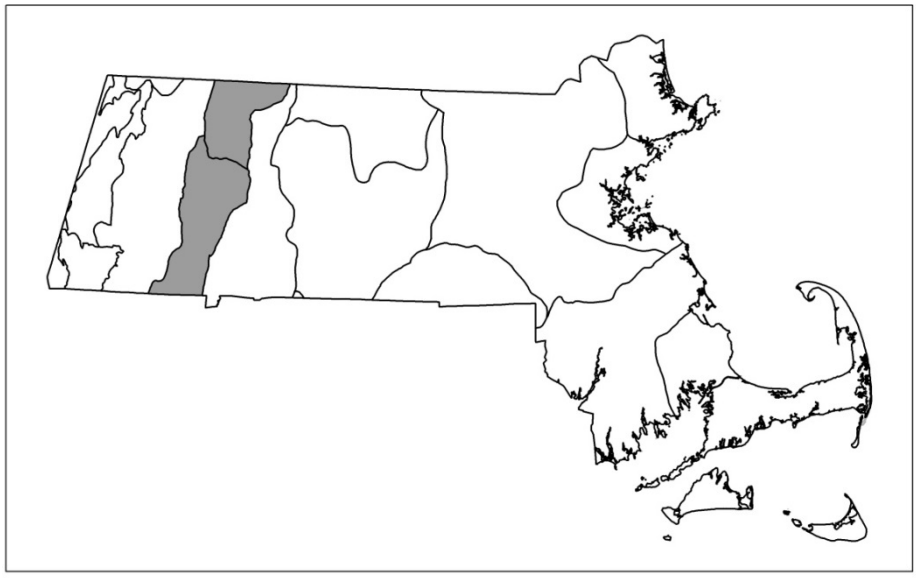
Riverside Seep Community

Community Code: CP2A0B2200

State Rank: S2



Concept: Mixed herbaceous community along river shores where groundwater discharge provides mineral enrichment, often kept open by flood and ice scour.

Environmental Setting: Riverside Seep Communities occur at the base of steep riverbanks where groundwater discharges from adjacent upland slopes. Groundwater discharge in seeps may be diffuse or concentrated in seepage rivulets, and groundwater flow appears to vary substantially among seeps; some seeps may dry out during the summer, others flow year-round. They are often associated with Riverside Rock Outcrop Communities or near rapids. Others may be at the base of talus slopes and associated with High-energy Riverbank Communities or gravel bars. Organic soils are seldom present except in sheltered areas. Mineral-rich seepage leads to a high species diversity of mostly herbaceous plants. Periodic flooding and, likely, ice scour from the river helps to prevent woody shrub encroachment.

Vegetation Description: The vegetation of Riverside Seep Communities is variable, apparently related to the flow and mineral content of groundwater. Seeps that dry during the summer months often have relatively sparse vegetation. The wettest parts of Riverside Seep Communities also have bare ground, including wet rocks and sometimes open water, but are typically mossy with a mixture of herbs and sedges. The general vegetation of Riverside Seep Communities that flow year-round is fairly dense and includes many graminoids (not all at each site) such as brown beak-rush (*Rhynchospora capitellata*), creeping spike-rush (*Eleocharis palustris*), scabrous sedge (*Carex scabrata*), sallow sedge (*C. lurida*), northern awned-sedge (*Carex gynandra*), wool-grass (*Scirpus cyperinus*), grass-leaf rush (*Juncus marginatus*), jointed rush (*J. articulatus*), marsh rush (*J. canadensis*), soft rush (*J. effusus*), Canada

bluejoint (*Calamagrostis canadensis*), fascicled panic-grass (*Dichanthelium acuminatum* ssp. *fasciculatum*), riverbank wild rye (*Elymus riparius*), upland bentgrass (*Agrostis perennans*), and green-fruited bur-reed (*Sparganium erectum*). Forbs include northern dwarf St. John's-wort (*Hypericum boreale*), swamp saxifrage (*Micranthes pensylvanica*), sensitive fern (*Onoclea sensibilis*), and marsh bellflower (*Campanula aparinoides*). Other characteristic herbs include spotted joe-pye-weed (*Eutrochium maculatum*), boneset (*Eupatorium perfoliatum*), orange jewelweed (*Impatiens capensis*), and fringed loosestrife (*Lysimachia ciliata*). Woody species such as speckled alder (*Alnus incana* ssp. *rugosa*) and willows (*Salix* spp.) are often present but not dominant. Muskflower (*Mimulus moschatus*), Canadian burnet (*Sanguisorba canadensis*), and golden alexanders (*Zizia aurea*) are indicative of minerotrophic conditions, and as a group are good indicator species of the community type. The non-native plants colt's foot (*Tussilago farfara*) and purple loosestrife (*Lythrum salicaria*) can also be abundant in the community. The vegetation described here is from sites in the western part of the state; eastern sites may be different.

Differentiating Occurrences: Riverside Seep Communities are small-patch communities that often occur with and grade into High-energy Rivershore Marshes and High-energy Riverbank Communities along high-energy rivers. Riverside Seep Communities occur at the base of steep riverbanks where groundwater discharges from the bottom of the upland slope; they are wetter than associated High-energy Rivershore Meadows and High-energy Riverbank Communities. Muskflower, Canadian burnet, and golden Alexanders as a group are good indicators of Riverside Seep Communities. High-energy Rivershore Meadows are densely vegetated with a characteristic group of dominant plants - hemp dogbane, riverside-sedge and Canadian burnet - in a mix with other forbs and graminoids. High-energy Riverbank Communities have, on average, sparser vegetation and more bare ground than do High-energy Rivershore Meadows or Riverside Seep Communities.

Associated Fauna: Because they are small communities, Riverside Seeps are part of the habitat of the wide-ranging riverine and upland animals.

Public Access: Gilbert A. Bliss State Forest, Chesterfield; Knightville Dam (US Army Corps of Engineers), Huntington; Catamount State Forest, Charlemont. These communities are disturbed by trampling from recreation which can lead to the invasion of non-native plant species already present at many sites.

Threats: It is not known to what extent dam construction and the resulting altered hydrology have affected the occurrence of riverside seep communities. These communities are disturbed by trampling from recreation, which leads to the invasion of non-native plant species. Purple loosestrife can be dominant where disturbance is high.

Management Needs: Removal of non-native plant species and maintenance of natural flooding regimes.

USNVC/NatureServe: G792. Laurentian and Acadian Riverscour Vegetation. G755. Central Riverine Wetland Vegetation - Often occurs with A3647 *Carex torta* Riverscour Alliance - *Carex torta* - *Apocynum cannabinum* - *Cyperus* spp. Herbaceous Vegetation [CEGL006536].