Alluvial Atlantic White Cedar Swamp

State Rank: S2 - Imperiled

Alluvial AWCS with AWC trunk and dense shrubs. Photo: Melissa Dow Cullina, NHESP.

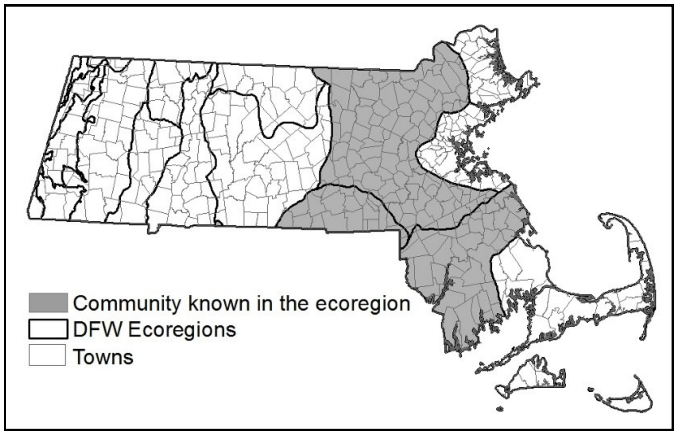
Alluvial Atlantic White Cedar Swamps occur along rivers and ponds where Atlantic white cedar is codominant with red maple.

Description: Alluvial Atlantic White Cedar Swamps (AWCS) occur within the floodplain of low gradient rivers and streams or at the fringes of open marshy areas along ponds. River floodwaters provide more nutrients than occur in other Atlantic white cedar (AWC) wetlands. But, like other AWCS and unlike other floodplain communities, they are often poorly drained, retaining sediment saturating flood water well into the growing season. Groundwater from uplands and surrounding wetlands may maintain soil moisture over the growing season. Soils are typically silt loams with a mucky surface organic layer. Alluvial AWCS often occur in wetland mosaics with other alluvial and floodplain forests and swamps, as well as more open wetland communities.

Characteristic Species: All AWCS are defined as having >25% cover of AWC in the canopy. Plants that commonly co-occur with AWC include red maple, high-bush blueberry, swamp azalea, and sphagnum moss. Alluvial AWCS are highly variable; besides the generally associated species, sweet pepperbush and silky dogwood occur in the sometimes dense shrub layer. The herb layer has species common to very wet, open or enriched sites, including sensitive fern, royal fern, bugleweed, and marsh St. John's-wort.

Differentiating from Related Communities: Alluvial AWCS differ from other AWC swamps in that they annually or biannually receive river floodwaters. Silky dogwood, sensitive and royal ferns, bugleweed, and marsh St. John's-wort are more common than in other AWCS, and sphagnum carpets are less dense in regularly flooded areas. As with all natural communities, transitions and mixes occur. Coastal AWCS are not along floodplains, although geographic distribution and resultant coastal species may overlap with Alluvial AWCS. Inland AWCS may also overlap geographically, but are also not along rivers. Yellow Birch is more common than in Alluvial AWCS. Inland AWCS have lower abundance of coastal indicators such as greenbrier, inkberry, dangleberrry, swamp sweetbells, Virginia chain-fern, and netted chain-fern than Alluvial or Coastal AWCS. In Alluvial Red Maple Swamps, silver maple is often codominant with red maple; there is very little AWC (<25% cover), if it is present at all.

Atlantic White Cedar branch. Photo: Jennifer Garrett, NHESP.



Habitat for Associated Fauna: Alluvial AWCS contribute variation to the habitats of wide-ranging wildlife species. AWCS can function as vernal pool habitat if water remains standing for 2-3 months and they lack fish; these areas provide important amphibian breeding habitat. Riverine Odonates use Alluvial AWCS adjacent to rivers for shelter.

Examples with Public Access: Maple Park Conservation Area, Mansfield; West Hill Dam property (USACE), Uxbridge; Moose Hill WS (MAS), Sharon; Bungay River Conservation Area, Attleboro; Noquochoke WMA, Dartmouth.

Mixed canopy Alluvial AWCS with purple loose-strife. Photo: Patricia Swain, NHESP.

From: *Classification of Natural Communities of Massachusetts* http://www.mass.gov/nhesp/ Updated: 2016
Natural Heritage & Endangered Species Program, Division of Fisheries & Wildlife, 1 Rabbit Hill Rd., Westborough, MA 01581 (508) 389-6360