Wisconsin Department of Natural Resources

Fish Passage Guidance

2013

Objectives of Guidance

- Consider our legal authority
- Aid resource managers in making decisions
- Help document decision
- Results in more consistent decisions
- Establishes guidance for complete barriers
- AIS sensitive

Department Authority

Areas for Legal Guidance	Specific Action
I. Department Authority to Regulate Fish Passages.	*Ordering Fish Passages* *NR 40 Invasive Species Regulation*
II. Department Authority to Regulate Dams.	*Direct Regulation of Dams* *FERC Dams: Water Quality Certification for Federally Licensed Dam Projects and additional Department involvement* *Navigable Waters, Harbors, and Navigation*
III. Circumstances in Which a Fish Health Certificate May Be Required.	*Introduction of Fish or Eggs into the Waters of the State* *Reintroduction of Fish or Eggs into Original Wild Source* *Upstream Movement through Passive Fish Passages* *Upstream Movement through Active Fish Passages*

Guidance – Concepts
Complete Barrier

1

Complete Barrier Condition

Regulatory Decision

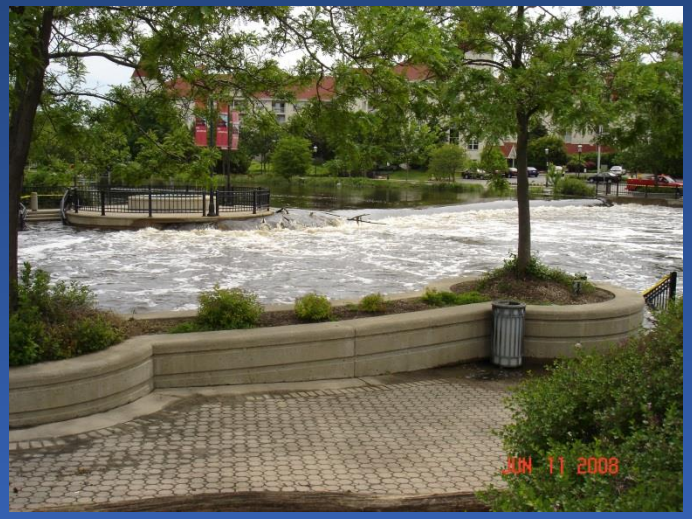
Complete Barrier Guidance

AIS below barrier	Type of passage being proposed – Active	Type of passage being proposed - Passive	AIS above barrier
VHS	Fish Health Certificate Required	Deny passage	No VHS above structure
AIS	Assess Risk and Impact on Ecology, Economics, Recreation and Aesthetics	Deny passage	AIS of concern is not present above structure
May or may not be present	If a **natural** complete barrier is present, passage would not be approved		May or may not be present

*This guidance is for projects that are specifically for fish passage at complete barriers.

A complete barrier is defined as a structure that cannot be crossed by AIS up to the 100 year event.

Guidance – Concepts
Incomplete Barrier



2

Identification of AIS of concern and assessment of risk.

