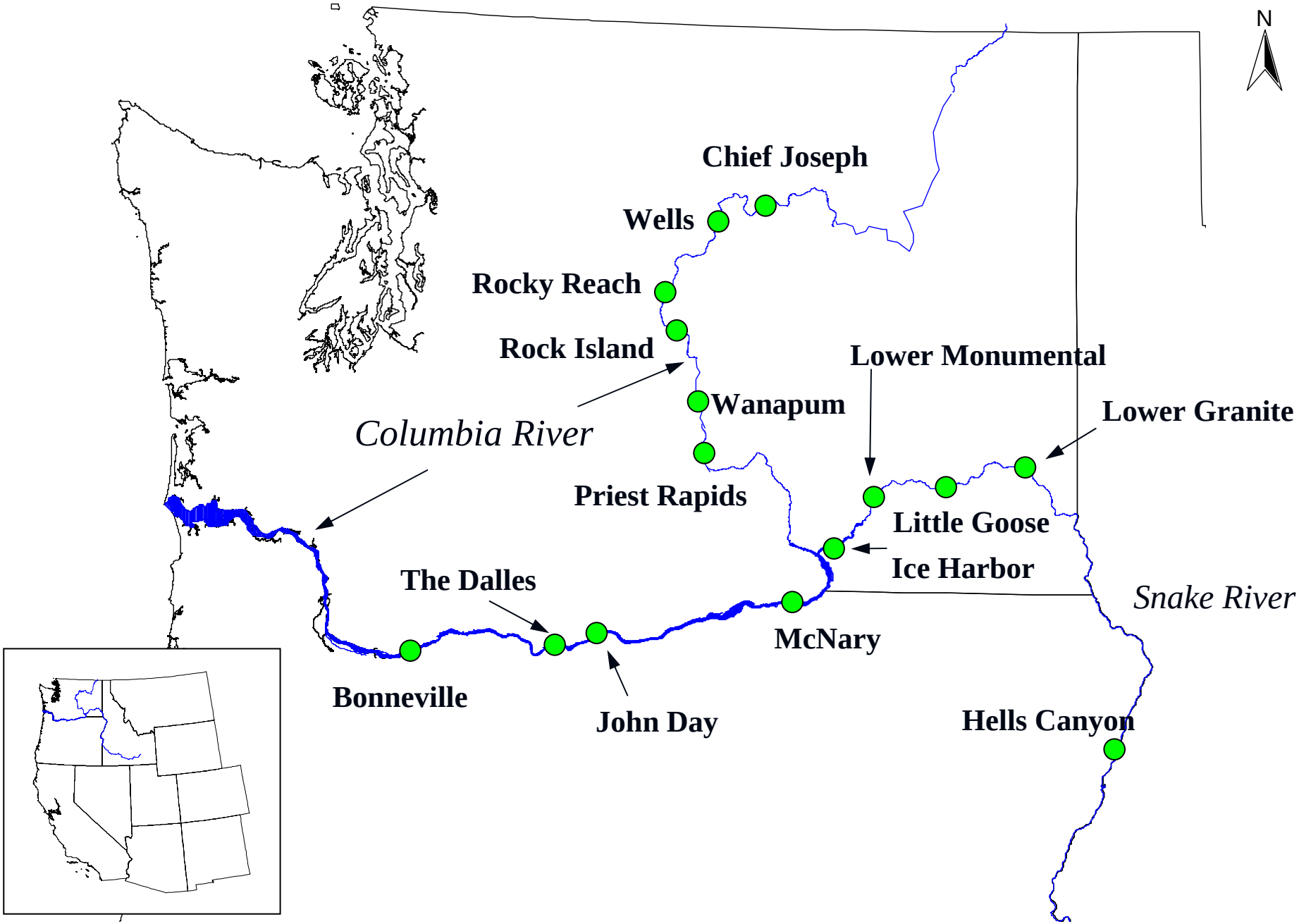
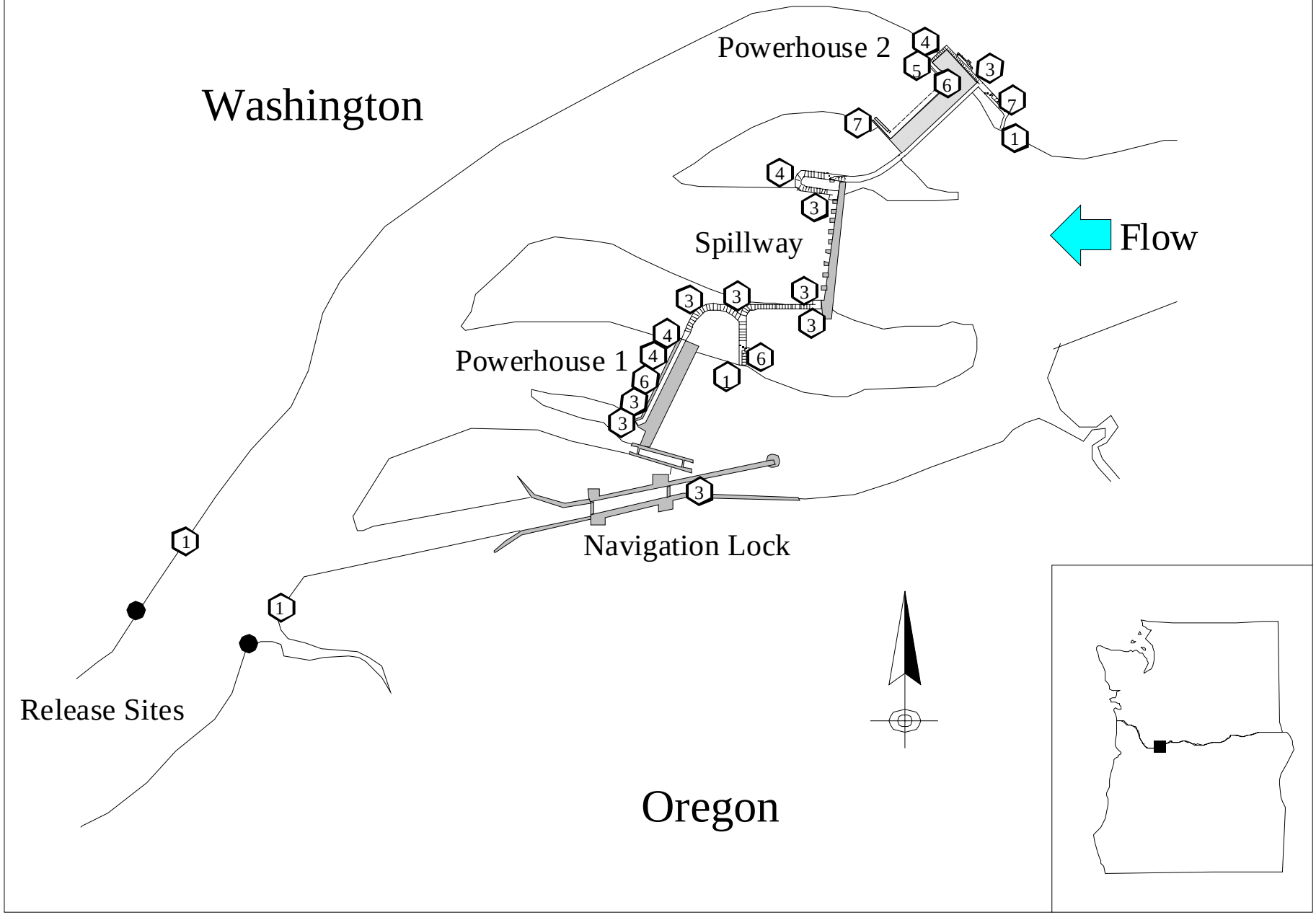
