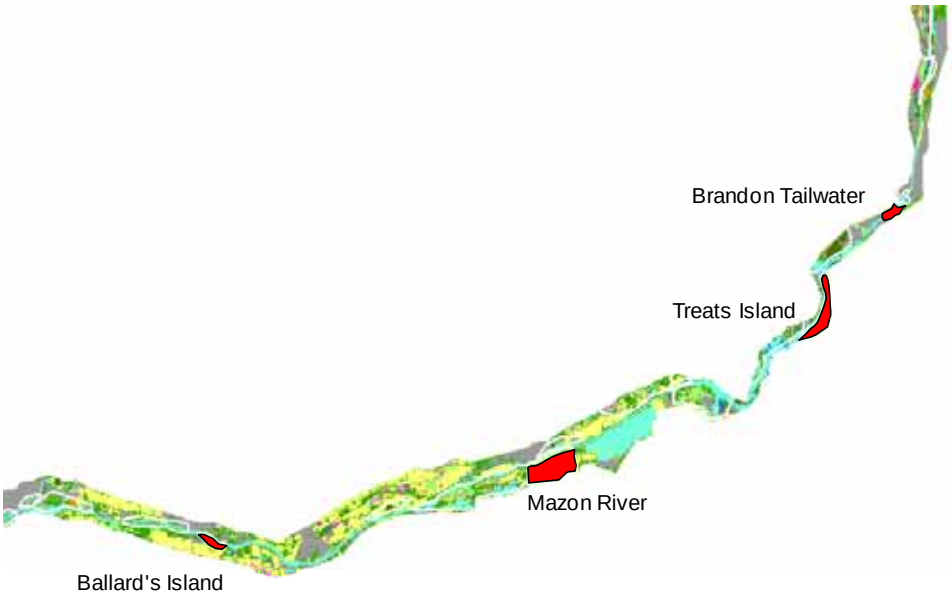
US Army Corps of Engineers
Rock Island District

Illinois River Reach
Ecosystem Restoration – High Priority Subareas

Upper Mississippi River System - Navigation and Ecosystem Sustainability Program

Upper Illinois River

The Upper Illinois River is a highly regulated reach with higher head dams in the steep valley reach above Starved Rock, Illinois. The ecosystem restoration needs are in backwater and side channel habitat in the Brandon Road Tailwater, secondary channels at Treat's Island and Ballard Island, and tributary confluence restoration at the Mazon River.



Brandon Road Tailwater

The Brandon Road Dam Tailwater is a high quality channel and braided channel subarea that is a Illinois Department of Natural Resources designated Resource Rich Area. Ecosystem restoration objectives for side channel restoration include increasing depth diversity to support native fishes. This subarea supports objectives to increase fish overwintering habitat and reduce distances between overwintering sites. It also contributes to objectives to maintain connected aquatic habitat. Achieving physical habitat objectives should help achieve objectives to improve biotic integrity and ecological function.

Treats Island

The Treats Island Side Channel is a high quality side channel subarea that is a designated Illinois Department of Natural Resources Resource Rich Area. Ecosystem restoration objectives for side channel restoration include increasing depth diversity to support native fishes. This subarea supports objectives to reduce distances between fish overwintering sites and contributes to objective to maintain connected aquatic habitat. Achieving physical habitat objectives should help achieve objectives to improve biotic integrity and ecological function.

Mazon River Confluence

The Mazon River confluence is a high quality meandering tributary confluence that is still connected with the river and supports riparian forest and wet prairie habitat. The tributary subarea is part of a broader watershed management plan. Physical process objectives include reducing sediment transport to the Illinois River to improve habitat in the delta area and downstream. Floodplain restoration coupled with upstream restoration can help naturalize tributary hydrology also. The subarea includes more than 1,000 acres of floodplain habitat that contribute to objectives to increase connected floodplain and tributary habitat quality. The diverse habitat at tributary deltas supports many biological composition and process objectives.

