Asian Carp Control Strategy Draft Framework

February 12, 2010

United States Coast Guard
U.S. Department of Homeland Security

Overview

- Draft Framework Overview
- Chicago Area Topography
- Biology and Science
- Draft Framework Approach
  - Draft Framework Short-term Actions
  - Draft Framework Long-term Actions
- Funding
- Comments

Draft Framework Overview

- Goal: prevent establishment of self-sustaining carp populations
- Team: ACE, EPA, FWS, CG, GLFC,IDNR and others; Draft Framework provides "space" for all to act
- Multi-tiered defense
- Iterative document

Chicago Area Topography

Biology and Science

- How the fish entered the Mississippi River
- Carp characteristics
- eDNA
  - What we know
  - What we don't know
- Other Tests for Asian Carp
  - Netting
  - Electrofishing
  - Towing industry ballast water sampling/analysis

Draft Framework Approach: Short-term Actions

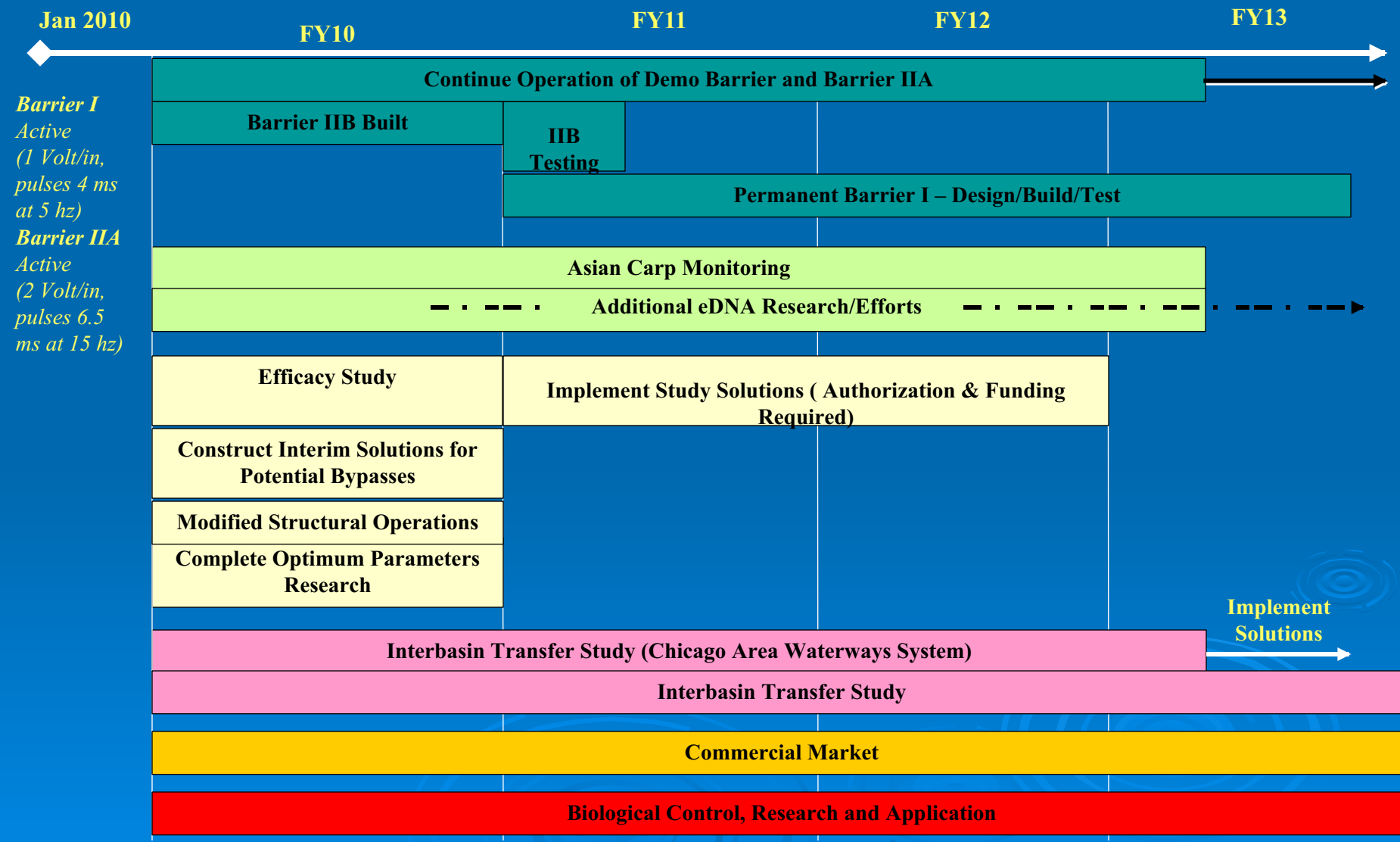
Draft Framework Approach: Short-term Actions

