

Kelly Lake

The Nature of Wetland Restoration on Private Lands



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UNITED STATES DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

Partnerships





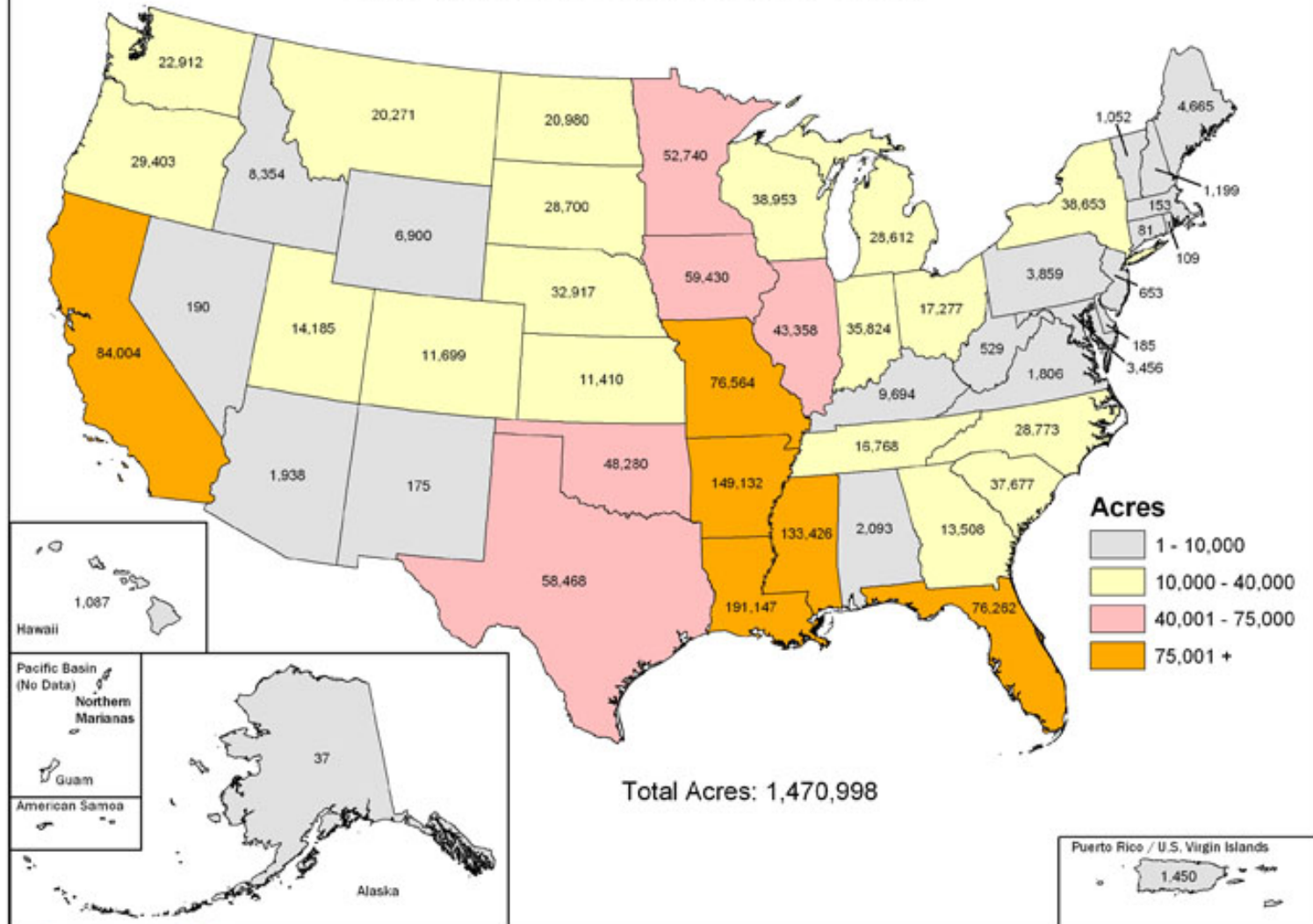
wetland restorations

- **Kelly Lake**
 - Conservation Reserve Enhancement Program (CREP)
 - NRCS conservation technical assistance
- **Spunky Bottoms**
 - Wetland Reserve Program (WRP)
 - NRCS easement funding
 - NRCS conservation technical assistance
- **Spring Lake**
 - Wetland Reserve Program (WRP)
 - NRCS easement funding
 - NRCS conservation technical assistance
- **Emiquon**
 - Wetland Reserve Program (WRP)
 - NRCS easement funding
 - NRCS conservation technical assistance