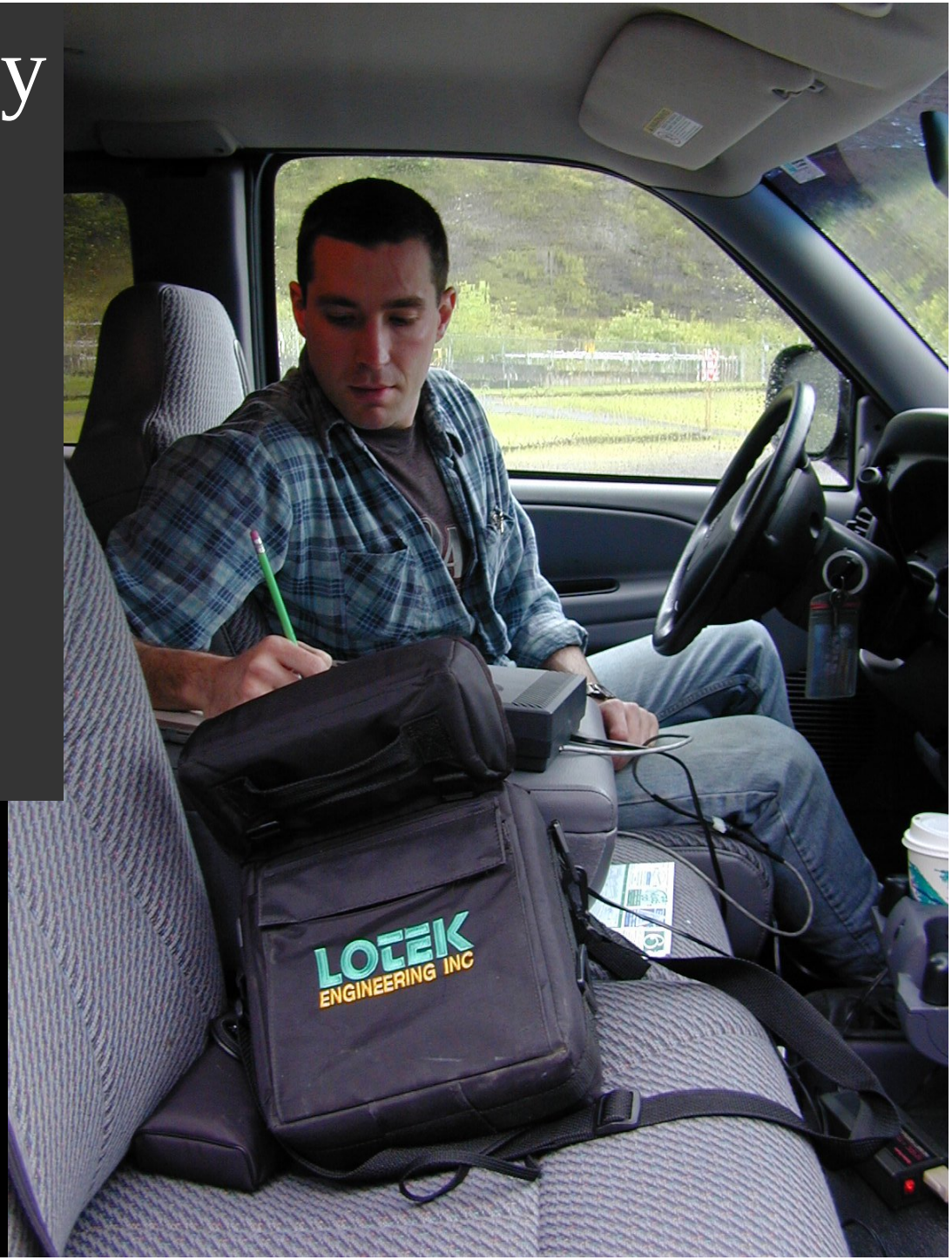
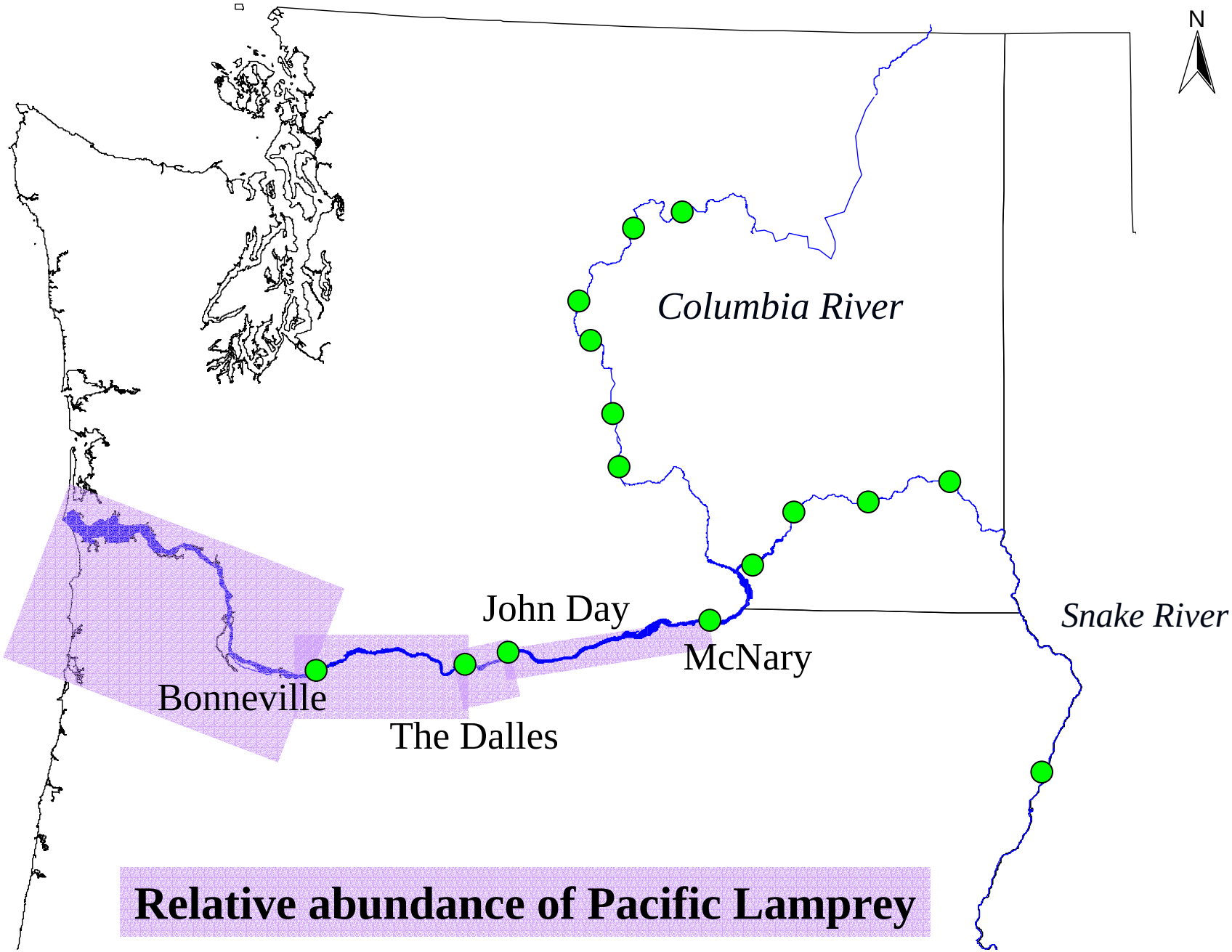