- Carp population suppression measures
- Enhanced detection measures
  - Increased sample collection
  - eDNA indicator refinement
- Structural operation variations
- Emergency engineering measures
- Expedited biological control assessments
- Enhanced electric barrier operations

Draft Framework Approach: Long-term Actions

- Efficacy study
- Inter-basin feasibility study
- Ecological-separation
- Modified lock operations
- Commercial market enhancement and ongoing fish population suppression
- Biological controls

ACRCC Strategy for Deterring Asian Carp Migration



Funding

- Short Term Action Items
  - $39.5M
- Long Term Action Items
  - $39.5M
- Great Lakes Restoration Initiative
  - $58M
- Base Funding
  - $21M

Comments

Additional Slides/Information to Follow

Considerations for Modified Structural Operations

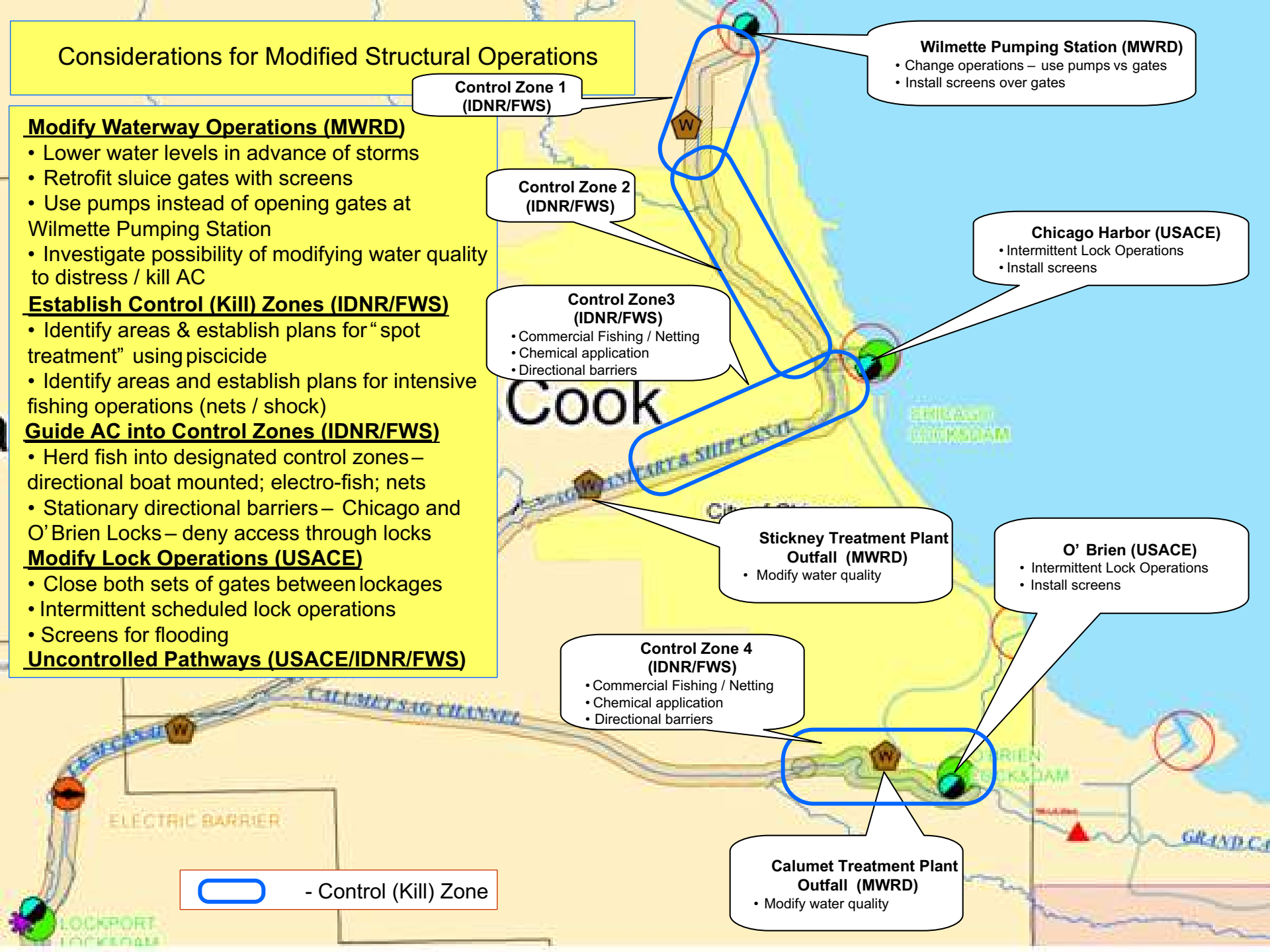
Modify Waterway Operations (MWRD)
- Lower water levels in advance of storms
- Retrofit sluice gates with screens
- Use pumps instead of opening gates at Wilmette Pumping Station
- Investigate possibility of modifying water quality to distress / kill AC