Wetland Reserve Program

WRP Acres by State through FY2003



Total Acres: 1,470,998



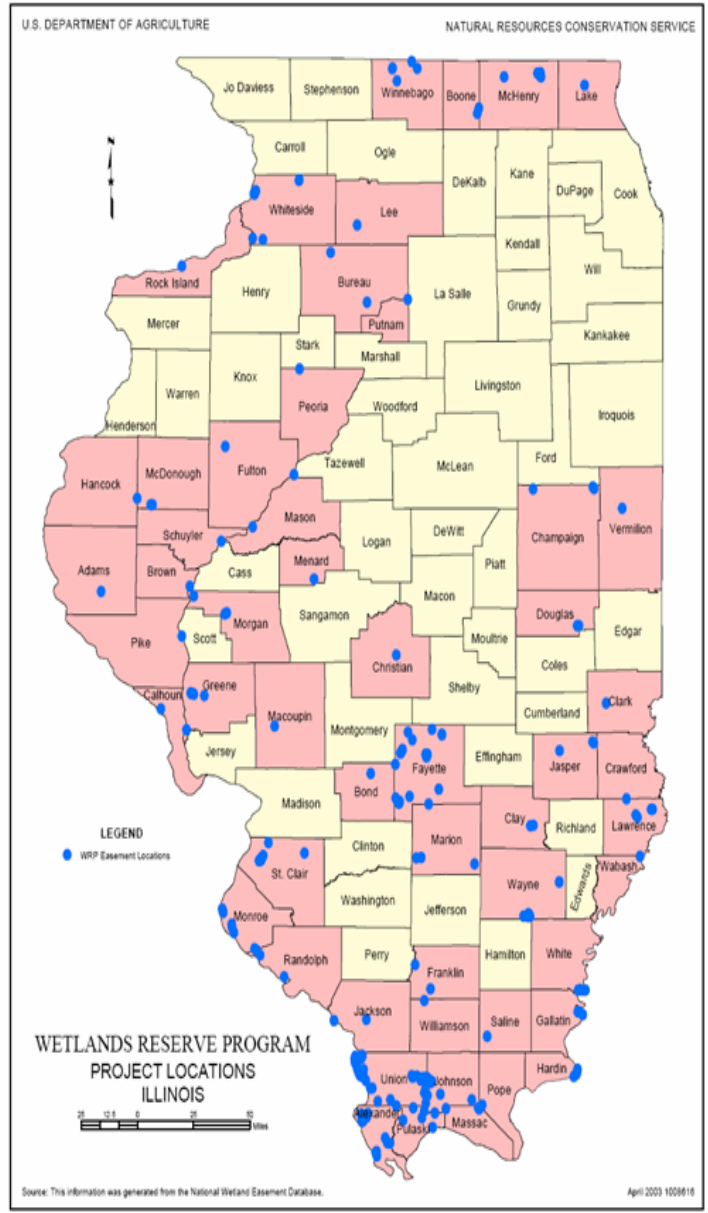
U.S. Department of Agriculture
Natural Resources Conservation Service
Resource Assessment Division
Washington, D.C. November 2003

Map ID: 7712

Source: NRCS Watersheds and Wetland Division, 2003



WRP in Illinois



Kelly Lake wetland restoration



- **CREP**
- **Schuyler County**
- **980 acres**
- **Private ownership**
- **6 contracts**
- **17 landowners involved**

