

NSE 1	0	0	0	0	1	1	1	0	0	1
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South Ladder Differentials (more than 0.2 too low)										
Ladder Exit	Not applicable.									
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.									
South Ladder Differentials (0.11 - 0.2 too low)										
Ladder Exit	Not applicable.									
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.									
South Ladder Differentials (0.01 - 0.1 too low)										
Ladder Exit	Not applicable.									
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.									
South Ladder Differentials (0.01 - 0.1 too high)										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
South Ladder Differentials (0.11 - 0.2 too high)										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
South Ladder Differentials (more than 0.2 too high)										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
North Ladder Differentials (more than 0.2 too low)										
Ladder Exit	Not applicable.									
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.									
North Ladder Differentials (0.11 - 0.2 too low)										
Ladder Exit	Not applicable.									
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.									
North Ladder Differentials (0.01 - 0.1 too low)										
Ladder Exit	Not applicable.									
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.									
North Ladder Differentials (0.01 - 0.1 too high)										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
North Ladder Differentials (0.11 - 0.2 too high)										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
North Ladder Differentials (more than 0.2 too high)										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (<0.80)										
South Shore	0	0	0	0	0	0	0	0	0	0
North Powerhouse	0	1	0	0	0	0	0	0	0	0
North Shore	0	1	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (0.80 - 0.89)										
South Shore	0	0	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (0.90 - 0.99):										

**APPENDIX 2 (CONTINUED). ICE HARBOR ADULT FISHWAY
INSPECTIONS**

2021

DATES:	10-Jun	14-Jun	15-Jun	16-Jun	22-Jun	23-Jun	24-Jun	28-Jun	30-Jun	1-Jul
CHANNEL VELOCITIES IN SOUTH FISHWAY:	2.6	1.7	1.8	2.5	2.4	2.6	2.3	2.8	3.0	2.2
ELEVATIONS:										
South Fish Ladder										
Forebay	438.0	438.0	438.2	438.2	438.1	438.0	437.9	438.1	437.7	438.3
Exit Pool	438.0	438.0	438.2	438.1	438.1	438.0	437.9	438.0	437.6	438.3
Makeup Diffuser	434.3	434.2	434.2	434.3	434.2	434.3	434.3	434.3	434.2	434.2
U S Picketed Leads	381.2	381.2	381.2	381.3	381.2	381.2	381.1	381.2	381.2	381.2
D S Picketed Leads	381.1	381.2	381.2	381.2	381.2	381.2	181.1	381.2	381.2	381.2
North Fish Ladder										
Forebay	437.9	438.0	438.1	438.1	438.1	438.0	437.9	438.1	437.5	438.2
Exit Pool	437.9	438.0	438.1	438.1	438.1	438.0	437.9	438.1	437.5	438.2
Makeup Diffuser	434.2	434.2	434.2	434.2	434.3	434.3	434.3	434.2	434.0	434.2
U S Picketed Leads	434.2	434.2	434.2	434.2	434.3	434.3	434.3	434.2	434.0	434.2
D S Picketed Leads	434.2	434.2	434.2	434.2	434.3	434.3	434.3	434.2	434.0	434.2
Collection Channels										
South Pwrh SG4	343.0	342.5	343.5	343.2	342.5	343.0	342.5	341.5	341.7	342.6
North Pwrh SG2	342.6	342.7	343.2	343.0	342.0	342.4	342.0	341.3	341.5	342.6
North Shore SG30	342.6	342.5	342.3	341.1	341.4	341.0	341.9	341.5	341.0	342.6
Tailwater										
South Pwrh SG3	341.0	341.3	342.4	341.8	340.2	341.0	340.5	340.1	340.2	341.3
North Pwrh SG1	341.0	341.4	342.2	341.8	340.3	341.2	340.4	340.1	340.1	341.2
North Shore SG29	341.9	340.5	341.2	339.6	339.7	339.0	340.2	339.6	339.5	341.4
Entrance Weirs										
SFE 1	332.8	332.6	334.1	333.5	332.3	333.0	333.7	332.3	332.3	332.3
NFE 2	332.5	332.5	332.5	332.5	332.6	332.6	332.5	332.3	332.3	332.3
NSE 1	332.3	332.3	332.3	332.3	332.3	332.3	332.3	332.3	332.3	332.3
DIFFERENTIALS/DEPTHS:										
South Fish Ladder										
Ladder Exit	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0
Ladder Weirs	1.3	1.2	1.2	1.3	1.2	1.3	1.3	1.3	1.2	1.2
Counting Station	0.1	0.0	0.0	0.1	0.0	0.0	200.0	0.0	0.0	0.0
North Fish Ladder										
Ladder Exit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ladder Weirs	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.0	1.2
Counting Station	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Collection Channels										
South Shore	2.0	1.2	1.1	1.4	2.3	2.0	2.0	1.4	1.5	1.3
North Powerhouse	1.6	1.3	1.0	1.2	1.7	1.2	1.6	1.2	1.4	1.4
North Shore	0.7	2.0	1.1	1.5	1.7	2.0	1.7	1.9	1.5	1.2
Weir Depths										
SFE 1	8.2	8.7	8.3	8.3	7.9	8.0	6.8	7.8	7.9	9.0
NFE 2	8.5	8.9	9.7	9.3	7.7	8.6	7.9	7.8	7.8	8.9
NSE 1	9.6	8.2	8.9	7.3	7.4	6.7	7.9	7.3	7.2	9.1
CRITERIA POINTS:										
Channel Velocities	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Differentials										
South Fish Ladder										
Ladder Exit	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Ladder Weirs	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Counting Station	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES

