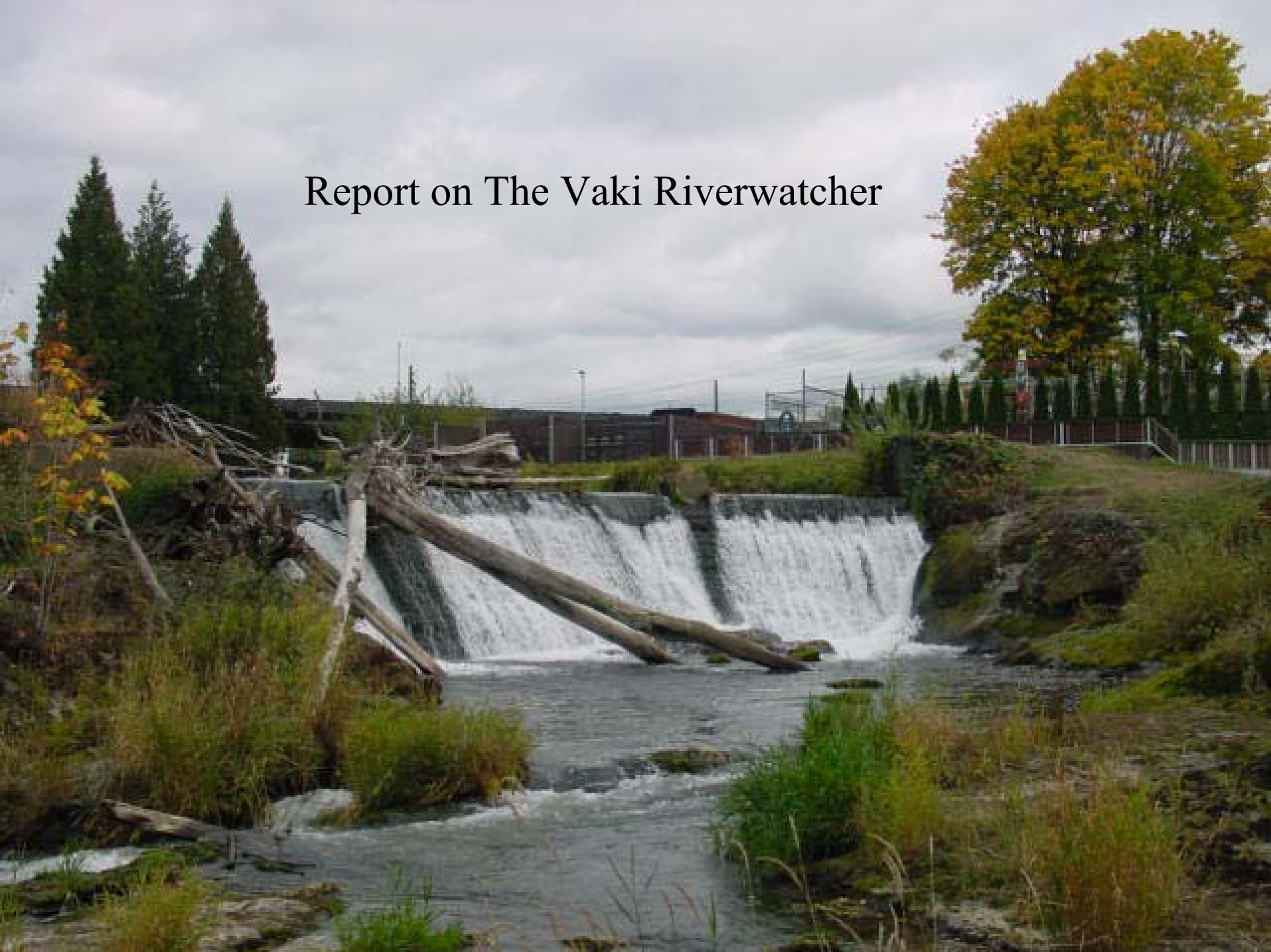


Report on The Vaki Riverwatcher





Puget Sound and Coastal Washington Hatchery Scientific Review Group



Production of juvenile and adult chinook salmon from releases of hatchery adults in the Deschutes River, Washington

Howard Fuss

Hatchery Evaluation and Analysis Team
Washington Department of Fish and Wildlife
Fish Program, Science Division