N
Chief Joseph
Wells
Rocky Reach
Rock Island
Wanapum
Priest Rapids
Columbia River
Lower Monumental
Lower Granite
Little Goose
Ice Harbor
Snake River
McNary
The Dalles
Bonneville
John Day
Hells Canyon

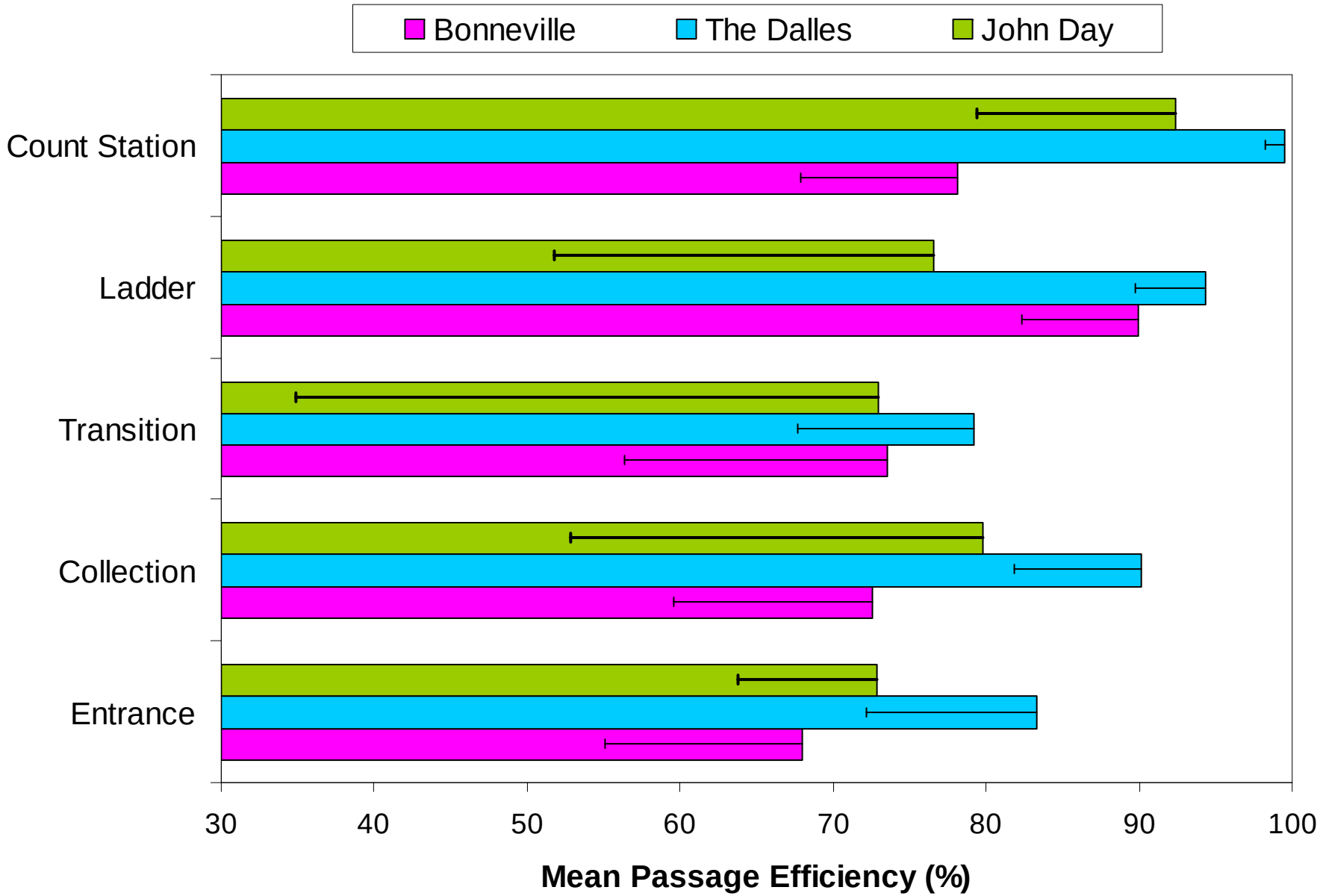
# Bonneville Dam Fixed Site Receivers

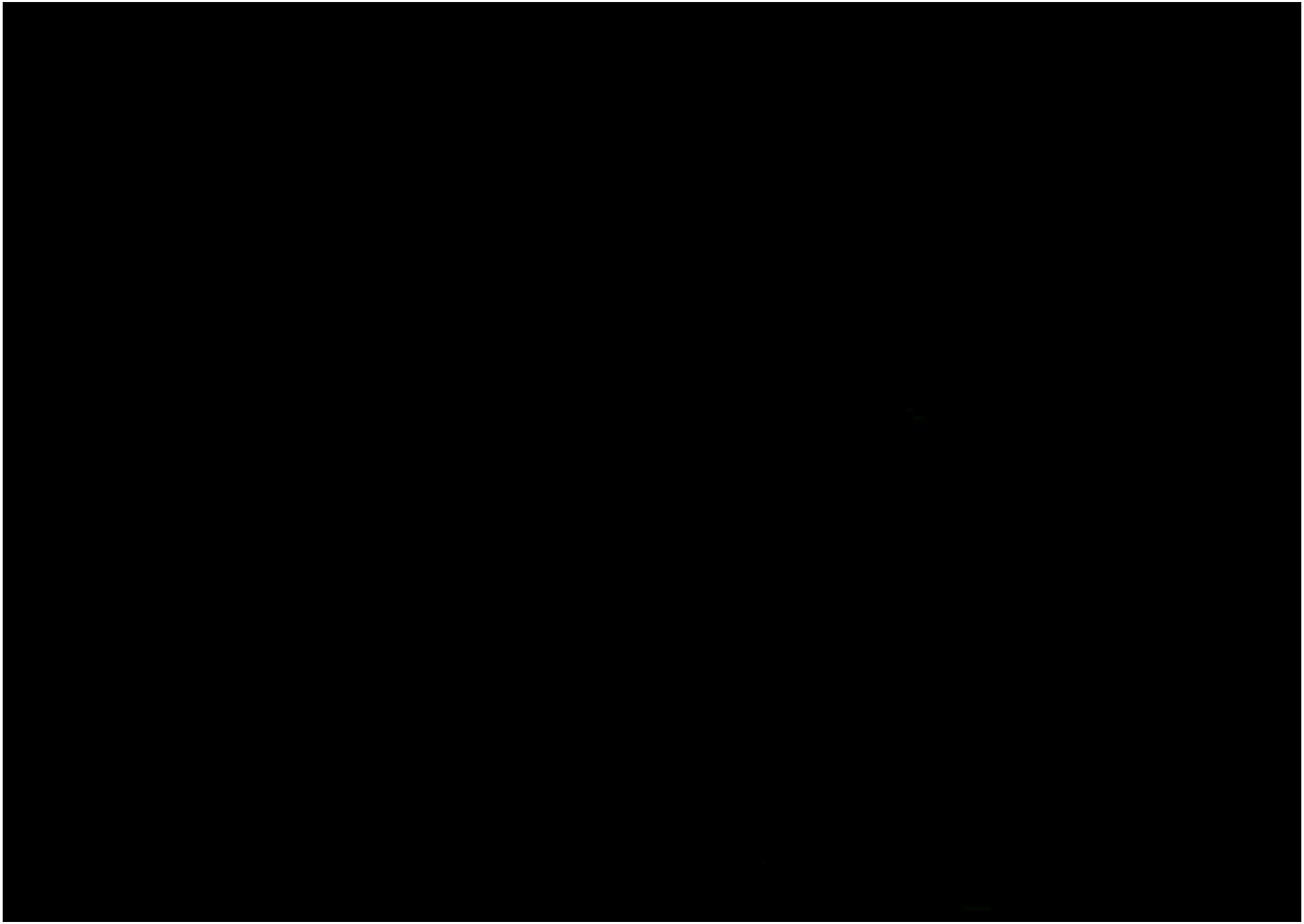


We tracked lamprey movements
with fixed site receivers and via mobile tracking from vehicles and boats.