NSE 1	0	0	0	1	1	1	1	1	1	1	0
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South Ladder Differentials (more than 0.2 too low)

Ladder Exit	Not applicable.										
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.										

South Ladder Differentials (0.11 - 0.2 too low)

Ladder Exit	Not applicable.										
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.										

South Ladder Differentials (0.01 - 0.1 too low)

Ladder Exit	Not applicable.										
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.										

South Ladder Differentials (0.01 - 0.1 too high)

Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0

South Ladder Differentials (0.11 - 0.2 too high)

Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0

South Ladder Differentials (more than 0.2 too high)

Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	1	0	0	0	0

North Ladder Differentials (more than 0.2 too low)

Ladder Exit	Not applicable.										
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.										

North Ladder Differentials (0.11 - 0.2 too low)

Ladder Exit	Not applicable.										
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.										

North Ladder Differentials (0.01 - 0.1 too low)

Ladder Exit	Not applicable.										
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	Not applicable.										

North Ladder Differentials (0.01 - 0.1 too high)

Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0

North Ladder Differentials (0.11 - 0.2 too high)

Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0

North Ladder Differentials (more than 0.2 too high)

Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0

Channel/Tailwater Differentials (<0.80)

South Shore	0	0	0	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0	0	0	0
North Shore	1	0	0	0	0	0	0	0	0	0	0

Channel/Tailwater Differentials (0.80 - 0.89)

South Shore	0	0	0	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0	0	0	0

Channel/Tailwater Differentials (0.90 - 0.99):

North Fish Ladder											
Ladder Exit	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Ladder Weirs	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Counting Station	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Collection Channels											
South Shore	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
North Powerhouse	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
North Shore	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Weir Depths											
SFE 1	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL	SILL	NO	SILL
NFE 2	SILL	NO	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL	SILL
NSE 1	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL

CRITERIA POINTS: YES											
(Output = 0, 1, or NA)											
Channel Velocities	1	1	1	1	1	1	1	1	1	1	1
Differentials											
South Fish Ladder											
Ladder Exit	1	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1	1
North Fish Ladder											
Ladder Exit	1	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1	1
Collection Channels											
South Shore	1	1	0	0	1	0	1	1	1	1	1
North Powerhouse	1	1	1	1	1	1	1	1	1	1	1
North Shore	0	1	1	1	1	1	1	1	1	1	1
Weir Depths											
SFE 1	0	0	0	0	1	0	0	0	0	0	0
NFE 2	0	0	0	0	0	0	1	0	0	0	0
NSE 1	0	0	0	0	0	0	0	0	0	0	0