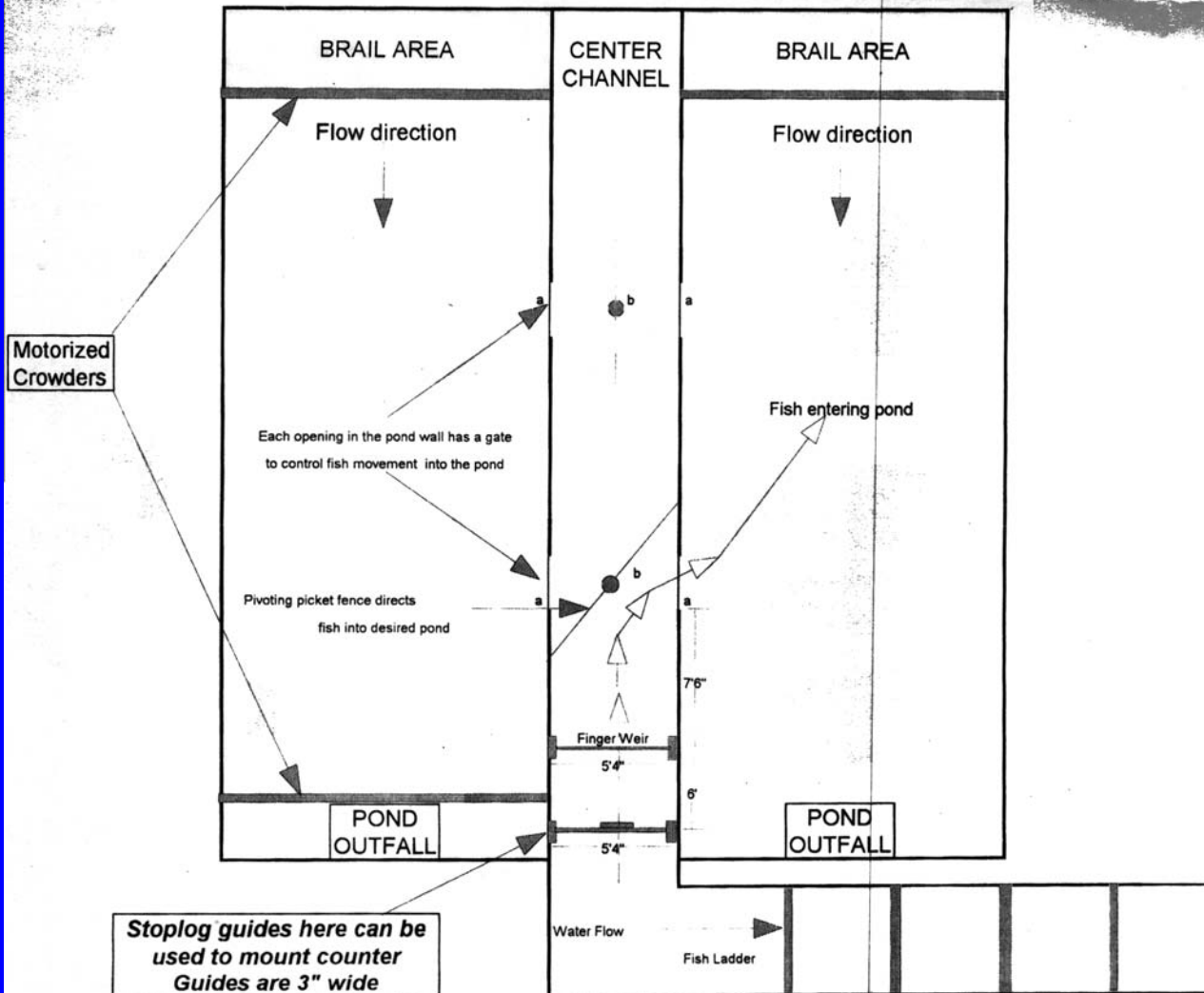






Dimensions for Tumwater Falls Trapping Facility

Tumwater Falls Adult Collection Facility consists of two 20'x100'x5' deep raceways. The ponds are divided by a center collection channel measuring 6'x100'x5'. Fish enter the center channel via a fish ladder. A finger weir is located at the lower end of the center channel. Once fish jump over the finger weir they are trapped from leaving the pond. Each pond has a brail system at the head end which allows fish to be processed without lowering the water depth. Water is supplied to the ponds by upwell which runs along the center-line of each pond. Water flow to each pond is 1,100 gpm. Attracting water to the center section is provided by opening up gates located in the walls of each pond (a). Wooden picket gates pivot on a center shaft to direct fish into the desired pond (b).

