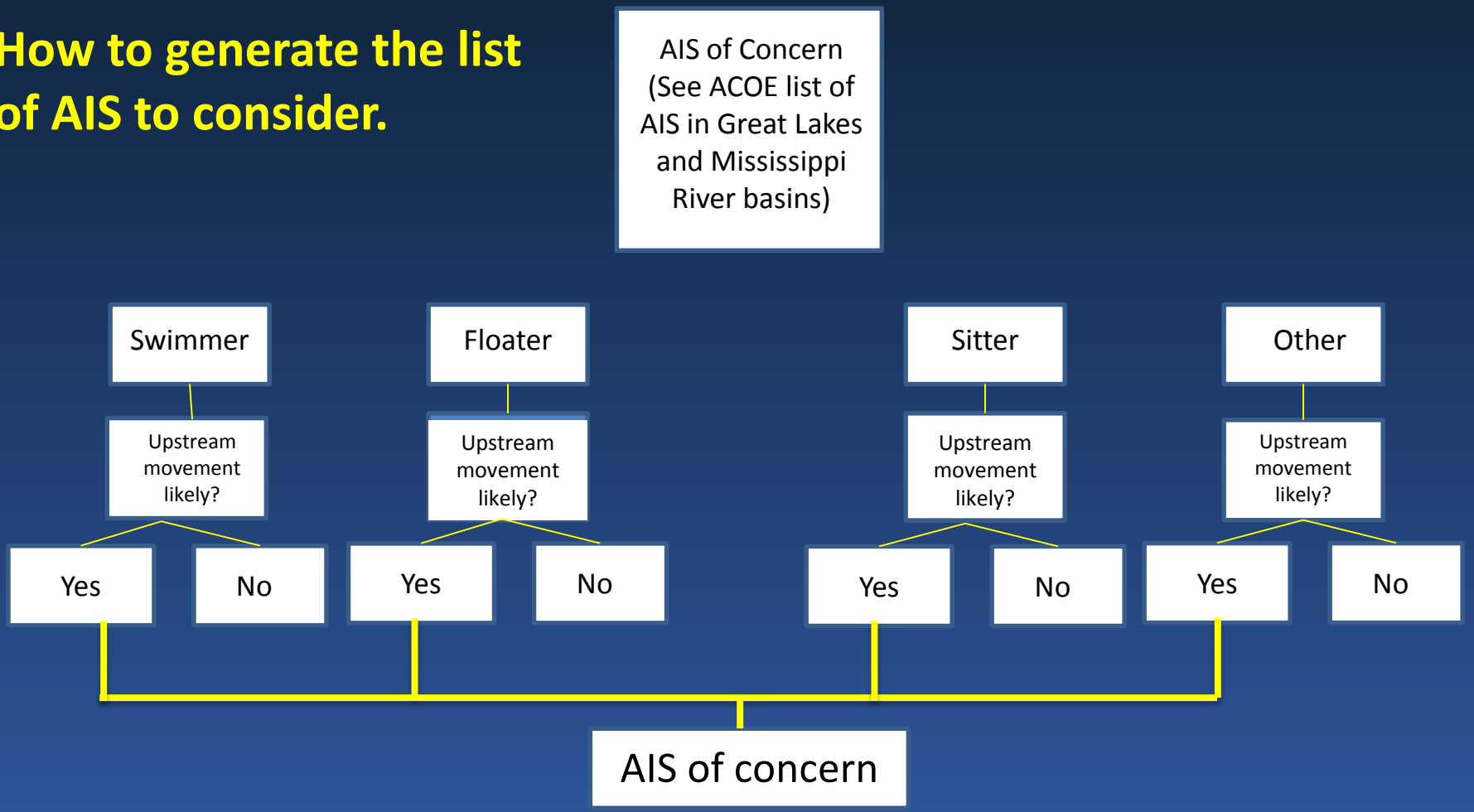
↓

Potential impact on Ecology, Economy, Recreation and Aesthetics.

↓

Regulatory Decision

How to generate the list of AIS to consider.



List of AIS of Concern: A, B, C, D, etc…

AIS with unknown status.

http://glmris.anl.gov/documents/ans/index.cfm

AIS of concern in basin?

Ability of AIS to survive transit to barrier?

Ability of AIS to become established at barrier?