CRITERIA POINTS: NO											
(Output = 0, 1, or NA)											
Channel Velocities	0	0	0	0	0	0	0	0	0	0	0
Differentials											
South Fish Ladder											
Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0
North Fish Ladder											
Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0
Collection Channels											
South Shore	0	0	1	1	0	1	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0	0	0	0
North Shore	1	0	0	0	0	0	0	0	0	0	0
Weir Depths											
SFE 1	0	0	0	0	0	0	0	0	0	1	0
NFE 2	0	1	0	0	0	0	0	0	0	0	0
NSE 1	0	0	0	0	0	0	0	0	0	0	0

CRITERIA POINTS: SILL											
(Output = 0, 1, or NA)											
Weir Depths											
SFE 1	1	1	1	1	0	1	1	1	1	0	1

North Fish Ladder										
Ladder Exit	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Ladder Weirs	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Counting Station	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Collection Channels										
South Shore	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO
North Powerhouse	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
North Shore	YES	NO	YES	NO	NO	NO	NO	NO	YES	NO
Weir Depths										
SFE 1	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL	SILL	SILL
NFE 2	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL	SILL	SILL
NSE 1	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL

CRITERIA POINTS: YES										
(Output = 0, 1, or NA)										
Channel Velocities	1	1	1	1	1	0	1	1	1	1
Differentials										
South Fish Ladder										
Ladder Exit	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1
North Fish Ladder										
Ladder Exit	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1
Collection Channels										
South Shore	1	1	1	1	1	1	1	1	0	0
North Powerhouse	1	1	1	1	1	1	1	1	1	1
North Shore	1	0	1	0	0	0	0	0	1	0
Weir Depths										
SFE 1	0	0	0	0	1	0	0	0	0	0
NFE 2	0	0	0	0	1	0	0	0	0	0
NSE 1	0	0	0	0	0	0	0	0	0	0

CRITERIA POINTS: NO										
(Output = 0, 1, or NA)										
Channel Velocities	0	0	0	0	0	1	0	0	0	0
Differentials										
South Fish Ladder										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
North Fish Ladder										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
Collection Channels										
South Shore	0	0	0	0	0	0	0	0	1	1
North Powerhouse	0	0	0	0	0	0	0	0	0	0
North Shore	0	1	0	1	1	1	1	1	0	1
Weir Depths										
SFE 1	0	0	0	0	0	0	0	0	0	0
NFE 2	0	0	0	0	0	0	0	0	0	0
NSE 1	0	0	0	0	0	0	0	0	0	0

CRITERIA POINTS: SILL										
(Output = 0, 1, or NA)										
Weir Depths										
SFE 1	1	1	1	1	0	1	1	1	1	1

North Fish Ladder											
Ladder Exit	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Ladder Weirs	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Counting Station	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Collection Channels											
South Shore	YES	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO
North Powerhouse	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	YES
North Shore	NO	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES
Weir Depths											
SFE 1	SILL	SILL	SILL	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL
NFE 2	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL
NSE 1	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL	SILL

CRITERIA POINTS: YES											
(Output = 0, 1, or NA)											
Channel Velocities	1	1	1	1	1	1	1	1	1	1	1
Differentials											
South Fish Ladder											
Ladder Exit	1	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1	1
North Fish Ladder											
Ladder Exit	1	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1	1
Collection Channels											
South Shore	0	0	0	0	0	0	1	1	1	1	0
North Powerhouse	1	1	1	1	1	0	1	1	0	1	1
North Shore	0	1	1	0	0	0	1	1	1	1	1
Weir Depths											
SFE 1	0	0	0	0	0	0	0	1	0	0	0
NFE 2	0	0	0	0	0	0	0	0	0	0	0
NSE 1	0	0	0	0	0	0	0	0	0	0	0

CRITERIA POINTS: NO											
(Output = 0, 1, or NA)											
Channel Velocities	0	0	0	0	0	0	0	0	0	0	0
Differentials											
South Fish Ladder											
Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0
North Fish Ladder											
Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0
Collection Channels											
South Shore	1	1	1	1	1	1	0	0	0	0	1
North Powerhouse	0	0	0	0	0	1	0	0	1	0	0
North Shore	1	0	0	1	1	1	0	0	0	0	0
Weir Depths											
SFE 1	0	0	0	0	0	0	0	0	0	0	0
NFE 2	0	0	0	0	0	0	0	0	0	0	0
NSE 1	0	0	0	0	0	0	0	0	0	0	0