Establish Control (Kill) Zones (IDNR/FWS)
- Identify areas & establish plans for "spot treatment" using piscicide
- Identify areas and establish plans for intensive fishing operations (nets / shock)

Guide AC into Control Zones (IDNR/FWS)
- Herd fish into designated control zones – directional boat mounted; electro-fish; nets
- Stationary directional barriers – Chicago and O'Brien Locks – deny access through locks

Modify Lock Operations (USACE)
- Close both sets of gates between lockages
- Intermittent scheduled lock operations
- Screens for flooding

Uncontrolled Pathways (USACE/IDNR/FWS)



Dispersal Barriers Overview

Barrier I (Demonstration):

-In continuous operation since 2002 @ 1 Volt/in, 5 hz, 4 ms

- Rehabilitated in Oct 2008

Barrier I (Permanent):

- Upgrade to a permanent barrier authorized; plan activation by 2013 if funded

Barrier IIB:

- Site prep completed
- Building construction contract NTP issued 3 Dec
- Electronics design ongoing
- **Construction to be completed 30 Sep 10**

Other Ongoing Efforts:

- Asian Carp Monitoring
- Research on Optimum Operating Parameters
- Study of Solutions to Potential Barrier Bypasses

Barrier IIA:

- Activated @ 1 Volt/in, 5 hz, 4 ms in APR 09.
- Increased to 2 Volt/in, 15 hz, 6.5 ms in AUG 09

-Maintenance shutdown completed 3 – 4 Dec w/rotenone support by State

Efficacy Study

U.S. Army Corps of Engineers

FY10 Near Term Timeline

28 Oct 2009 Sec 126 Authority	Nov 2009 Interim Report I Completed	Dec 2009 Operating Parameters Phases A&B Complete	Jan 2010 Modified Structural Ops Concept Development	Mar 2010 Submit Interim Report III	Apr 2010 Execute Initial Implementation of Modified Structural Ops	May 2010 Start Construction of Channel Barriers	Jun 2010 Draft Final Report Completed	Sep 2010 NEPA Completed ASA Review For Final Report	Oct 2010 Channel Barriers Const Complete Full Implementation of MSO

Interim Report I: Recommended Emergency Measures (Implement via Sec 126)

- Construct 13.5 miles of wire mesh fence and Jersey barriers between Des Plaines River and CSSC
- Block Illinois & Michigan Canal at natural flow divide
- Complete by Sept 2010

Interim Report II: Determine Optimal Operating Parameters

- Phases A&B – Tank testing completed Dec 09 – defines optimal parameters
- Phase C – Flume tests to validate optimal parameters under field conditions

Interim Report III: Modified Structural Operations

- March 2010 - Submit report for review
- April 2010 - Initial implementation begins
- Fall 2010 – Additional implementation integrated with Partner Agencies

Final Report: Evaluate Other Potential Emergency Measures to Deter Migration

- Other Electrical & Behavioral Barriers, Operational changes, Asian Carp pop control, ballast testing
- Initial Impacts Assessment (Flooding, Navigation, Recreation, Water Quality, Public Health and Safety, Great Lakes Ecosystem)

Impact Uncertainties

U.S. Army Corps of Engineers

Flooding:

- Flood Damage Reduction Structures
- TARP Impacts
- Property Loss / Damage ($B)
- Loss of Life

Public Health and Safety/EM:

- USCG/DHS/Chicago Fire and Police

Commerce / Economics:

- Transportation System Upset
- Critical Infrastructure
- Revenue Impacts
- Job Impacts

Water Quality:

- TARP Impacts

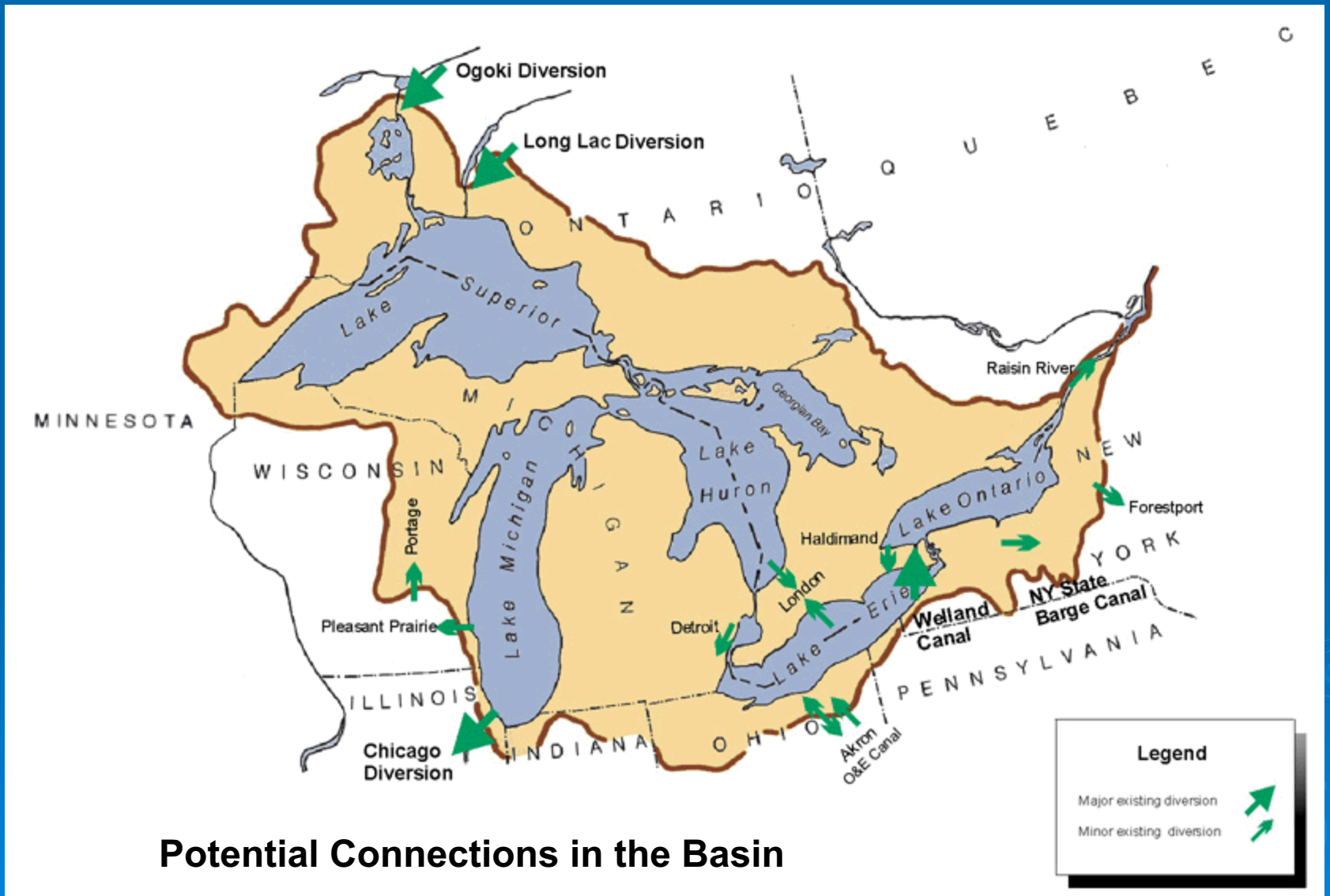
Recreation / Tourism:

- Navy Pier
- Great Lakes Shoreline
- Great Lakes Fishing

Great Lakes Ecosystem:

- Asian Carp (AC) Adaptability
- AC Impacts to Shoreline and Tributaries
- AC Impacts to Great Lakes Fisheries ($B)

Great Lakes' Basin Connections



Potential Connections in the Basin