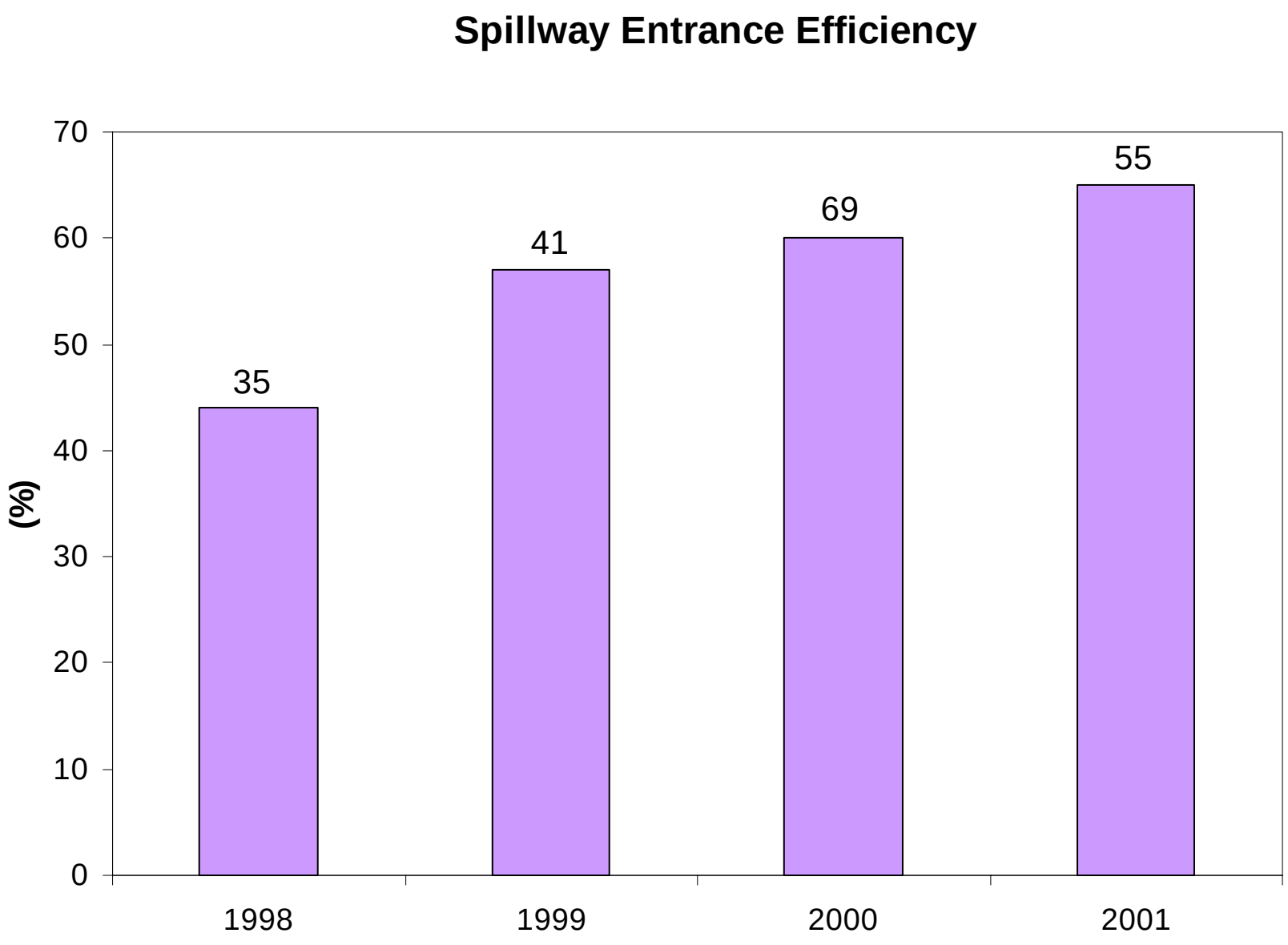


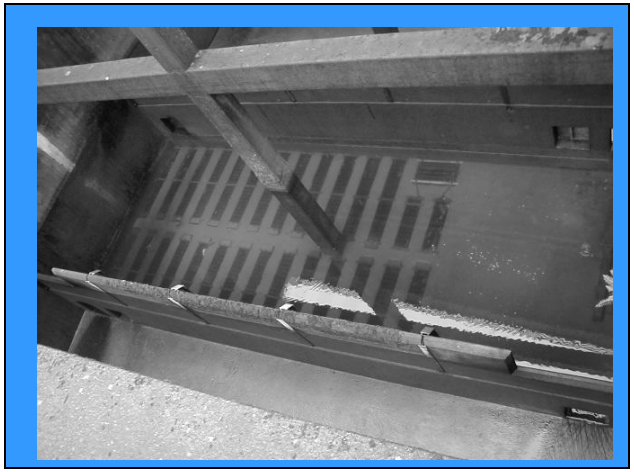

N
Columbia River
Snake River
John Day
McNary
Bonneville
The Dalles
Relative abundance of Pacific Lamprey

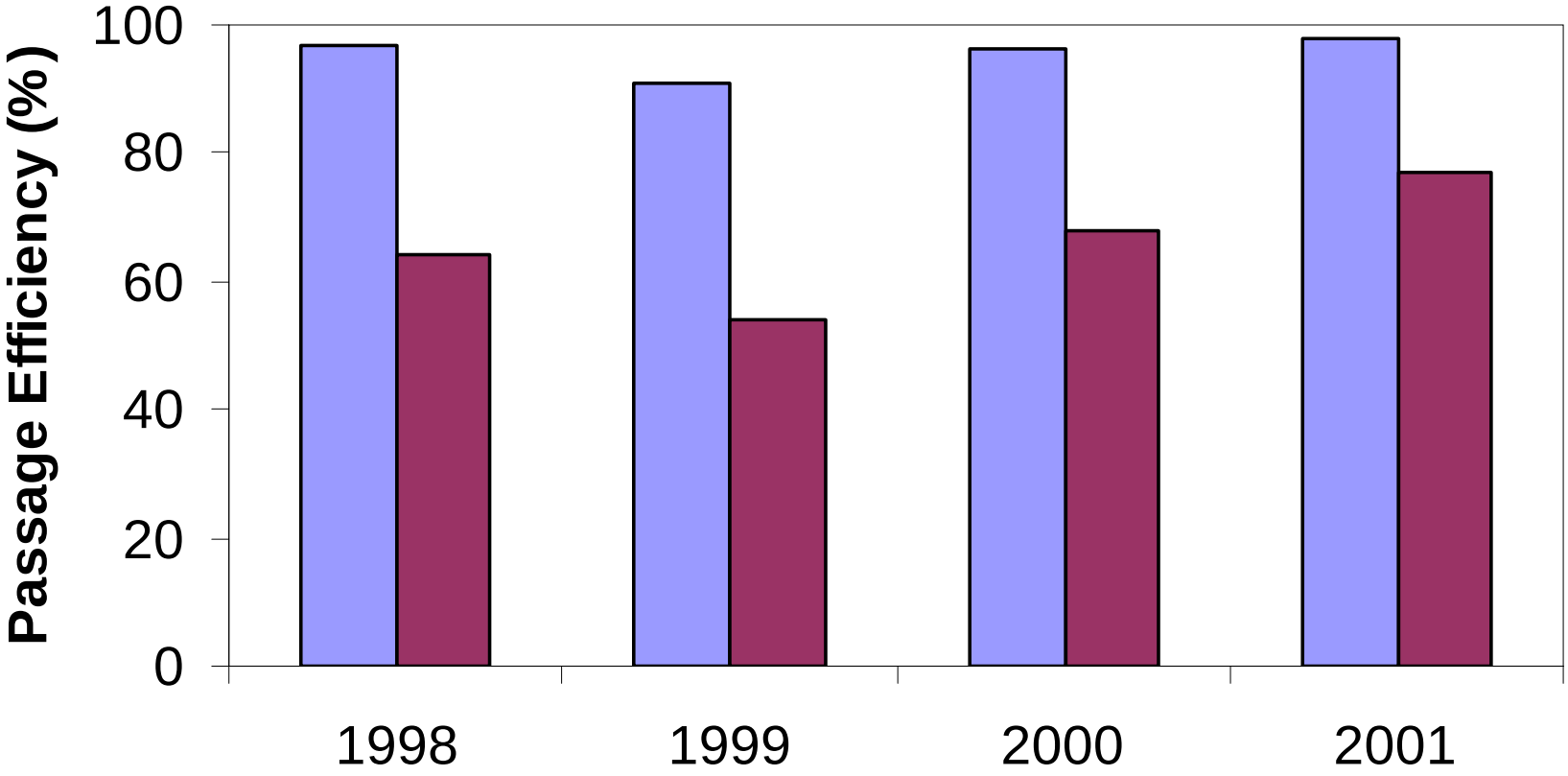

Bonneville
The Dalles
John Day
Count Station
Ladder
Transition
Collection
Entrance
30
40
50
60
70
80
90
100
Mean Passage Efficiency (%)