Ability of AIS to cross barrier as proposed

Ability of AIS to become established upstream of barrier

GLMRIS FORMAT (ANSTF, 1996)

Great Lakes

Mississippi River

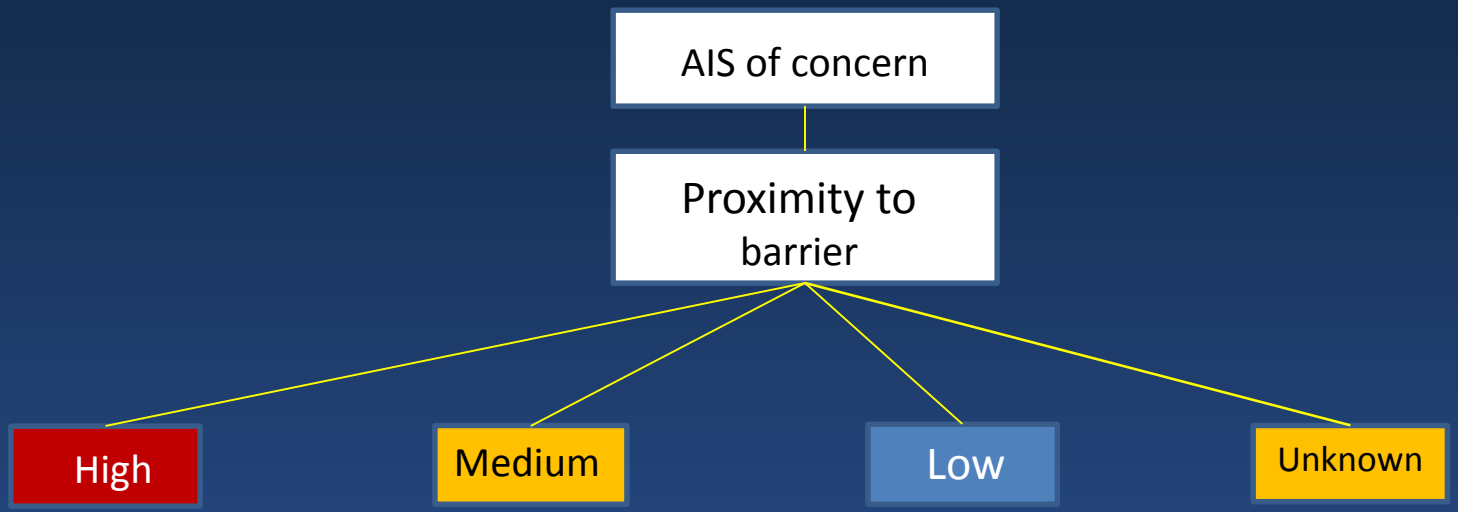
Interbasin Study

Further evaluate only high and medium risk species.

List AIS of concern:

High Risk: Species B, D
Medium Risk: Species C
Low Risk: Species A, F, G, I, J, K, E, H, L, M, N, O, P, Q, R, S, T, U

Evaluate impact of passage on public trust.



High Risk – Species common in basin

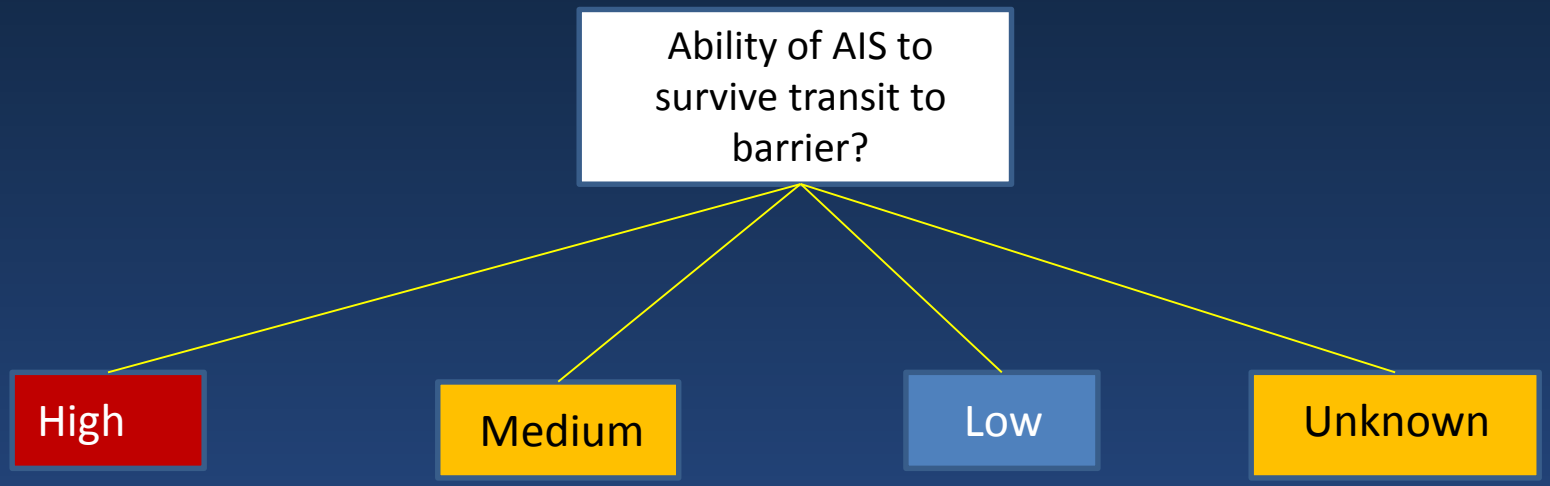
Medium Risk – Species present but not common