Ballards Island

Ballards Island is a side channel and small backwater complex in a river reach with little habitat diversity. The site ranks highly because it fills gaps in floodplain and aquatic habitat classes that are rare upstream from the site. The site has an organized stakeholder group that supports restoration at this site. Restoring this subarea can help achieve side channel and backwater aquatic habitat objectives that support fish and wildlife.

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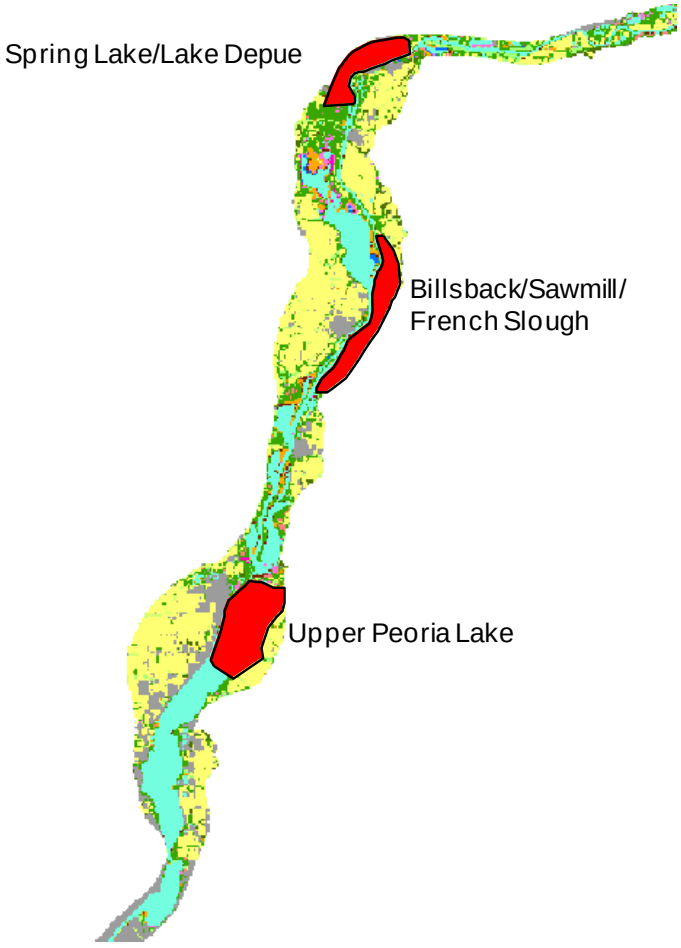
Peoria Pool Projects

Peoria Pool has been the focus of several ecosystem restoration studies that focus effort on Peoria Lake itself, but other lakes are well known also. Reach Planning incorporated that knowledge and concentrated new effort on backwaters in the upper part of the pool. The Peoria Pool Backwaters Feasibility Study investigated a 10-mile reach above Peoria Lake and prioritized two lakes for this sequence of project planning. The feasibility study identified restoration needs for the entire 10-mile reach. Starved Rock Tailwater and upper pool habitat is also important for sport fishing.



Spring-Depue-Turner Lakes

This Spring, Depue, and Turner Lakes backwater complex is a high quality backwater complex in Upper Peoria Pool. The backwaters are intermediate in proximity to other floodplain habitat, but the lakes fill a large gap in available fish overwintering sites. Excessive sedimentation into the backwaters degrades high quality habitat which can be protected and enhanced with geomorphic adaptation. Managed connections, like j-hook entrance to downstream connecting channels, can reduce sedimentation. The subarea provides diverse terrestrial habitat that supports many biological objectives.

Billsbach & Sawmill Lakes and French Slough

The backwater lake complex historically supported high quality habitat that has degraded in response to hydrologic alteration in the river and increased sedimentation from upland development. The subarea is intermediate in proximity to waterfowl habitat, but it potentially fills a gap in fish overwintering sites. The entire Peoria Pool backwaters reach has support local stakeholders and agencies. Restoration activity in Illinois River backwaters can support water quality, geomorphology, and hydrology ecosystem objectives. Optimizing these physical process objectives can then support habitat and biological objectives.