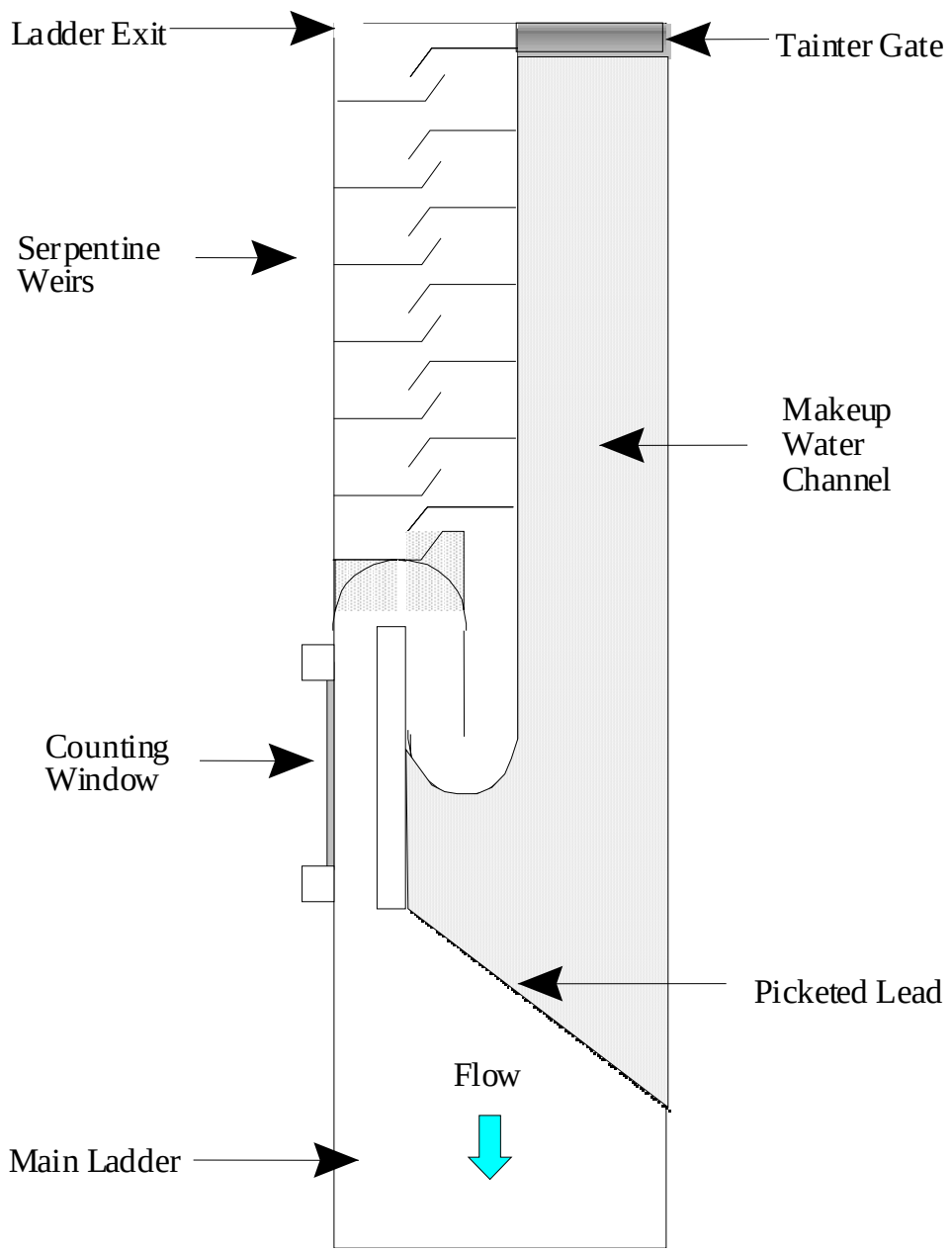


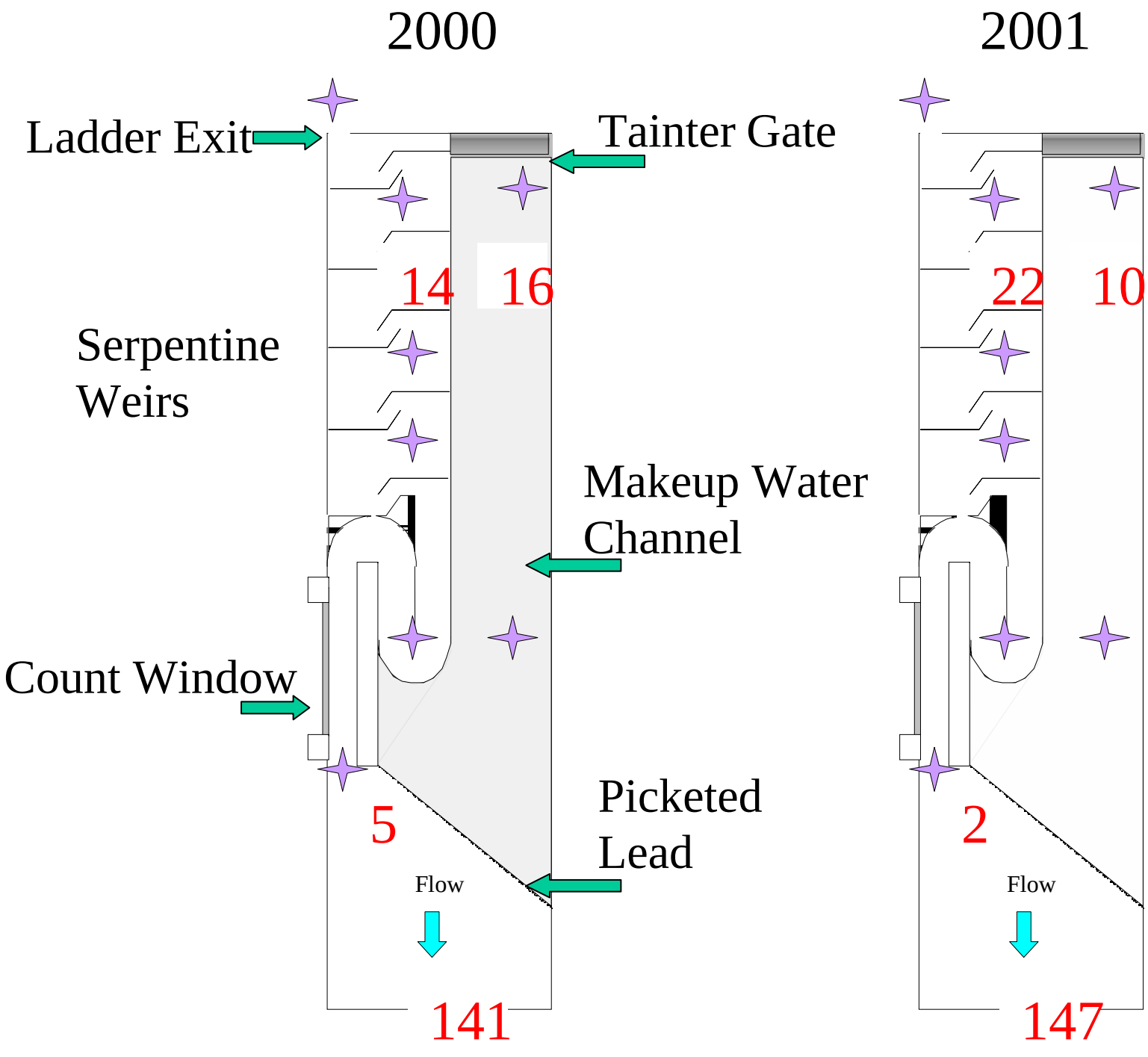
Video courtesy of William Daigle


Spillway Entrance Efficiency
(%)
70
60
50
40
30
20
10
0
35
41
69
55
1998
1999
2000
2001