Low Risk – Species not in basin or already above barrier.

List AIS of concern:

High Risk: Species A, B, C, D, E
Medium Risk: Species F, G, H, I, J, K, L
Low Risk: Species M, N, O, P, Q, R, S, T, U

Carry list of AIS of concern to next page.



High Risk – Could reach barrier under all conditions

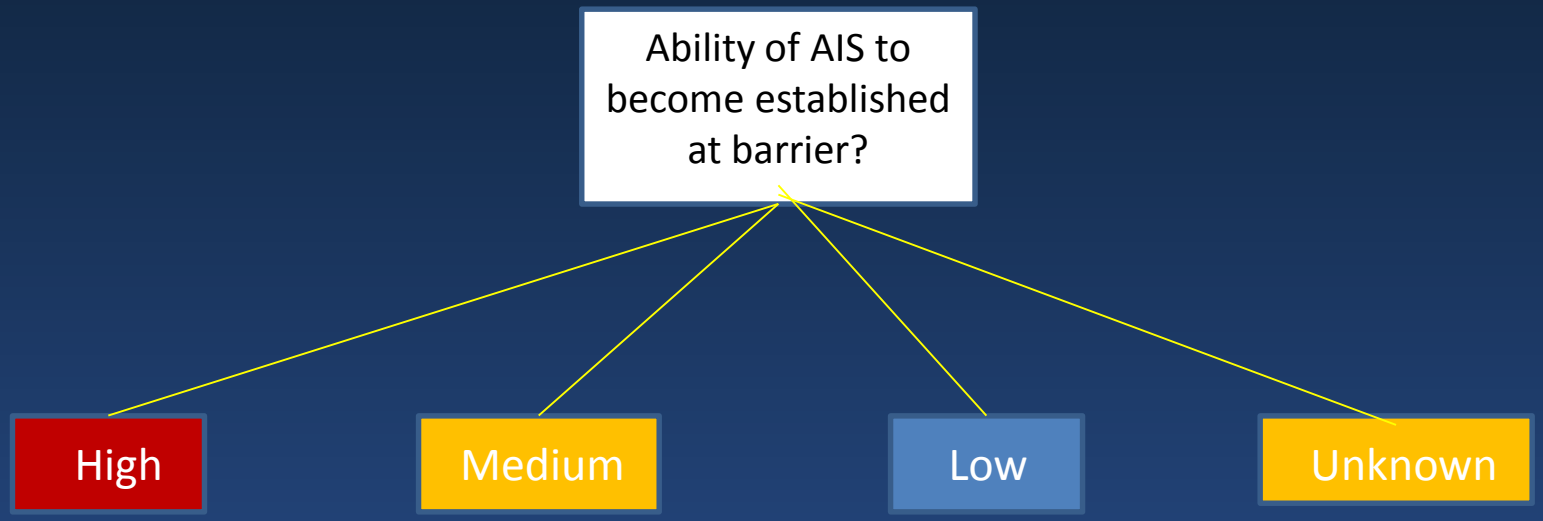
Medium Risk – Could reach barrier under certain circumstances (e.g. Flow)