CRITERIA POINTS: SILL											
(Output = 0, 1, or NA)											
Weir Depths											
SFE 1	1	1	1	1	1	1	1	0	1	1	1

North Fish Ladder											
Ladder Exit	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Ladder Weirs	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES
Counting Station	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Collection Channels											
South Shore	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES
North Powerhouse	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
North Shore	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Weir Depths											
SFE 1	SILL	SILL	SILL	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL
NFE 2	SILL	SILL	SILL	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL
NSE 1	SILL	SILL	SILL	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL

CRITERIA POINTS: YES											
(Output = 0, 1, or NA)											
Channel Velocities	1	1	1	1	1	1	1	1	1	1	1
Differentials											
South Fish Ladder											
Ladder Exit	1	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1	1
North Fish Ladder											
Ladder Exit	1	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	0	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1	1
Collection Channels											
South Shore	1	0	0	0	0	0	1	1	1	1	1
North Powerhouse	0	1	1	1	1	1	1	1	1	1	1
North Shore	1	1	1	1	1	1	1	1	1	1	1
Weir Depths											
SFE 1	0	0	0	0	0	0	0	1	0	0	0
NFE 2	0	0	0	0	0	0	0	1	0	0	0
NSE 1	0	0	0	0	0	0	0	1	0	0	0

CRITERIA POINTS: NO											
(Output = 0, 1, or NA)											
Channel Velocities	0	0	0	0	0	0	0	0	0	0	0
Differentials											
South Fish Ladder											
Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0
North Fish Ladder											
Ladder Exit	0	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	1	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0	0
Collection Channels											
South Shore	0	1	1	1	1	1	0	0	0	0	0
North Powerhouse	1	0	0	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0	0	0	0
Weir Depths											
SFE 1	0	0	0	0	0	0	0	0	0	0	0
NFE 2	0	0	0	0	0	0	0	0	0	0	0
NSE 1	0	0	0	0	0	0	0	0	0	0	0

CRITERIA POINTS: SILL											
(Output = 0, 1, or NA)											
Weir Depths											
SFE 1	1	1	1	1	1	1	1	0	1	1	1

North Fish Ladder										
Ladder Exit	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Ladder Weirs	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Counting Station	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Collection Channels										
South Shore	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
North Powerhouse	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
North Shore	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
Weir Depths										
SFE 1	SILL	SILL	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL
NFE 2	SILL	SILL	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL
NSE 1	SILL	SILL	SILL	SILL	SILL	SILL	YES	SILL	SILL	SILL

CRITERIA POINTS: YES										
(Output = 0, 1, or NA)										
Channel Velocities	1	1	1	1	1	1	1	1	1	1
Differentials										
South Fish Ladder										
Ladder Exit	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	0	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1
North Fish Ladder										
Ladder Exit	1	1	1	1	1	1	1	1	1	1
Ladder Weirs	1	1	1	1	1	1	1	1	1	1
Counting Station	1	1	1	1	1	1	1	1	1	1
Collection Channels										
South Shore	1	1	1	1	1	1	1	1	1	1
North Powerhouse	1	1	1	1	1	1	1	1	1	1
North Shore	1	1	1	1	1	0	1	1	1	1
Weir Depths										
SFE 1	0	0	0	0	0	0	1	0	0	0
NFE 2	0	0	0	0	0	0	1	0	0	0
NSE 1	0	0	0	0	0	0	1	0	0	0

CRITERIA POINTS: NO										
(Output = 0, 1, or NA)										
Channel Velocities	0	0	0	0	0	0	0	0	0	0
Differentials										
South Fish Ladder										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	1	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
North Fish Ladder										
Ladder Exit	0	0	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0	0	0
Collection Channels										
South Shore	0	0	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	1	0	0	0	0
Weir Depths										
SFE 1	0	0	0	0	0	0	0	0	0	0
NFE 2	0	0	0	0	0	0	0	0	0	0
NSE 1	0	0	0	0	0	0	0	0	0	0

CRITERIA POINTS: SILL										
(Output = 0, 1, or NA)										
Weir Depths										
SFE 1	1	1	1	1	1	1	0	1	1	1