Passage Efficiency (%)
100
80
60
40
20
0
1998
1999
2000
2001

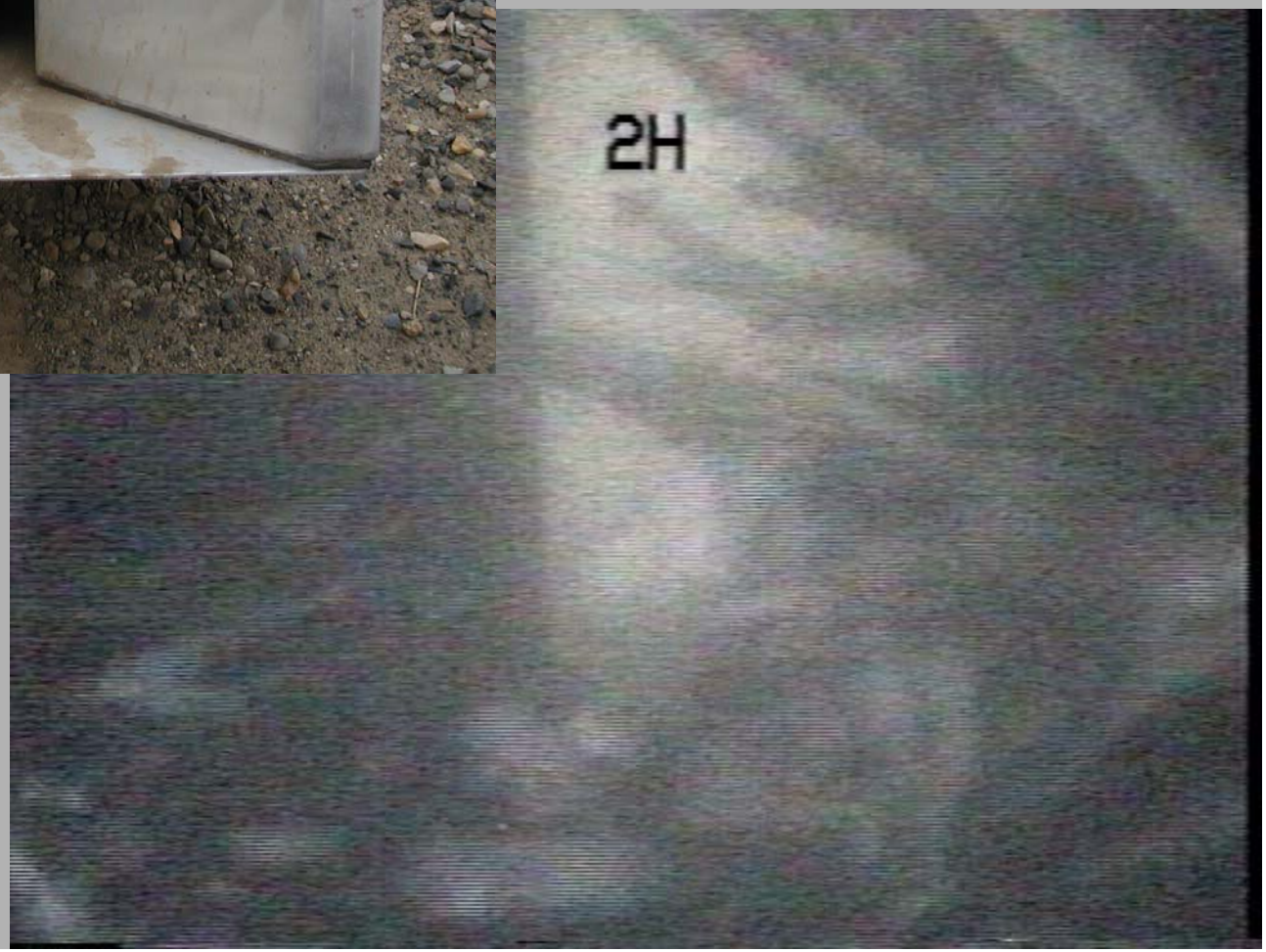

Ladder Exit
Tainter Gate
Serpentine Weirs
Makeup Water Channel
Counting Window
Picketed Lead
Flow
Main Ladder


2000
2001
Ladder Exit
Tainter Gate
14
16
22
10
Serpentine
Weirs
Makeup Water
Channel
Count Window
5
2
Picketed
Lead
Flow
Flow
141
147

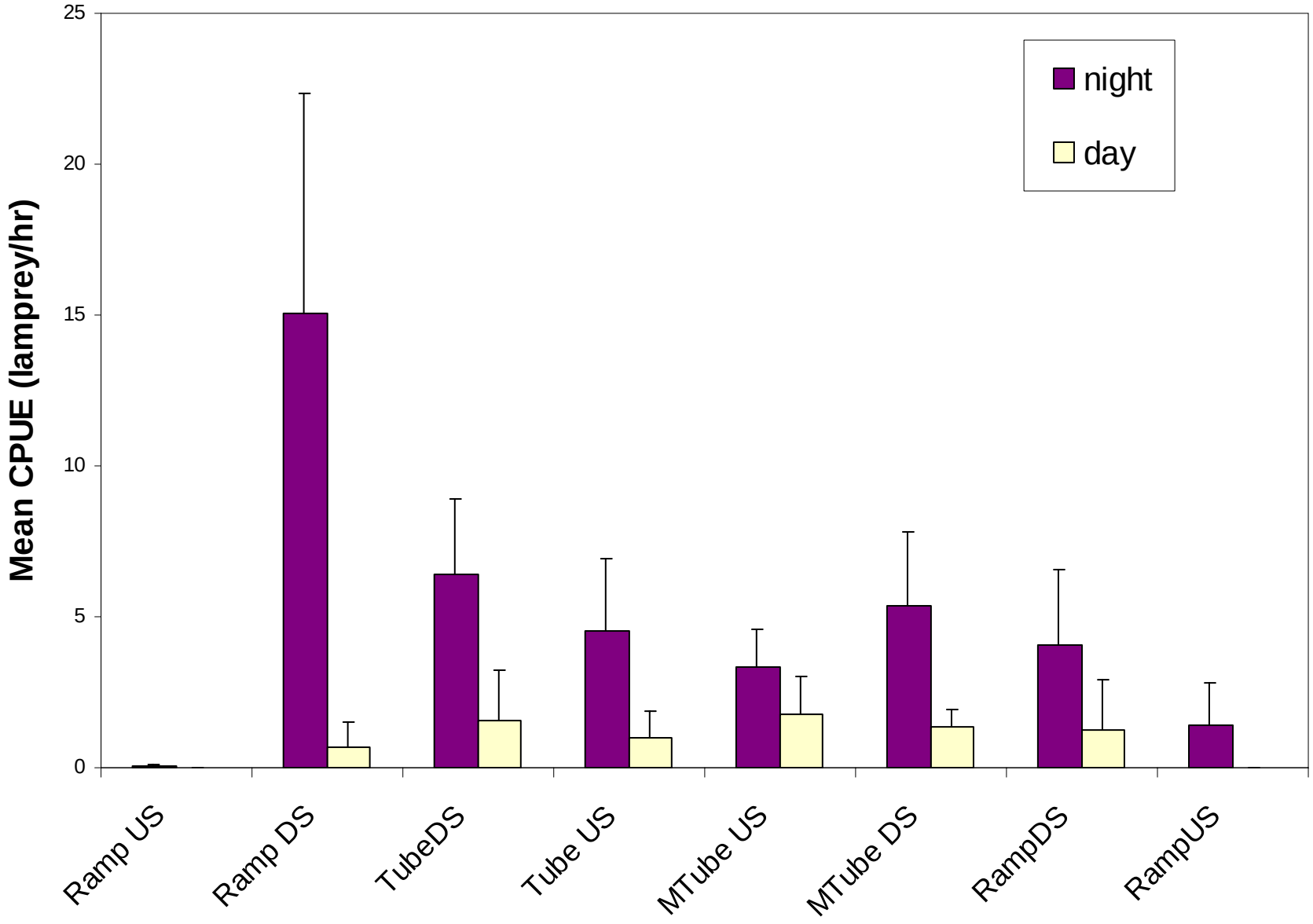
# Bradford Island Makeup Water Channel (MWC) Bypass Designs