Low Risk - Unlikely to reach barrier

List AIS of concern:

High Risk: Species A, B, D, E
Medium Risk: Species C, F, G, H, L
Low Risk: Species I, J, K, M, N, O, P, Q, R, S, T, U

Carry list of AIS of concern to next page.



High Risk – Could establish year round population

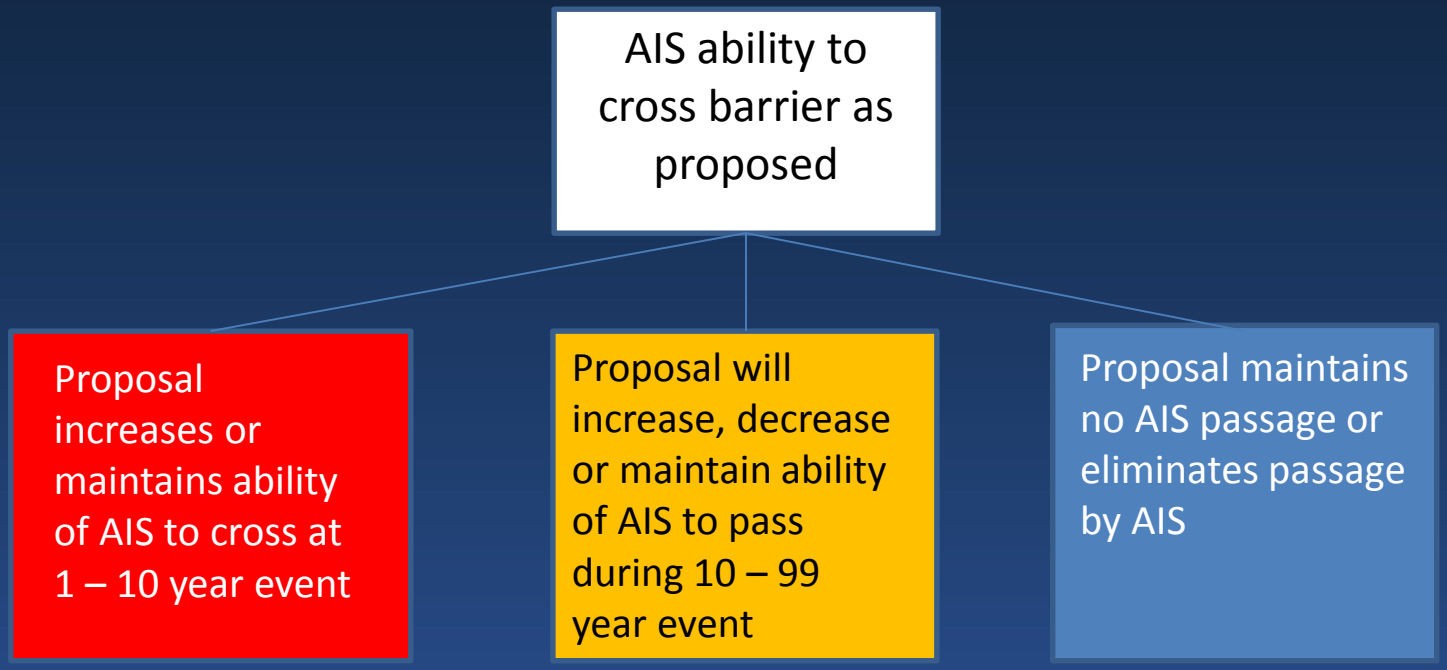
Medium Risk – Could establish seasonal population

Low Risk – Unlikely to establish population

List AIS of concern:

High Risk: Species A, B, D,
Medium Risk: Species C, F, G,
Low Risk: Species I, J, K, E, H, L, M, N, O, P, Q, R, S, T, U

Carry list of AIS of concern to next page.