Upper Peoria Lake

Peoria Lake is a historic feature in the Illinois River Valley. The upper Lake provides important wetland and backwater habitat that has been filling with sediment for more than 100-years since the first large scale hydrologic perturbations. The subarea is an Illinois Department of Natural Resources designated Resource Rich Area. Backwater restoration could address backwater habitat and fish overwintering objectives. There is widespread support for ecosystem restoration in the Peoria region.

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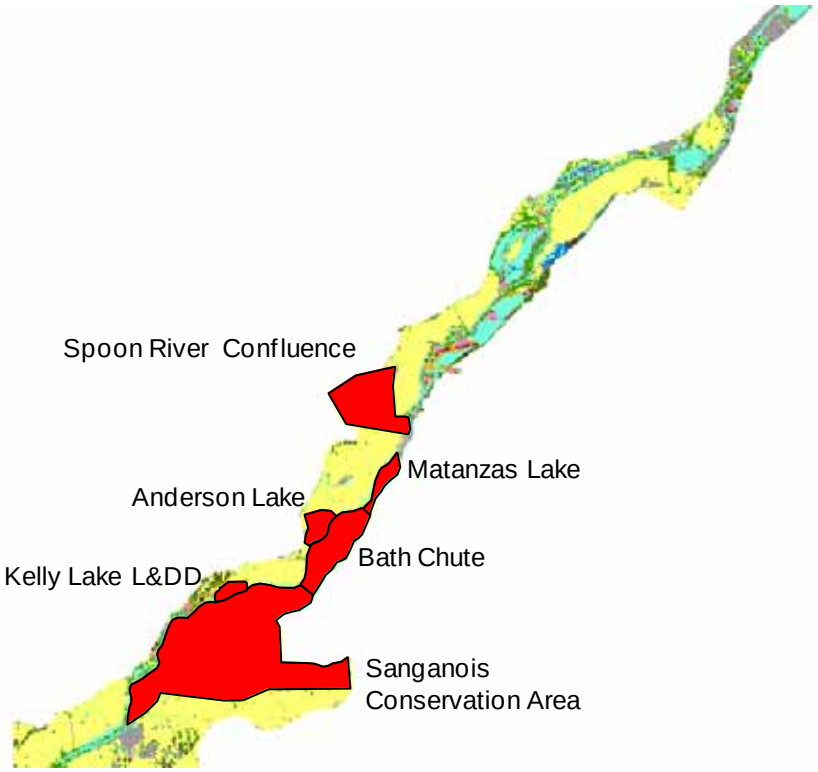
La Grange Pool

Ecosystem restoration priority subareas in the La Grange Pool include two important tributary confluence areas, two historically productive connected backwater lakes. Bath Chute provides important side channel habitat in a unique six-mile long channel that also influences the Sanganois area downstream. The Sanganois Conservation area is a large tributary delta of the Sangamon River. The subarea includes aquatic, wetland, and terrestrial habitat and unique hydrogeomorphic diversity that supports diverse plant communities also. Kelly Lake Levee and Drainage District is a potential floodplain restoration opportunity that could achieve wetland habitat and biota objectives in a former slough in a small levee district. These subareas compliment existing management areas in the upper part of the pool.

