa</i> , <i>Sophora stenophylla</i>   |

### CHARACTERISTIC SPECIES

#### Ouray National Wildlife Refuge

| <i>Stratum</i> | <i>Species</i>   |
|----------------|--|
| SHRUB          | <i>Ericameria nauseosa</i> , <i>Chrysothamnus viscidiflorus</i> , <i>Achnatherum hymenoides</i> , <i>Sporobolus</i><br><i>cryptandrus</i> , <i>Sophora stenophylla</i> |

#### Global

| <i>Stratum</i> | <i>Species</i>   |
|----------------|--|
| SHRUB          | <i>Ericameria nauseos</i> , <i>Chrysothamnus viscidiflorus</i>                             |
| GRAMINOID      | <i>Achnatherum hymenoides</i> , <i>Hesperostipa comata</i> , <i>Sporobolus cryptandrus</i> |

### OTHER NOTEWORTHY SPECIES

#### Global

| <i>Stratum</i> | <i>Species</i> |
|----------------|----------------|
|----------------|----------------|

#### GLOBAL SIMILAR ASSOCIATIONS:

#### GLOBAL STATUS AND CLASSIFICATION COMMENTS

**Global Conservation Status Rank:** G?.

**Global Comments:** This association has only been described from only 2 areas but is likely more common.

#### ELEMENT DISTRIBUTION

**Ouray National Wildlife Refuge Range:** *Ericameria nauseosa* Sand Deposit Sparse Vegetation occupies sand dunes and deep, sandy soils within the Refuge. These sites typically occur on the knolls or midslopes below bluffs where wind-blown sand (eolian deposits) collects and forms dunes. *Ericameria nauseosa* also occupies deep sandy deposits on more even terrain on the west side of the Refuge, but here it often does not supply sufficient foliar cover to be considered a shrubland type.

**Global Range:** This association has only been described from Ouray National Wildlife Refuge and Ouray National Wildlife Refuge in Utah, but is likely more common in similar habitats throughout the interior western U.S.

**Nations:** US

**States/Provinces:** UT

#### ELEMENT SOURCES

**Ouray National Wildlife Refuge Inventory Notes:**

**Classification Confidence:** 3    **Identifier:** CEGL002980

**REFERENCES:** (n/a)