High Risk – Could establish year round population

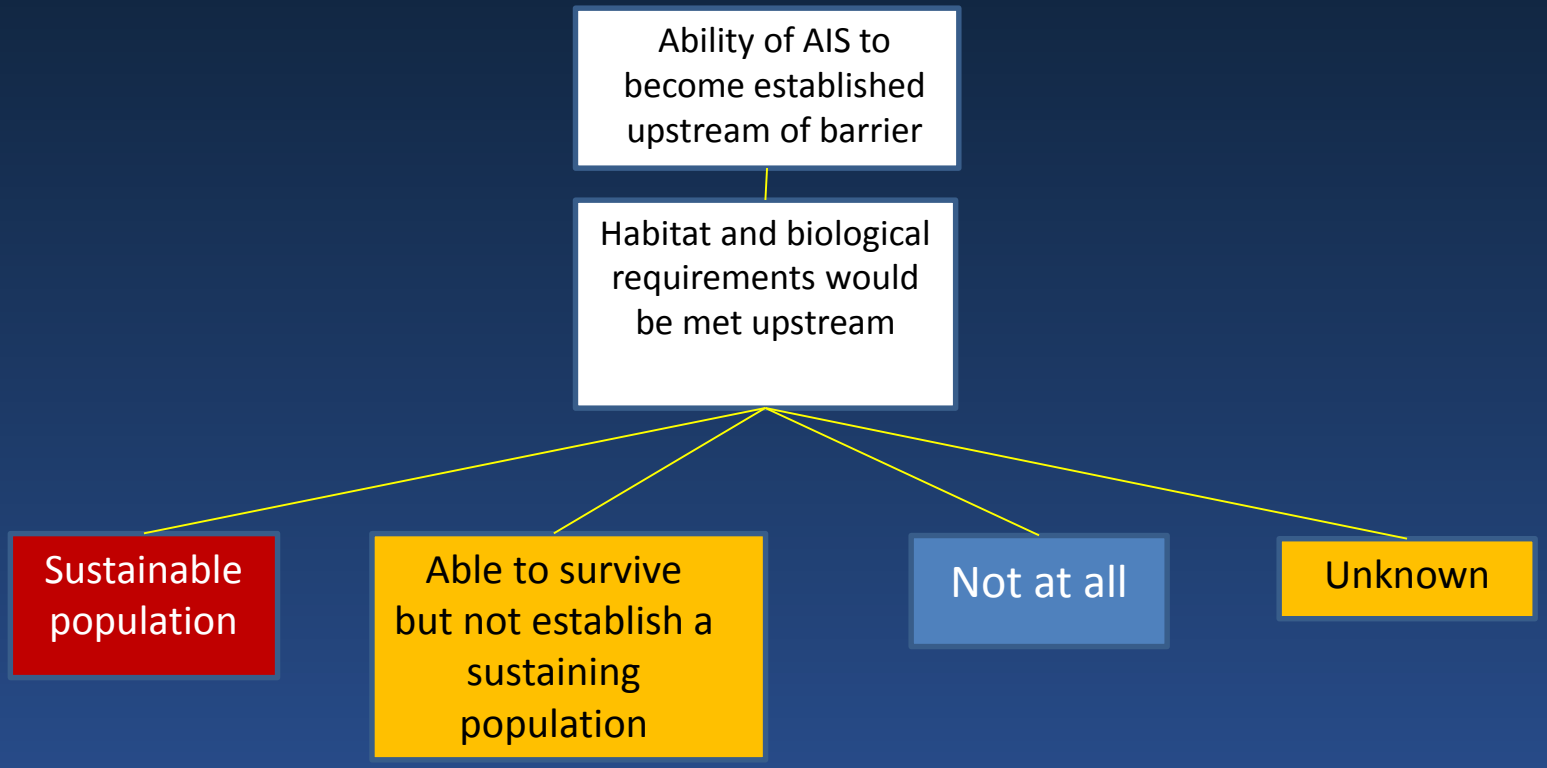
Medium Risk – Could establish seasonal population