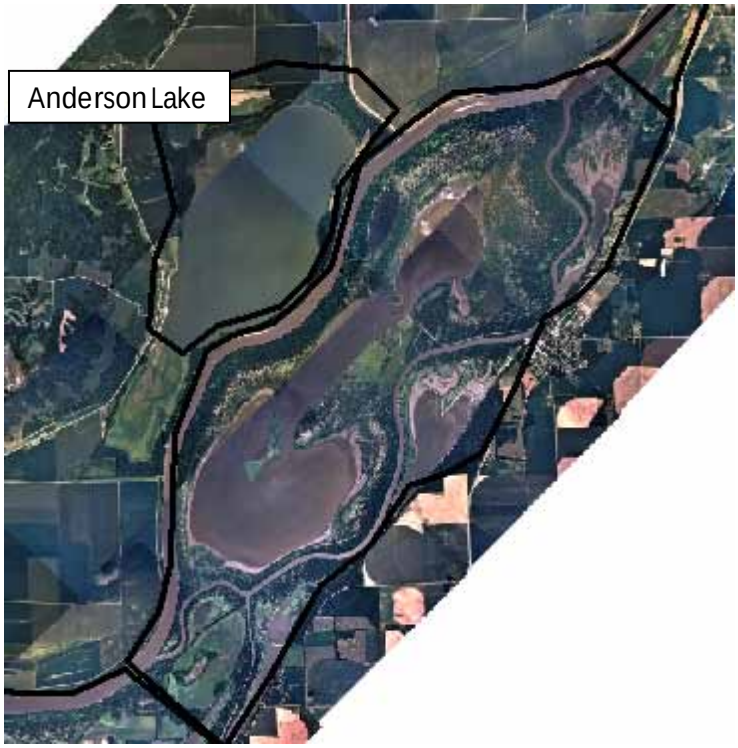


Spoon River Confluence

The Spoon River is a meandering lowland tributary to the Illinois River, it is an Illinois Department of Natural Resources designated Resource Rich Area. The Spoon River has high sediment transport capacity and has been the focus of sediment reduction and stream restoration programs. There is a very active watershed protection effort. Adjacent farmland at the confluence was acquired for conservation in recent years and the region offers very high potential habitat benefits. Floodplain habitat is relatively abundant, but the Spoon provides overwintering habitat and access to fish spawning habitat. Water quality sediment reduction objectives, hydrology objectives, and floodplain habitat objectives can all be met in the Spoon River confluence.

Matanzas and Anderson Lakes

Matanzas and Anderson Lakes are historic waterfowl hunting and fishing areas that are degraded by excessive sedimentation like most Illinois River backwaters. They are designated Resource Rich Areas that provide connected backwater habitat. Ecosystem restoration in the lakes can achieve water quality objectives by reducing sediment resuspension and moderating sediment transport into the lakes. Geomorphic objectives to restore connected backwaters can be achieved in both lakes. Restored physical processes can maintain habitats to achieve biological objectives.



Bath Chute

Bath Chute is one of the longer side channels in the Illinois River. It is one of the few persistent side channels, so it is listed as a Resource Rich Area. The side channel provides consistent fish habitat. Snicarte slough in the center of the island can provide wetland and fish overwintering habitat. There is high stakeholder interest in the subarea. Channel and backwater wetland classes in the subarea support many physical process, habitat structure, and biological composition objectives.

Kelly Lake Levee and Drainage District

Kelly Lake Levee and Drainage District is a small levee district with former sloughs that have good potential to achieve floodplain wetland benefits. The site is an Illinois DNR Resource Rich Area with other agency interest. Many floodplain wetland objectives can be achieved, but connectivity would require levee alterations. The drainage district infrastructure can help achieve hydrology objectives and protect interior wetlands from excessive sedimentation. Isolated wetlands support many biological benefits.

Sanganois Conservation Area

The Sanganois Conservation Area is a 10,000 acre complex of tributary delta, complex channels, and backwater lakes. The site is a large contiguous forest with high topographic diversity that supports high quality forests. Many qualities qualify the area as a Resource Rich Area. Maintaining the physical processes can support forested wetland communities.

