

ENSR

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August 1, 2006

Mark Rits
Project Coastal Geologist
Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, MA 01754

**RE: Site Assessment
Maritime Shrubland Community
53-63 Baxter Road
Nantucket, MA**

Dear Mark:

As requested, an ENSR biologist investigated the maritime shrubland habitat present on the coastal bank at the above-referenced properties. The site investigation was performed to assess the overall wildlife habitat potential and wildlife functions provided by the maritime shrubland community. The site inspection occurred on July 25, 2006 under clear skies with high humidity and warm temperatures.

The maritime shrubland community consists of plant species adapted to the exposed environment on the coastal bank at the site where wind and salt spray deposits influence the species composition and height of the vegetation. The plant community at the site consists of dense patches of wind sheared shrubs with small, scattered, open areas occupied by a variety of common grasses and herbaceous species. The maritime shrubland community provides stabilization to the coastal bank and reduces erosion due to wind, rain, and wave action.

Dominant woody species recorded in the maritime shrubland community during the site investigation were northern bayberry (*Myrica pensylvanica*), salt spray rose (*Rosa rugosa*), poison ivy (*Toxicodendron radicans*), and wild grape (*Vitis labrusca*). Less abundant woody associates include beach plum (*Prunus maritima*), arrow-wood (*Viburnum dentatum*), Virginia rose (*Rosa virginiana*), eastern black cherry (*Prunus serotina*), and blackberries (*Rubus* spp.). Common herbaceous species recorded in the site survey include American beachgrass (*Ammophila breviligulata*), orchard grass (*Dactylis glomerata*), sheep fescue (*Festuca ovina*), bentgrass (*Agrostis* sp.), and velvet grass (*Holcus lanatus*).

A preliminary inventory of the higher vascular plant species recorded in the maritime shrubland community on the coastal bank is presented in Appendix A with general cover estimates. The maritime shrubland habitat classification assigned to the plant community by ENSR is based on the habitat descriptions in "Classification of the Natural Communities of Massachusetts" by Swain and Kearsley (2000).

Wildlife habitat values and functions for this plant community type include providing nesting areas for songbirds, such as song sparrow, eastern towhee, and breeding sites for small mammals, such as meadow vole and white-footed mouse. Bird species observed feeding in the maritime shrubland habitat during the site investigation included relatively few observations due to the time of the survey. Recorded species included song sparrow, American goldfinch, and tree sparrows.

However, species diversity would increase dramatically if a bird survey was performed during the peak fall migration period when the maritime shrubland community is a critically important habitat, since it provides cover habitat and forage habitat for a diverse group of fall migrants. The fruits and seeds

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produced in the maritime shrubland community provide a crucial food source during the fall migration. For additional information on this subject, please refer to the enclosed article, "Patterns of Frugivory and Energetic Condition in Nearctic Landbirds during Autumn Migration" by Parrish 1997).

Northern bayberry is a particularly important fruit-bearing shrub in the maritime shrubland community as it is a preferred food source for several migratory species, including tree sparrow, yellow rumped-warbler, gray catbird, and eastern bluebird as noted in "Trees, Shrubs, and Vines for Attracting Birds" by DeGraaf and Witman (1979). The blackberry and rose fruits and seeds are also important fruit-bearing shrubs.

ENSR strongly recommends that the proposed site work be seriously considered by the Nantucket Conservation Commission since the site work will contribute directly to the long term protection and preservation of this critically important habitat.

Sincerely yours,



Donald G. Schall
Senior Biologist

Enclosures

APPENDIX A

Higher Vascular Plant Species Recorded in the Maritime Shrubland Community

Shrubs:

| Common Name | Scientific Name | Estimated Percent Cover |
|----------------------|----------------------------|--------------------------------|
| Northern Bayberry | <i>Myrica pensylvanica</i> | 60-65% |
| Salt-spray Rose | <i>Rosa rugosa</i> | 30-35% |
| Virginia Rose | <i>Rosa virginiana</i> | 10-15% |
| Blackberry | <i>Rubus arenicola</i> (?) | 10-15% |
| Beach Plum | <i>Prunus maritima</i> | 10-15% |
| Eastern Black Cherry | <i>Prunus serotina</i> | 10-15% |
| Arrow-wood | <i>Viburnum dentatum</i> | 5-10% |
| Common Elderberry | <i>Sambucus canadensis</i> | 1-5% |
| Scotch Broom | <i>Cytisus scoparius</i> | 1-5% |
| Common Privet | <i>Ligustrum vulgare</i> | 1-5% |

Vines:

| Common Name | Scientific Name | Estimated Percent Cover |
|--------------------|-------------------------------|--------------------------------|
| Poison Ivy | <i>Toxicodendron radicans</i> | 35-40% |
| Wild Grape | <i>Vitis labrusca</i> | 10-15% |
| Bindweed | <i>Convolvulus</i> sp. | 1-5% |

Herbaceous:

| Common Name | Scientific Name | Estimated Percent Cover |
|---------------------|---------------------------------|--------------------------------|
| Velvet Grass | <i>Holcus lanatus</i> | 10-15% |
| American Beachgrass | <i>Ammophila breviligulata</i> | 15-20% |
| Orchard Grass | <i>Dactylis glomerata</i> | 5-10% |
| Bentgrass | <i>Agrostis</i> sp. | 5-10% |
| Rough Goldenrod | <i>Solidago rugosa</i> | 1-5% |
| Goldenrod | <i>Solidago</i> sp. | 5-10% |
| Seaside goldenrod | <i>Solidago sempervirens</i> | 1-5% |
| Oxeye Daisy | <i>Leucanthemum vulgare</i> | 1-5% |
| Common Mullein | <i>Verbascum thapsus</i> | 1-5% |
| Queen Ann's-lace | <i>Daucus carota</i> | 1-5% |
| Yarrow | <i>Achillea millefolium</i> | 1-5% |
| Saltwort | <i>Salsola kali</i> | 1-5% |
| Pilewort | <i>Erechtites hieraciifolia</i> | 1-5% |
| Wild Radish | <i>Raphanus raphanistrum</i> | 1-5% |
| Filed Thistle | <i>Cirsium</i> sp. | 1-5% |