Low Risk – Unlikely to establish population

List AIS of concern:

High Risk: Species A, B, D,
Medium Risk: Species C, F, G,
Low Risk: Species I, J, K, E, H, L, M, N, O, P, Q, R, S, T, U

Carry list of AIS of concern to next page.



High Risk – Able to establish a reproducing, sustainable population upstream of barrier

Medium Risk – Able to survive upstream but unable to reproduce or establish sustaining population

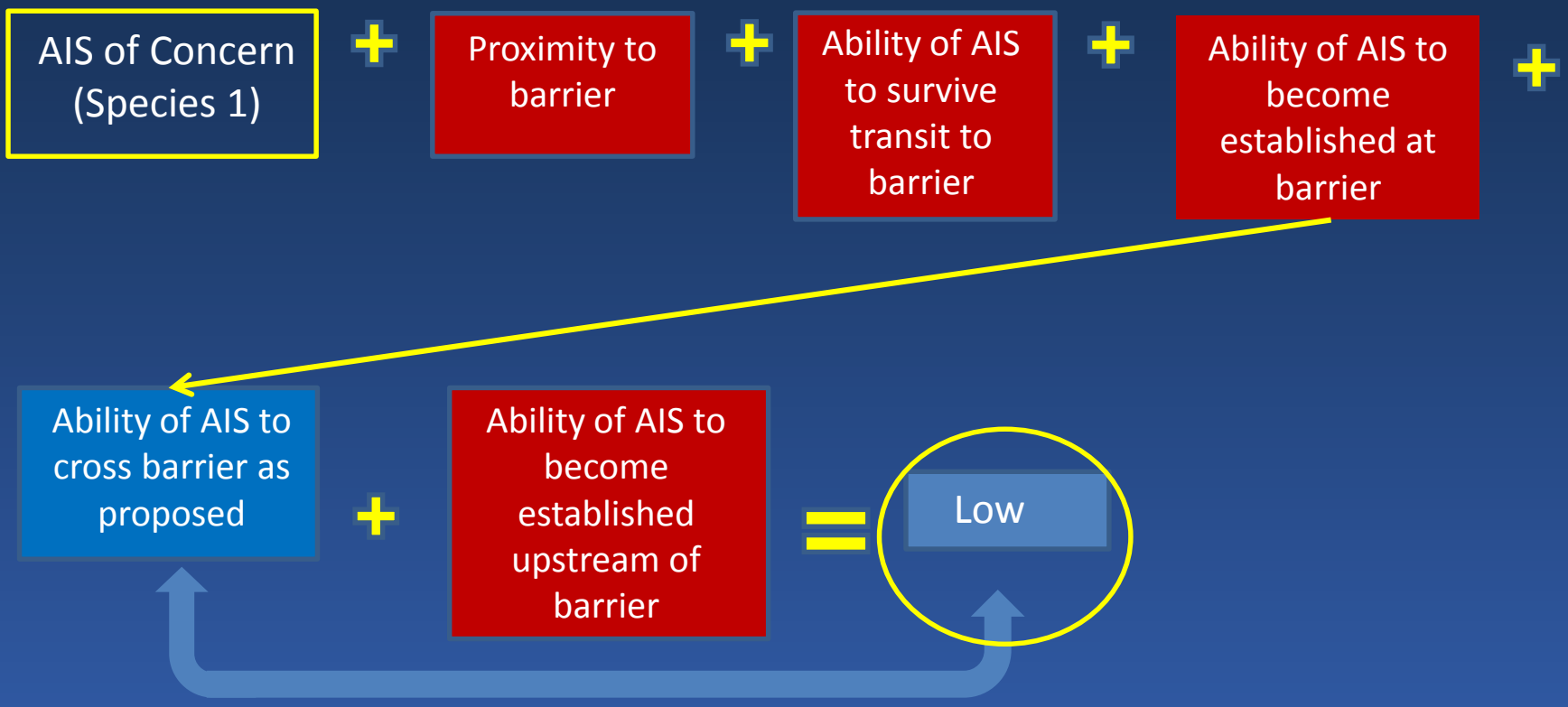
Low Risk – Unable to survive or become established

