**Ecosystem Type: TUNDRA**

**Category: Natural Hazard Mitigation**

1. **Materials**

***Supplier*** – Results from a natural hazard like a drought period can be mediated by ecosystems like tundras. Tundra ecosystems maintain the overall moisture of vegetative plants, which keeps productivity levels higher than for plants under heat stress (Gamon et al., 2013).

***Driver*** – not applicable

***Demander*** – not applicable

1. **Nutrition**

***Supplier*** – not applicable

***Driver*** -not applicable

***Demander*** - not applicable

1. **Energy**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** – not applicable

1. **Mediation of Waste, Toxics, and Other Nuisances**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** – not applicable

1. **Mediation of Flows**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** – not applicable

1. **Maintenance of Physical, Chemical, and Biological Indicators**

***Supplier*** – As the permafrost of tundras thaw due to increasing global temperatures, vegetative species are starting to offset the losses of carbon dioxide because they are starting to grow in these areas. While thawing of these ecosystems increases the effects carbon has on the atmosphere, tundra plants help decrease the impact by becoming more productive in a warmer environment (Schuur et al., 2009).

***Driver*** – not applicable

***Demander*** – not applicable

1. **Spiritual, Symbolic, Religious, and Social Experiences**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** – not applicable

1. **Physical and Intellectual Interactions w/ Biota, Ecosystems, and Land/Seascapes**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** - not applicable

**Sources:**

Gamon, J.A. et al. (2013) Spatial and temporal variation in primary productivity (NDVI) of coastal Alaskan tundra: Decreased vegetation growth following earlier snowmelt. *Remote Sensing of Environmnet, 129*, 144-153. <https://doi.org/10.1016/j.rse.2012.10.030>. [abstract only]

Schuur, E.A.G. et al. (2009) The effect of permafrost thaw on old carbon release and net carbon exchange from tundra. *Nature, 459,* 556-559. DOI: 10.1038/nature08031. [abstract only]