History of Kelly Lake - 1844 Plat

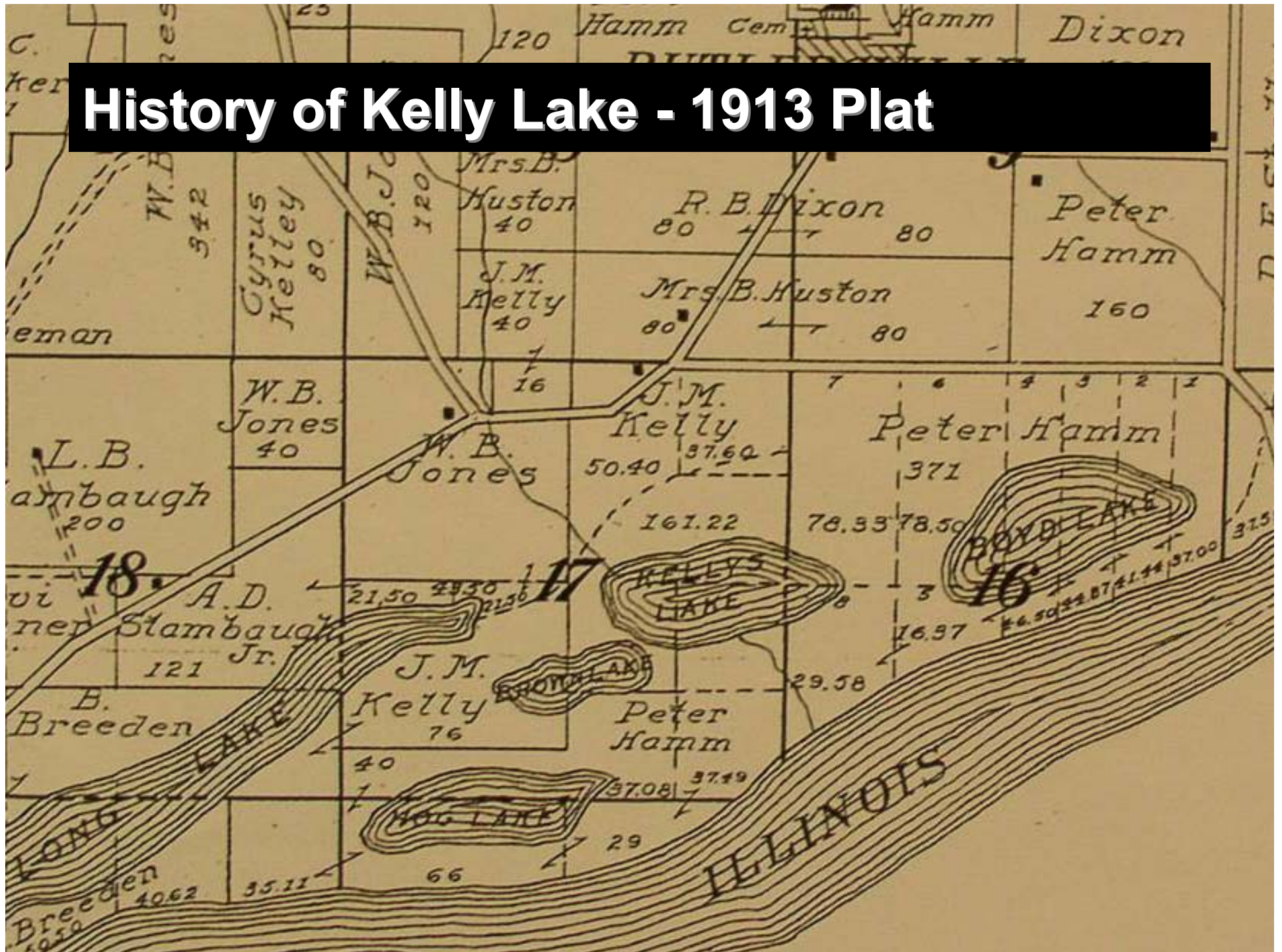


History of Kelly Lake - 1872 Plat



- **Presettlement wetland**
- **Settlement circa 1870**
 - Same ownership for 100+ years

History of Kelly Lake - 1913 Plat



Agriculture & Kelly Lake

- **Levee system built circa 1900**
- **Drainage district of 1170 acres**
 - Main drainage ditch
 - Pump house

Pump House





Levee maintenance

- River's outside curve, impact side
- Levee breeches/repairs: 1926, 1943
- Levee improvements
 - 1950's & 1960's: added 20ft ↑ and 4ft ↔
 - 1980's: levee rebuilt