List AIS of concern:

High Risk: Species B, D
Medium Risk: Species C
Low Risk: Species A, F, G, I, J, K, E, H, L, M, N, O, P, Q, R, S, T, U

Evaluate impact of passage on public trust.

Example 1. Identification of AIS of Concern.



Risk Level: High | Medium | Low

In this example the species 1 is **unlikely** to cross the barrier, therefore the overall risk of the species is Low

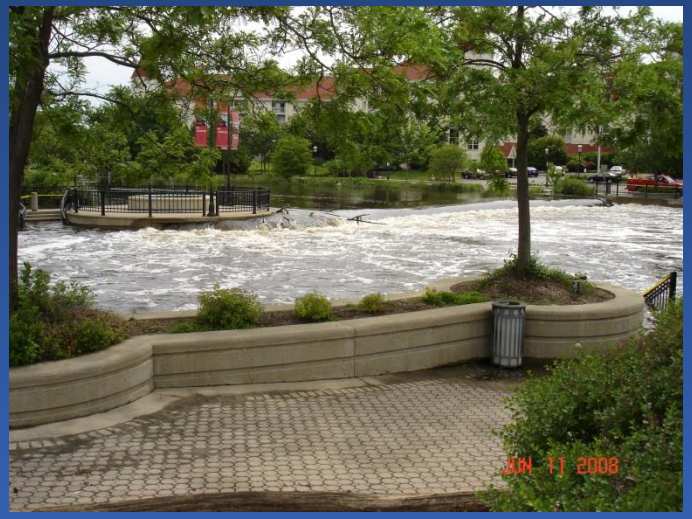
Identification of AIS of Concern

AIS of Concern	Proximity to Barrier	Ability to survive transit to barrier	Ability to become established at barrier	Ability to cross barrier	Ability to become established upstream of barrier	Final Risk for Species
Species A						
Species B						
Species C						
Species D						
Species E						
Species F						
Species G						

High Risk Species
Medium Risk Species
Low Risk Species

Further evaluate only high and medium risk species.

Guidance – Concepts
Incomplete Barrier



2

Identification of AIS of concern and assessment of risk.

Potential impact on Ecology, Economy, Recreation and Aesthetics.

Regulatory Decision

Will passage of all **aquatic organisms** be in the public's interest?

Ecological | Aesthetic | Economic | Recreational

Positive Impacts _____

_____

Negative Impacts_____

_____

Neutral Impacts_____

_____

Unknown Impacts_____

_____

Summary – Considered for high, and medium risk AIS and native species.

Regulated Activity	Risk of Passing AIS will; (Increase, stay the same or decrease)	Overall Impact on Public Interests (Positive, No change, Negative)	**Regulatory Decision** **(approve, deny, modify)**
Construction of new barrier			
Modification at existing barrier ❑ Operating procedures ❑ Improve safety of barrier ❑ Increase flood capacity ❑ Other _____ ❑ Fish passage project at ❑ Complete barrier ❑ Incomplete barrier	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
Replace barrier (e.g. culvert, dam)			
Remove barrier			
Other: (e.g. Temporary Drawdown)			

Barrier being considered:

Objectives of Guidance

- Consider of our legal authority
- Aid resource managers in making decisions
- Help document decision
- Results in more consistent decisions
- Establishes guidance for complete barriers
- AIS sensitive

Questions/Comments