APPENDIX 2 (CONTINUED). ICE HARBOR ADULT FISHWAY INSPECTIONS

2021

DATES:	14-Dec	15-Dec	20-Dec	21-Dec	22-Dec	27-Dec	28-Dec	29-Dec
CHANNEL VELOCITIES IN SOUTH FISHWAY:	2.9	3.0	2.8	2.7	2.8	2.7	2.7	2.8
ELEVATIONS:								
South Fish Ladder								
Forebay	438.8	438.6	438.7	438.9	438.7	439.2	438.5	438.2
Exit Pool	438.8	438.6	438.7	438.9	438.7	4389.2	438.5	438.2
Makeup Diffuser	434.3	434.3	434.3	434.3	434.3	434.3	434.3	434.3
U S Picketed Leads	381.3	381.3	381.3	381.4	381.4	381.4	381.4	381.4
D S Picketed Leads	381.2	381.2	381.2	381.2	381.2	381.2	381.2	381.2
North Fish Ladder								
Forebay	438.9	438.8	438.8	439.0	438.8	439.1	438.6	438.2
Exit Pool	438.9	438.8	438.8	439.0	438.8	439.1	438.6	438.2
Makeup Diffuser	434.2	434.2	434.2	434.3	434.3	434.3	434.3	434.2
U S Picketed Leads	434.2	434.2	434.2	434.3	434.3	434.3	434.3	434.2
D S Picketed Leads	434.2	434.2	434.2	434.3	434.3	434.3	434.3	434.2
Collection Channels								
South Pwrh SG4	341.3	340.4	341.6	341.3	342.8	340.5	340.5	341.7
North Pwrh SG2	341.2	339.9	341.4	341.1	342.5	340.2	340.3	341.5
North Shore SG30	341.4	340.3	341.6	341.2	342.6	340.6	340.6	341.5
Tailwater								
South Pwrh SG3	340.1	338.7	340.4	340.2	341.7	339.1	339.1	340.5
North Pwrh SG1	340.0	338.6	340.3	340.1	341.4	339.0	339.0	340.4
North Shore SG29	340.1	338.6	340.2	340.1	341.5	339.0	339.1	340.3
Entrance Weirs								
SFE 1	332.3	332.3	332.3	332.3	332.3	332.3	332.3	332.3
NFE 2	332.3	332.3	332.3	332.3	332.3	332.3	332.3	332.3
NSE 1	332.5	332.3	332.3	332.3	332.3	332.3	332.3	332.3
DIFFERENTIALS/DEPTHS:								
South Fish Ladder								
Ladder Exit	0.0	0.0	0.0	0.0	0.0	-3950.0	0.0	0.0
Ladder Weirs	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Counting Station	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
North Fish Ladder								
Ladder Exit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ladder Weirs	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2
Counting Station	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Collection Channels								
South Shore	1.2	1.7	1.2	1.1	1.1	1.4	1.4	1.2
North Powerhouse	1.2	1.3	1.1	1.0	1.1	1.2	1.3	1.1

Collection Channels								
South Shore	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0
Weir Depths								
SFE 1	0	0	0	0	0	0	0	0
NFE 2	0	0	0	0	0	0	0	0
NSE 1	1	0	0	0	0	0	0	0

CRITERIA POINTS: SILL								
(Output = 0, 1, or NA)								
Weir Depths								
SFE 1	1	1	0	1	0	1	1	0
NFE 2	1	1	0	1	0	1	1	0
NSE 1	0	1	1	1	0	1	1	0

South Ladder Differentials (more than 0.2 too low)								
Ladder Exit	Not applicable.							
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	Not applicable.							
South Ladder Differentials (0.11 - 0.2 too low)								
Ladder Exit	Not applicable.							
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	Not applicable.							
South Ladder Differentials (0.01 - 0.1 too low)								
Ladder Exit	Not applicable.							
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	Not applicable.							
South Ladder Differentials (0.01 - 0.1 too high)								
Ladder Exit	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0
South Ladder Differentials (0.11 - 0.2 too high)								
Ladder Exit	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0
South Ladder Differentials (more than 0.2 too high)								
Ladder Exit	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0
North Ladder Differentials (more than 0.2 too low)								
Ladder Exit	Not applicable.							
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	Not applicable.							
North Ladder Differentials (0.11 - 0.2 too low)								
Ladder Exit	Not applicable.							
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	Not applicable.							
North Ladder Differentials (0.01 - 0.1 too low)								
Ladder Exit	Not applicable.							
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	Not applicable.							
North Ladder Differentials (0.01 - 0.1 too high)								
Ladder Exit	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0
North Ladder Differentials (0.11 - 0.2 too high)								
Ladder Exit	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0