Mason County

Kelly Lake Drainage District, 1957

Continuing maintenance issues

- **1990's**

- Bank erosion: 40% eroded
- Dissolution of drainage district



Landowner Options

- **1999: landowners met with NRCS**

- **Alternatives**

- Repair levee
- Sell to NGO
- Conservation Reserve Enhancement Program (CREP)



- Met needs of 17 effected landowners
- Land remains in private ownership

CREP

- **Partnership program**
- **Easement & restoration program**
 - Technical assistance from NRCS, IDNR
 - 15-year, 30-year, or permanent easement



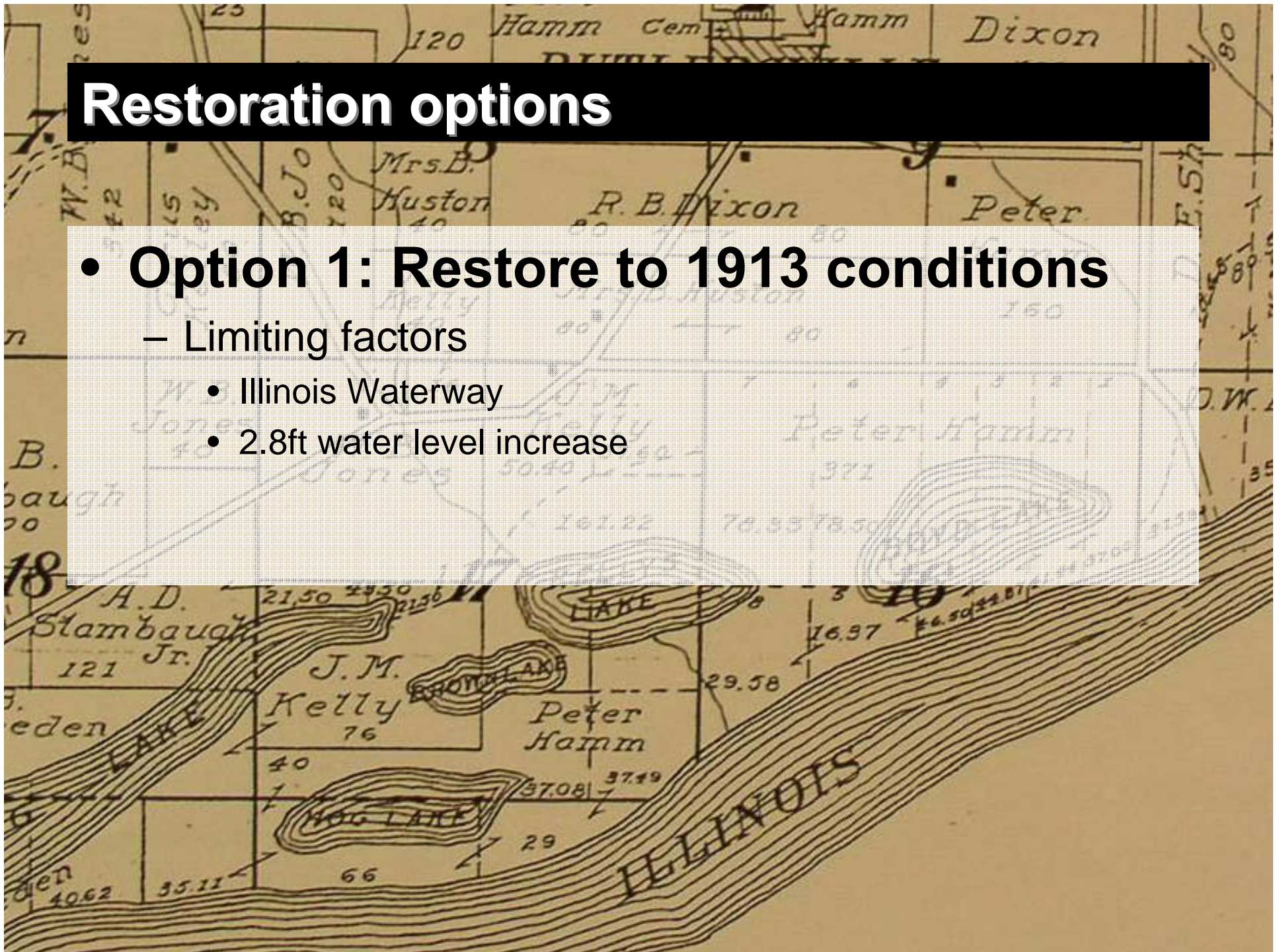
Kelly Lake restoration

- 6 conservation plans
- 6 CREP contracts
- Consensus amongst 17 landowners

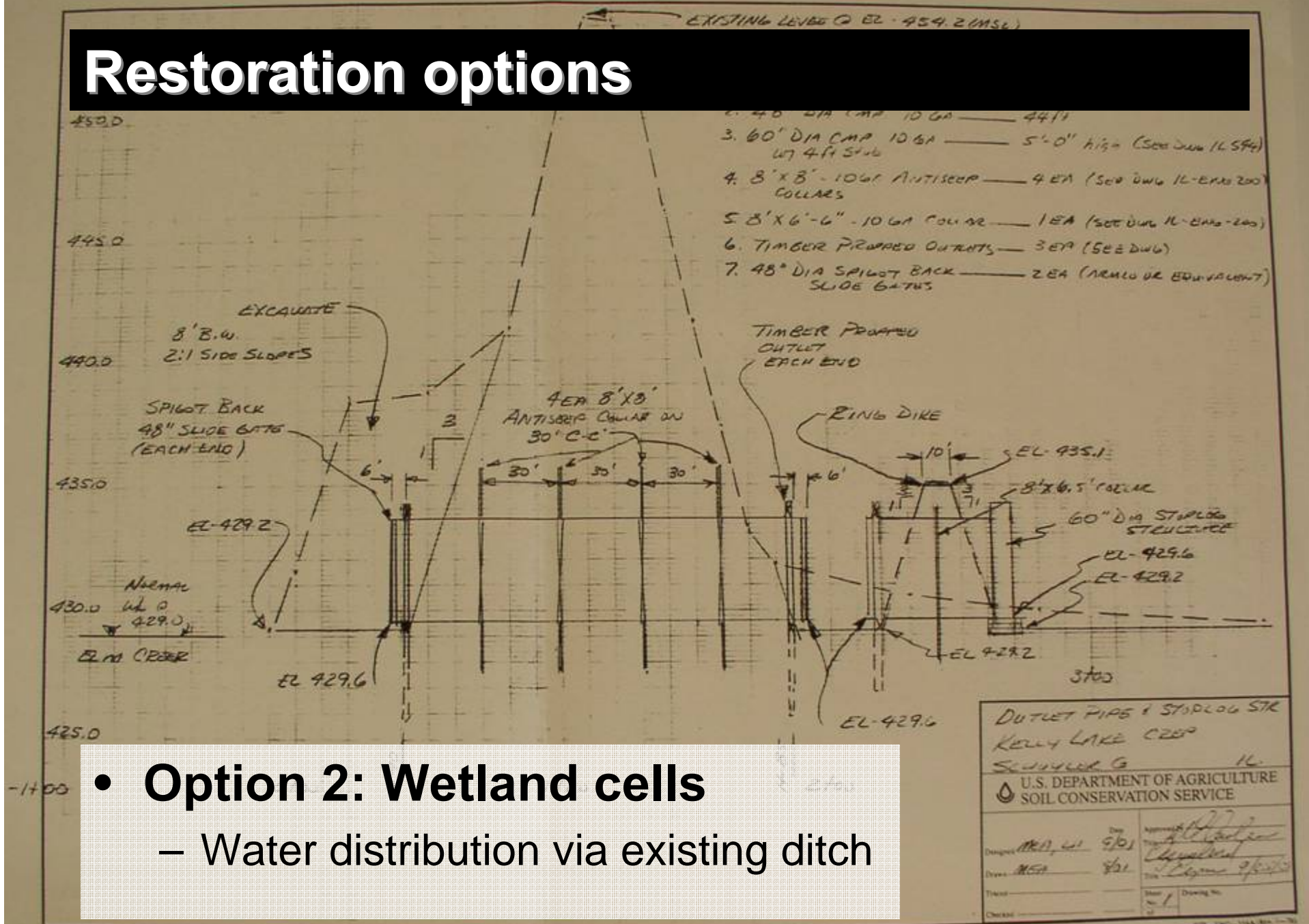


Restoration options

- **Option 1: Restore to 1913 conditions**
 - Limiting factors
 - Illinois Waterway
 - 2.8ft water level increase