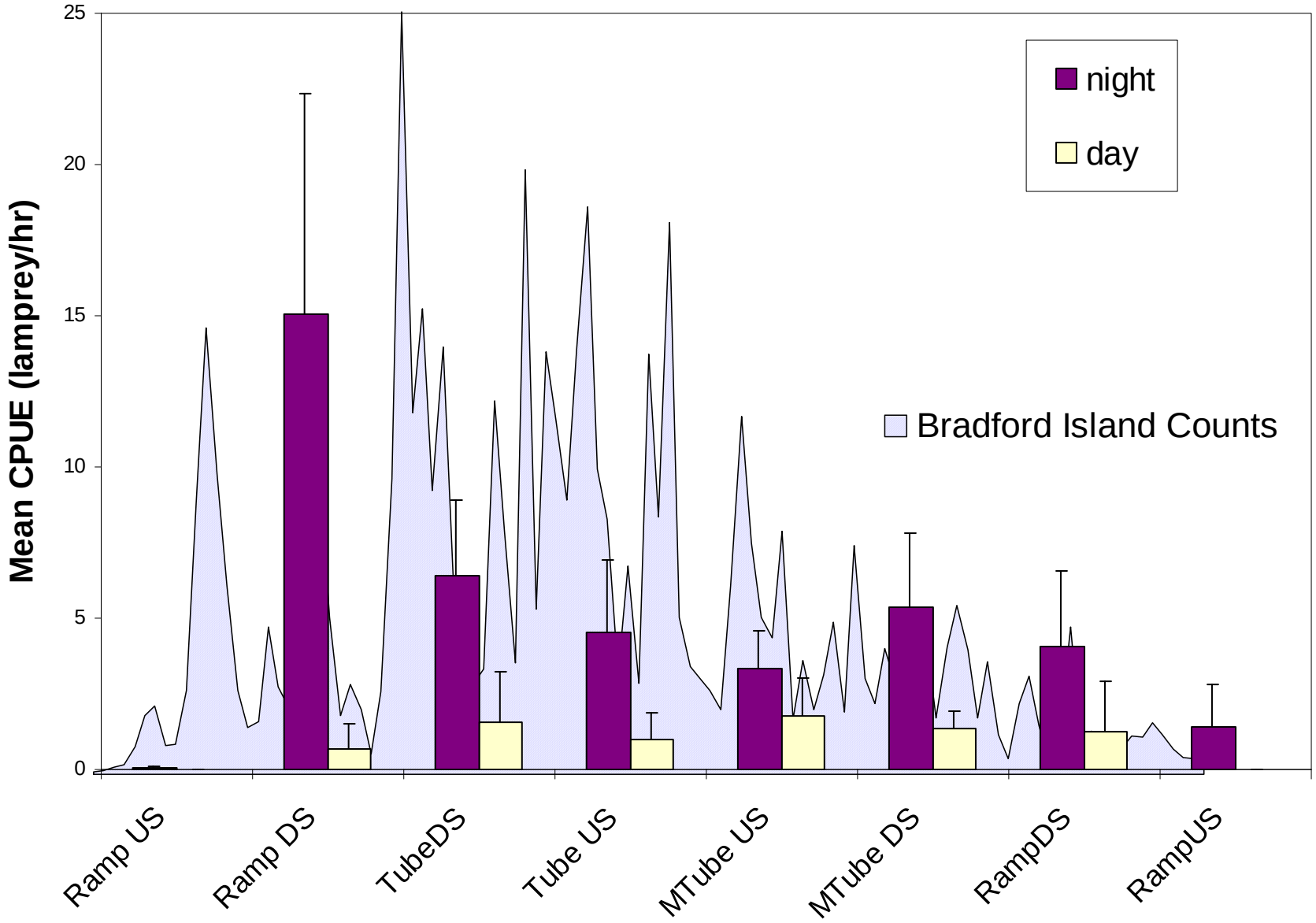
Tube

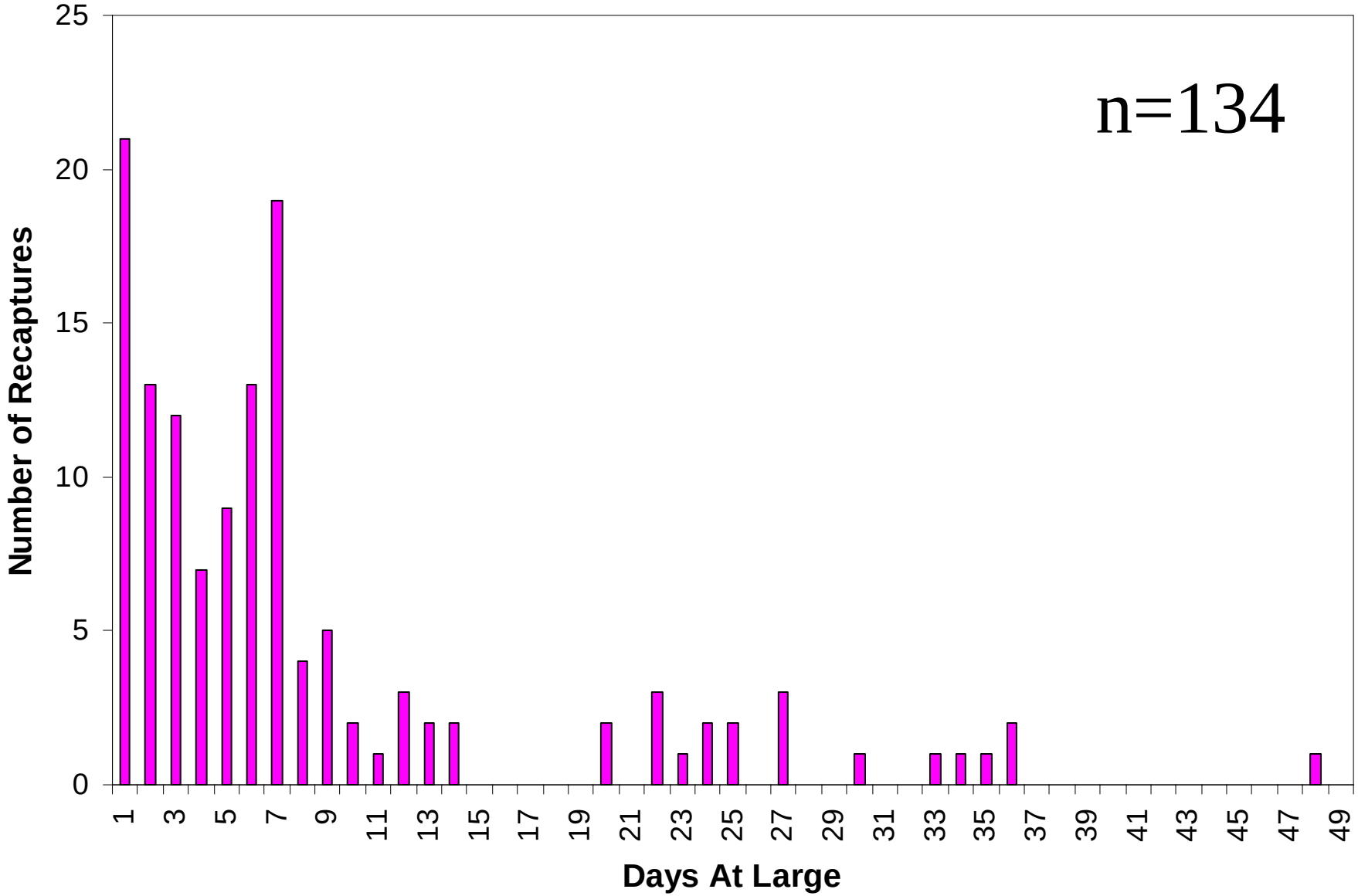
Ramp

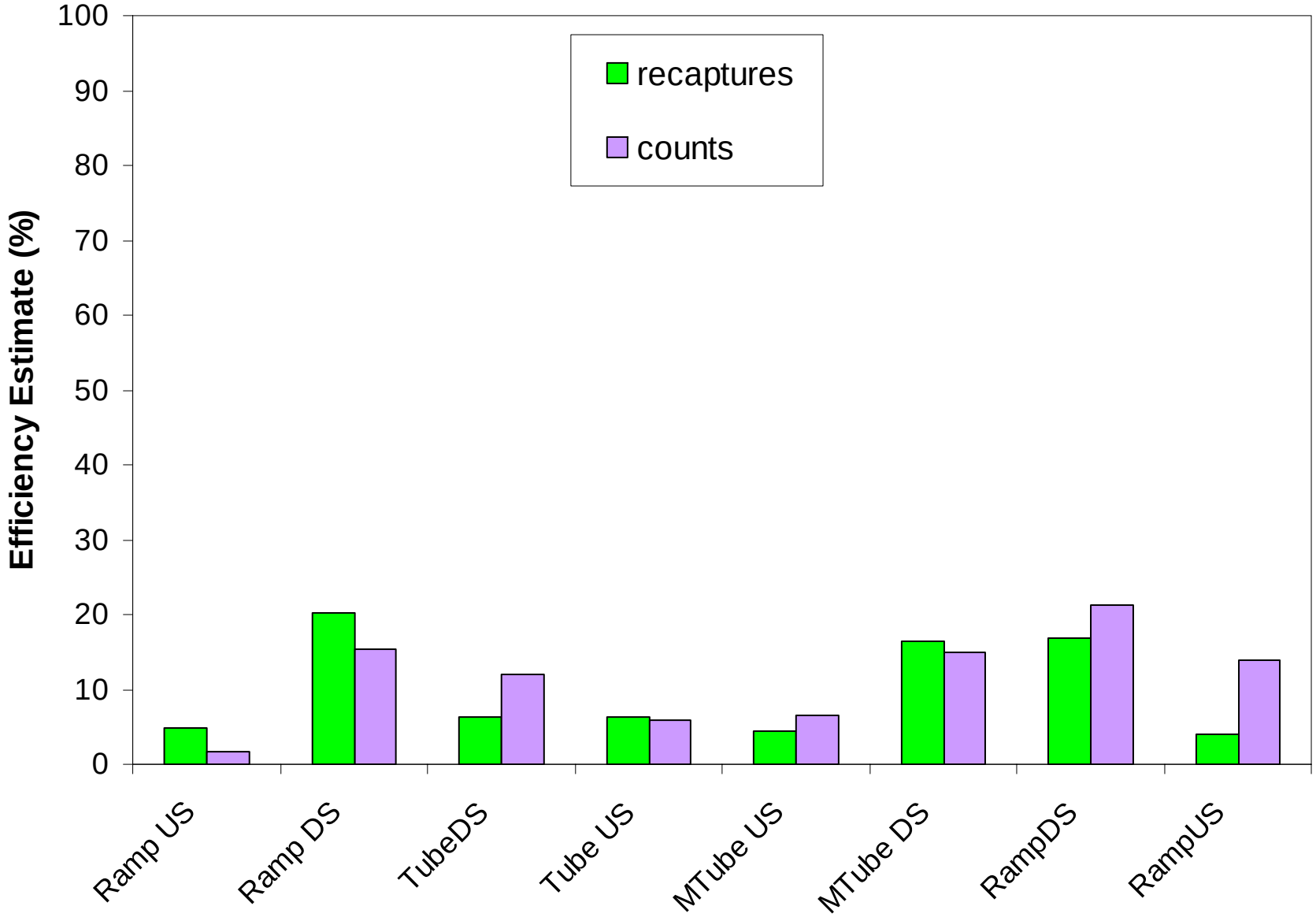

2H

# Evaluation of Bypass Efficiency


Mean CPUE (lamprey/hr)
25
20
15
10
5
0
night
day
Ramp US
Ramp DS
TubeDS
Tube US
MTube US
MTube DS
RampDS
RampUS

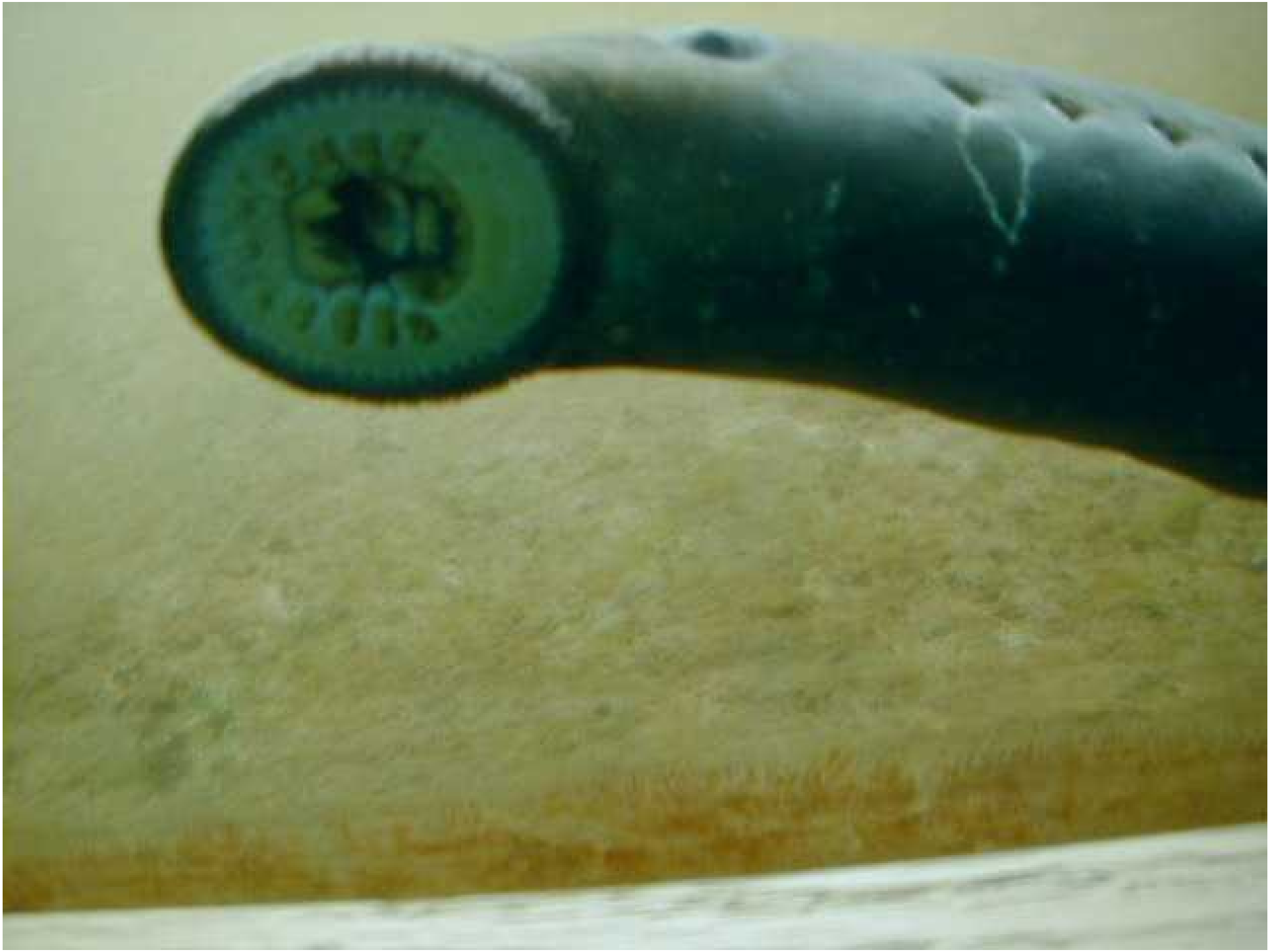

Mean CPUE (lamprey/hr)
25
20
15
10
5
0
night
day
Bradford Island Counts
Ramp US
Ramp DS
TubeDS
Tube US
MTube US
MTube DS
RampDS
RampUS


n=134
Number of Recaptures
Days At Large
0
5
10
15
20
25
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49


Efficiency Estimate (%)
100
90
80
70
60
50
40
30
20
10
0
recaptures
counts
Ramp US
Ramp DS
TubeDS
Tube US
MTube US
MTube DS
RampDS
RampUS

- 5458 lamprey were released into the forebay in 2003

8-25-03 6H
19:50:58



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