Counting Station	0	0	0	0	0	0	0	0
North Ladder Differentials (more than 0.2 too high)								
Ladder Exit	0	0	0	0	0	0	0	0
Ladder Weirs	0	0	0	0	0	0	0	0
Counting Station	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (<0.80)								
South Shore	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (0.80 - 0.89)								
South Shore	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (0.90 - 0.99):								
South Shore	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (2.01 - 2.10)								
South Shore	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (2.11 - 2.20)								
South Shore	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0
Channel/Tailwater Differentials (>2.20)								
South Shore	0	0	0	0	0	0	0	0
North Powerhouse	0	0	0	0	0	0	0	0
North Shore	0	0	0	0	0	0	0	0
Entrance Weir Depths (more than 0.2 too low)								
SFE 1 (<7.80)	0	0	0	0	0	0	0	0
NFE 2 (<7.80)	0	0	0	0	0	0	0	0
NSE 1 (<7.80)	1	0	0	0	0	0	0	0
Entrance Weir Depths (0.11 - 0.2 too low)								
SFE 1 (7.80 - 7.89)	0	0	0	0	0	0	0	0
NFE 2 (7.80 - 7.89)	0	0	0	0	0	0	0	0
NSE 1 (7.80 - 7.89)	0	0	0	0	0	0	0	0
Entrance Weir Depths (0.01 - 0.1 too low)								
SFE 1 (7.90 - 7.99)	0	0	0	0	0	0	0	0
NFE 2 (7.90 - 7.99)	0	0	0	0	0	0	0	0
NSE 1 (7.90 - 7.99)	0	0	0	0	0	0	0	0

<u># of YES</u>	<u>% YES</u>	<u>Total No. of Inspections</u>
124	96.9%	128
128	100.0%	128
127	99.2%	128
127	99.2%	128

128	100.0%	128
127	99.2%	128
128	100.0%	128
106	82.8%	128
123	96.1%	128
109	85.2%	128
48	37.5%	128
48	37.5%	128
33	25.8%	128
<u># of NO</u>	<u>% NO</u>	
4	3.1%	
0	0.0%	
1	0.8%	
1	0.8%	
0	0.0%	
1	0.8%	
0	0.0%	
22	17.2%	
5	3.9%	
19	14.8%	
8	6.3%	
5	3.9%	
2	1.6%	
	<u>% SILL</u>	
<u># of SILL</u>		
72	56.3%	
75	58.6%	
93	72.7%	

South Ladder Differentials (more than 0.2 too low)	
Ladder Exit	
Ladder Weirs	1
Counting Station	
South Ladder Differentials (0.11 - 0.2 too low)	
Ladder Exit	
Ladder Weirs	0
Counting Station	
South Ladder Differentials (0.01 - 0.1 too low)	
Ladder Exit	
Ladder Weirs	0
Counting Station	
South Ladder Differentials (0.01 - 0.1 too high)	
Ladder Exit	0
Ladder Weirs	0
Counting Station	0
South Ladder Differentials (0.11 - 0.2 too high)	
Ladder Exit	0
Ladder Weirs	0
Counting Station	0
South Ladder Differentials (more than 0.2 too high)	