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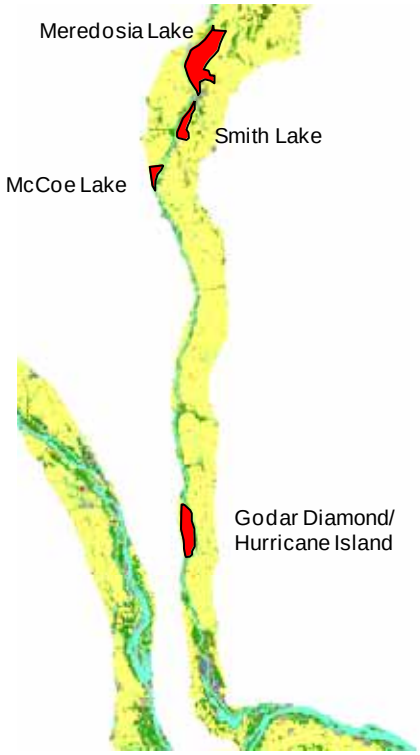
Alton Pool

Alton Pool high priority subareas ecosystem restoration subareas are concentrated in the upper part of the reach where there is some connected floodplain habitat. The rest of the reach down to the lower 15 miles is lined with levees on the East bank and the bluff on the West bank. There is little connected backwater or floodplain habitat. Several degraded side channels in the reach are considered as a single subarea because they share common physical and ecological functions. Their restoration sequence will be determined when more is known about their status. The Godar Diamond-Hurricane Island subarea is another large side channel with interior wetlands. It is the most significant connected habitat for more than 60 river miles. The lowest end of the Alton Pool is highly influenced by the Melvin Price Locks and Dam which maintains several large aquatic lakes and backwater complexes managed as wildlife refuges and hunting areas. These lakes have already been the focus of recent restoration work.



Meredosia Lake

Meredosia Lake is a large backwater wetland complex that is a designated Resource Rich Area. The US Fish and Wildlife Service and Illinois DNR cooperate in managing the area. Restoring backwater physical structure and fish overwintering conditions would increase the abundance of fish habitat which is lacking for many miles. Restoration objectives for the site include backwater geompoghology and sediment transport to the subarea from tributaries. Temporary drawdowns may help consolidate sediment and restore emergent vegetation that supports many fish and wildlife objectives.

Smith Lake

Smith Lake is a smaller isolated backwater lake and wetland complex. The subarea supports forested wetland and emergent wetlands that qualify it as a Resource Rish Area. Restoration activity could incorporate a small tributary to help manage sediment reduction objectives. Increasing backwater quality would increase fish overwintering opportunities. Physical habitat objectives include improving backwater depth and sediment quality which should improve water quality. Improved water quality is important to support aquatic plant communities. Maintaining wetlands in the subarea can help address many fish and wildlife objectives.

Mc Coe Lake

Mc Coe Lake is a small management area and connected sloughs that are listed as a Resource Rich Area. Restoration activity at the site could address backwater and side channel geomorphology objectives. Improving aquatic habitat conditions could increase fish overwintering in a reach with little off-channel habitat. Restored secondary channel habitat would support river fish objectives, enhancing the wetland complex could benefit a variety of wetland dependent critters also.

Godar-Diamond/Hurricane Island

This island and side channel complex is another of the few large, persistent Illinois River secondary channels. The interior wetland at Hurricane Island is a managed hunting area that is part of a complex of state and Federal management areas nearby at the confluence with the Mississippi River. The subarea is an Illinois Resource Rich Area and it has a very strong constituent group. Its proximity to other refuges reduced its ranking in the prioritization matrix. Objectives for secondary channels and flow diversity can be achieved to support fisheries objectives. The potential to support wetland objectives is very high.

Alton Pool Side Channels

Secondary channels in Alton Pool are degraded by excessive sedimentation in an impounded environment. Sedimentation in the reach is notorious as the flow from the watershed is concentrated down the narrow mainstem floodway between levees. The Melvin Price Locks and Dam maintain stable river stages at low flow and the Mississippi River can also act like a hydraulic dam backing up the Illinois River during large floods. Heavy sediment loads then drop out in the low velocity environment and fill contiguous floodplains, backwaters, and channels. There are seven or more secondary channels that can achieve channel habitat objectives. A general reconnaissance of the subareas is required to prioritize based on need, potential benefits, and program.