Restoration options



Water control structure



Stop log structure & screw gate



Restoration plan

- One large wetland lake



Tree plantings - 164 acres



Warm season grasses - 114 acres



Wildlife food plots - 87.1 acres



Outcome

- **Kelly Lake covers approx. 615 acres**



Wildlife benefits

- **35 species of waterfowl, shorebirds, etc.**



Wildlife

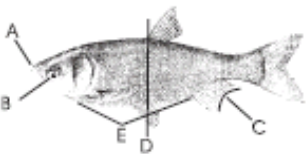


Wildlife



Fish response

- fins of small specimens without spines
- pectoral fin with 15-18 rays and stiff, hard spine having a finely serrated posterior (rear) margin
- dorsal fin with moderately stiff, nonserrate spinelike ray at origin
- anal fin (C) falcate (i.e. hooked) with 12-13 rays and slightly stiffened, nonserrate spine at origin
- dorsal fin with 8 rays



Silver carp (*Hypophthalmichthys molitrix*)
 ■ Drainages with introductions

- and origin of fin (D) behind pelvic insertion
- a smooth ventral keel (E) extending from base of anal fin to isthmus at the base of the gills
- gill rakers extremely numerous and fused or covered with a netlike or spongelike porous matrix
- pharyngeal teeth 4-4, moderately long and bluntly rounded
- intestine very long with many loops, its length 3-6 times longer than total fish length

Black carp

- thick, elongate body with broad, blunt head
- golden/dark grey/brown color with scales on back and sides showing a prominently dark-edged, giving a characteristic cross-hatched effect (A)
- subterminal mouth (B) with thin unspecialized lips
- dorsal fin short and pointed with 7-8 rays and situated over the pelvic fins
- anal fin closer to caudal fin than in



native minnow (i.e. distance from front of anal fin base to base of caudal fin going more than 2.5 times into the distance from anal fin base forward to tip of snout)

• throat teeth fused (See Figure 2-II), molariform (i.e. knobs looking similar to human molars)



Black carp (*Mylopharyngodon piceus*)
 ■ Drainages with introductions

Information Sources:

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- Smith, P.W. 1979. The fishes of Illinois. University of Illinois Press, Urbana. 314 pp.
- USGS Online. Nonindigenous aquatic species. <http://nas.er.usgs.gov/fishes/accounts/>

Natural Resource Agency Contacts:

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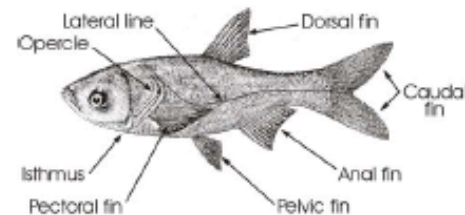
Mississippi Interstate
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U.S. Fish & Wildlife Service

Asian Carp



Key To Identification

Asian carp are large 39-40 in. (40-50 lb.) fish introduced into the U.S. by fish farmers in Southern states in the 1960's and 70's to control vegetation and algae blooms. Three of these species, the grass carp (*Ctenopharyngodon idella*), bighead carp (*Hypophthalmichthys nobilis*), and silver carp (*Hypophthalmichthys molitrix*) have been released or have escaped to the wild and are reproducing in many rivers and streams of the Mississippi River Basin. As they continue to expand their range, and show up in commercial and sport fish catches, a need has arisen to develop a simple key to assist fishers and resource managers in making quick and accurate field identifications.

Five species are included in this key. In addition to the grass, bighead and silver carps; the common carp (*Cyprinus carpio*) and the black carp (*Mylopharyngodon piceus*) have also been included. The black carp remains in captivity in hatcheries, fish culture facilities, and fish farm ponds, primarily in Southeastern states. But because of its similarity in appearance to the grass carp, and the possibility of its escape from captivity, resource managers and fishers are urged to be watchful for it. The key to Asian carp identification which follows assumes that the reader can readily distinguish the common carp from other fish species:

1. Dorsal fin rays 13 or more; dorsal and anal fins with a strongly serrated (barbed) anterior (front) spine.....Common carp

Management



Landowner experience





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