Ladder Exit	0
Ladder Weirs	0
Counting Station	1
North Ladder Differentials (more than 0.2 too low)	
Ladder Exit	
Ladder Weirs	0
Counting Station	
North Ladder Differentials (0.11 - 0.2 too low)	
Ladder Exit	
Ladder Weirs	1
Counting Station	
North Ladder Differentials (0.01 - 0.1 too low)	
Ladder Exit	
Ladder Weirs	0
Counting Station	
North Ladder Differentials (0.01 - 0.1 too high)	
Ladder Exit	0
Ladder Weirs	0
Counting Station	0
North Ladder Differentials (0.11 - 0.2 too high)	
Ladder Exit	0
Ladder Weirs	0
Counting Station	0
North Ladder Differentials (more than 0.2 too high)	
Ladder Exit	0
Ladder Weirs	0
Counting Station	0
Channel/Tailwater Differentials (<0.80)	
South Shore	0
North Powerhouse	2
North Shore	7
Channel/Tailwater Differentials (0.80 - 0.89)	
South Shore	0
North Powerhouse	0
North Shore	0
Channel/Tailwater Differentials (0.90 - 0.99):	
South Shore	0
North Powerhouse	0
North Shore	3
Channel/Tailwater Differentials (2.01 - 2.10)	
South Shore	1
North Powerhouse	0
North Shore	0
Channel/Tailwater Differentials (2.11 - 2.20)	
South Shore	5
North Powerhouse	0
North Shore	3
Channel/Tailwater Differentials (>2.20)	
South Shore	16
North Powerhouse	3
North Shore	6
Entrance Weir Depths (more than 0.2 too low)	
SFE 1 (<7.80)	2
NFE 2 (<7.80)	4
NSE 1 (<7.80)	2

Entrance Weir Depths (0.11 - 0.2 too low)

SFE 1 (7.80 - 7.89)	0
NFE 2 (7.80 - 7.89)	0
NSE 1 (7.80 - 7.89)	0

Entrance Weir Depths (0.01 - 0.1 too low)

SFE 1 (7.90 - 7.99)	6
NFE 2 (7.90 - 7.99)	1
NSE 1 (7.90 - 7.99)	0

1	2	3	4	5	6	7	8	9
ICE HARBOR				-----Not Enough Depth-----			-----Too Much Depth-----	
Criteria and Locations	No. in Criteria/ No. on Sill/ No. of Inspecti ons	% In Criter ia/ % On Sill	No./ % Withi n 0.01- 0.1 Foot	No./% Within 0.11-0.2 Foot	No./ % >0.2 Foot	No./ % Withi n 0.01- 0.1 Foot	No./% Within 0.11-0.2 Foot	No./ % >0.2 Foot
Channel Velocities	124 *** 128	96.9 *** ***	*** *** ***	*** *** ***	*** *** ***	*** *** ***	*** *** ***	*** *** ***
Differentials South Fish Ladder								
Ladder Exit	128 *** 128	100.0 *** ***	*** *** ***	*** *** ***	*** *** ***	0 0.0 0	0 0.0 0	0 0.0 0
Ladder Weirs	127 *** 128	99.2 *** ***	0 0.0 0	0 0.0 0	1 0.8 0	0 0.0 0	0 0.0 0	0 0.0 0
Counting Station	127 *** 128	99.2 *** ***	*** *** ***	*** *** ***	*** *** ***	0 0.0 0	0 0.0 0	1 0.8 0
North Fish Ladder								
Ladder Exit	128 *** 128	100.0 *** ***	*** *** ***	*** *** ***	*** *** ***	0 0.0 0	0 0.0 0	0 0.0 0
Ladder Weirs	127 *** 128	99.2 *** ***	0 0.0 0	1 0.8 0	0 0.0 0	0 0.0 0	0 0.0 0	0 0.0 0
Counting Station	*** *** 128	0.0 *** ***	*** *** ***	*** *** ***	*** *** ***	0 0.0 0	0 0.0 0	0 0.0 0
Collection Channels								
South Shore	106 *** 128	82.8 *** ***	0 0.0 0	0 0.0 0	0 0.0 0	1 0.8 0	5 3.9 0	16 12.5 3
North Powerhouse	123 *** 128	96.1 *** ***	0 0.0 0	0 0.0 0	2 1.6 0	0 0.0 0	0 0.0 0	3 2.3 6
North Shore	109 *** 128	85.2 *** ***	3 2.3 0	0 0.0 0	7 5.5 0	0 0.0 0	3 2.3 0	6 4.7 0
Weir Depths								
SFE 1	48 72 128	37.5 56.3 ***	6 4.7 ***	1 0.8 ***	0 0.0 ***	*** *** ***	*** *** ***	*** *** ***
NFE 2	48 75 128	37.5 58.6 ***	0 0.0 ***	0 0.0 ***	0 0.0 ***	*** *** ***	*** *** ***	*** *** ***
NSE 1	33 93 128	25.8 72.7 ***	2 1.6 ***	4 3.1 ***	2 1.6 ***	*** *** ***	*** *** ***	*** *** ***

