



River and Lake Drawdown Community

Community Code: CP2A0B250A

State Rank: SNR



Concept: Sparsely to moderately vegetated exposed drawdown areas of reservoirs and behind dams.

Environmental Setting: River and Lake Drawdown Communities develop on sediments exposed when water levels are low in impounded waterbodies. They may be expansions of riverside beaches and pointbars, or mudflats exposed by drawdown for any reason including for dam repair or removal. There is wide variability in substrate type, with rocky or sandy sediments abutting beaches and pointbars where water regularly flows, or mudflats where impoundment water is slow or still. Large areas of bottom sediments may be exposed as a result of drawdown. Sites are submerged when impoundments are full.

Vegetation Description: The vegetation of the River and Lake Drawdown Community varies in space and time due to differences in substrate, flooding regime, length of time since flooding, geography, and other physical constraints. Vegetation is usually low-growing with cover varying from very sparse to dense (<10% to >80% cover). Weedy (opportunistic, non-competitive, short-lived, quick to reproduce) species quickly dominate recently exposed sediments. Early community development can be from species expanding ranges from beaches, pointbars, or backwater mudflats, or from growth of long-surviving seeds left in the seed bank after previous drawdowns. These pioneers are quickly supplemented by readily transported seeds and plant parts from surrounding areas. Typical species include smartweeds (*Polygonum* and *Persicaria* spp.), water purslane (*Ludwigia palustris*), false pimpernel (*Lindernia dubia*), and various graminoids such as sandbar-lovegrass (*Eragrostis hypnoides*), sand sedge (*Bulbostylis capillaris*), awned flatsedge (*Cyperus squarrosus*),



spike-rushes (*Eleocharis* spp.), and beak rushes or horned sedges (*Rhynchospora* spp.). Some stranded floating-leaved or emergent aquatic plants may temporarily survive in exposed sediments, including water lilies (*Nymphaea* or *Nuphar* spp.), bulrushes (*Bolboschoenus* spp.), and rushes (*Juncus* spp.). A wide range of other native and non-native species may occur.

Differentiating Occurrences: River and Lake Drawdown Communities occur on often large areas of exposed sediments of reservoirs and behind dams when water levels are lowered. Riverine Pointbar and Beach Communities are in high-energy stream channels on sand or gravel. Freshwater Mud Flat Communities have low, sparse, annual herbaceous vegetation on recently exposed muddy (fine mixed organic and mineral materials) sediments in river backwaters and ponds, where they may include stranded aquatic vegetation. The drawdown community shares many of the same opportunistic species of mud flats and pointbars, but may cover more extensive areas.

Associated Fauna: Wide-ranging animals include River and Lake Drawdown Communities opportunistically as part of their habitats. Shorebirds forage for invertebrates on the exposed sediments of these communities throughout their breeding season and during migration. Adult fish can normally swim to deeper water unless caught in isolated depressions; however, a year's reproductive class can be lost if fish have spawned on sediments that become exposed. If sediments become dewatered or desiccated, the mortality of the benthic-dwelling organisms, such as freshwater mussels or dragonfly larvae, would increase.

Public Access: The communities are ephemeral and depend on recent management. They are potentially statewide, in any ponded river or reservoir.

Threats:

Management Needs:

USNVC/NatureServe: Related to: River Mudflats Sparse Vegetation [CEGL002314]; Lake Mudflats Sparse Vegetation [CEGL002313]; Inland Freshwater Strand Beach Sparse Vegetation [CEGL002310]. Included in the broadly described: *Lysimachia ciliata* - *Apocynum cannabinum* Sparse Vegetation [CEGL006554]; Related concept to: Riverine Sand Flats - Bars Sparse Vegetation [CEGL002049].