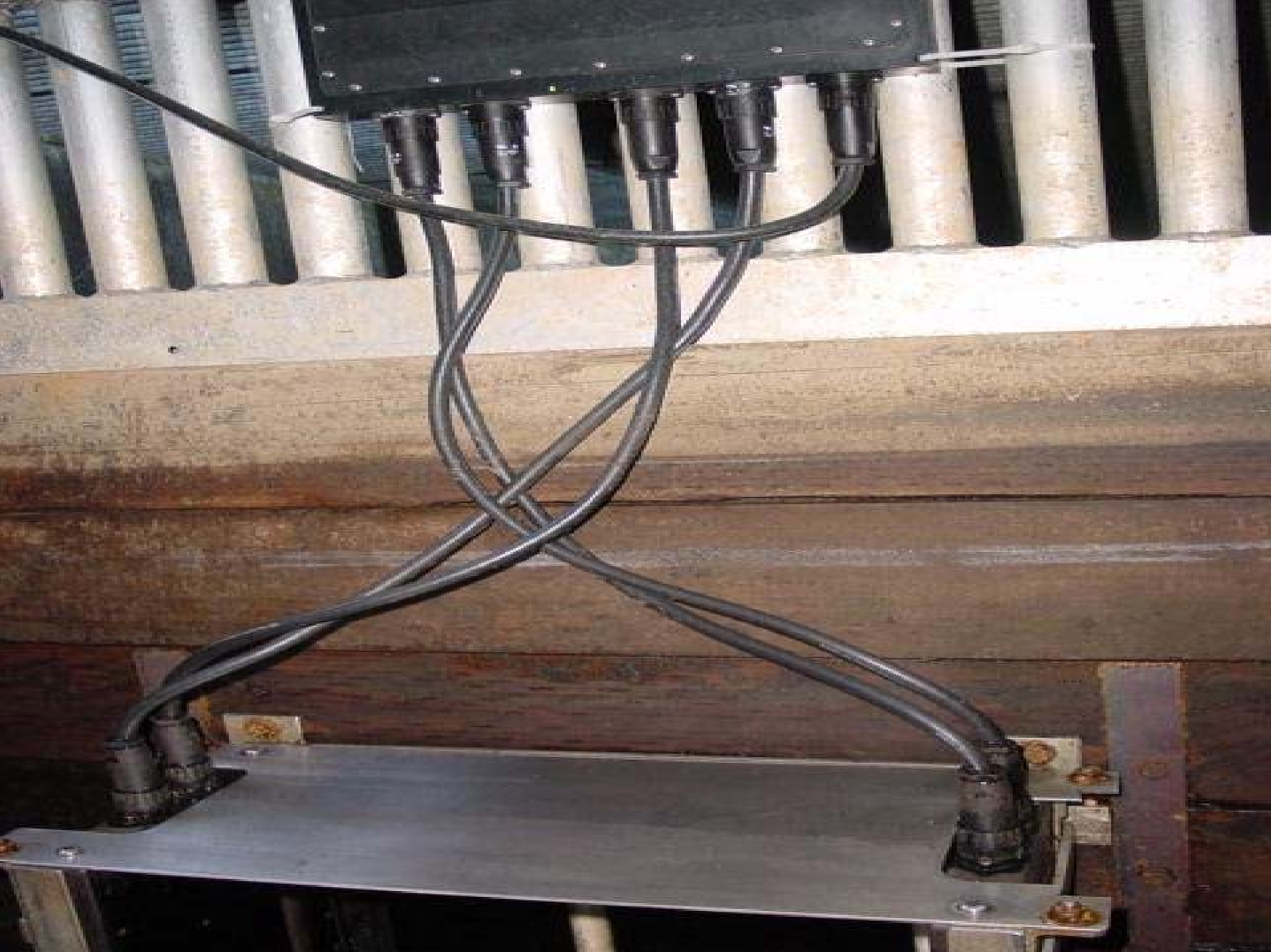




















VAKI
RiverWatcher

15:08 U: 36
41°F D: 23

ON/OFF

FN

RESET



Active Counter

Chambers Creek Tr

Add/Remove Files

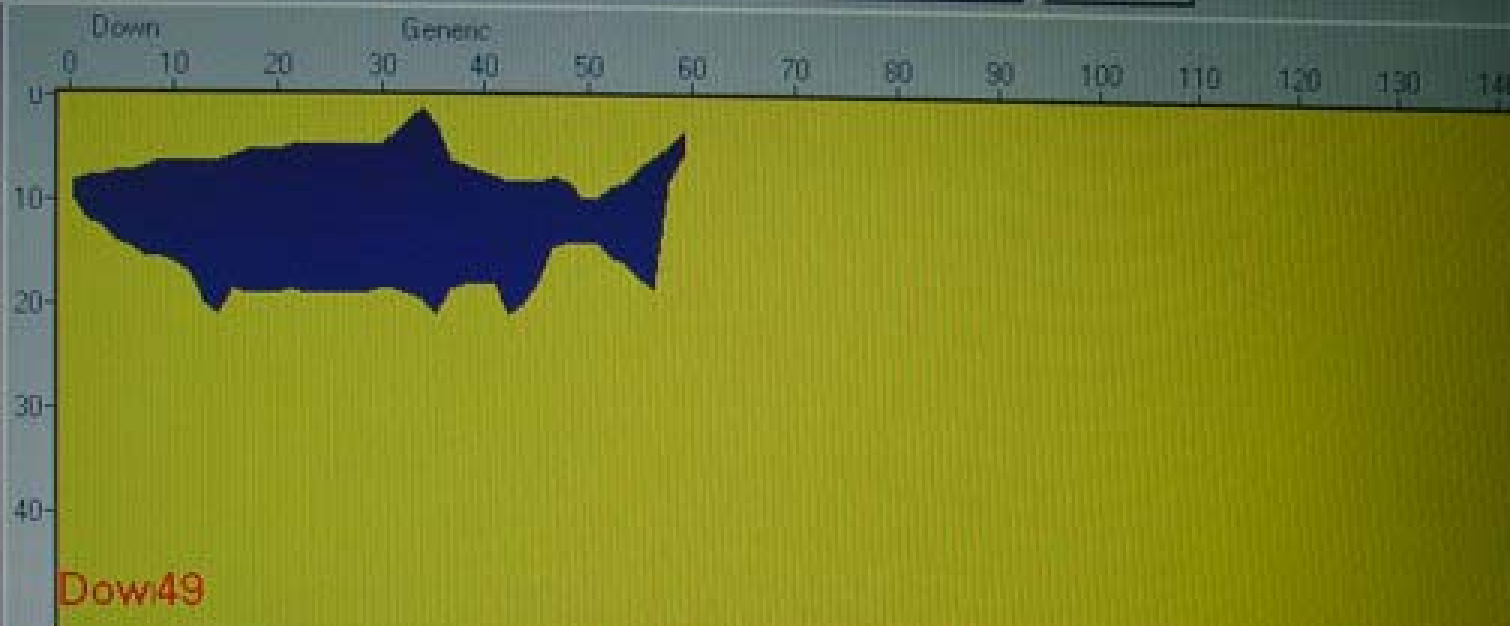
Connect

Chart

View

Close

Categories

☐ Generic☐ Not fish

12/13/01 12:12:00 P

Depth:142

Length: 85

Position: 34

Speed: 0.6



Image 1

☒ Show Image

Size/Time | Temperature | File records | Visibility

Date/Time	Depth	Length	Category	Direction	File nr	Pos. in Frame
12/13/01 12:05:00 PM	135	81	Generic	Down	1	69
12/13/01 12:05:00 PM	117	70	Generic	Up	1	76
12/13/01 12:10:00 PM	95	57	Generic	Up	1	51
12/13/01 12:11:00 PM	109	65	Generic	Up	1	15
▶ 12/13/01 12:12:00 PM	142	85	Generic	Down	1	34

Start

Slide Show

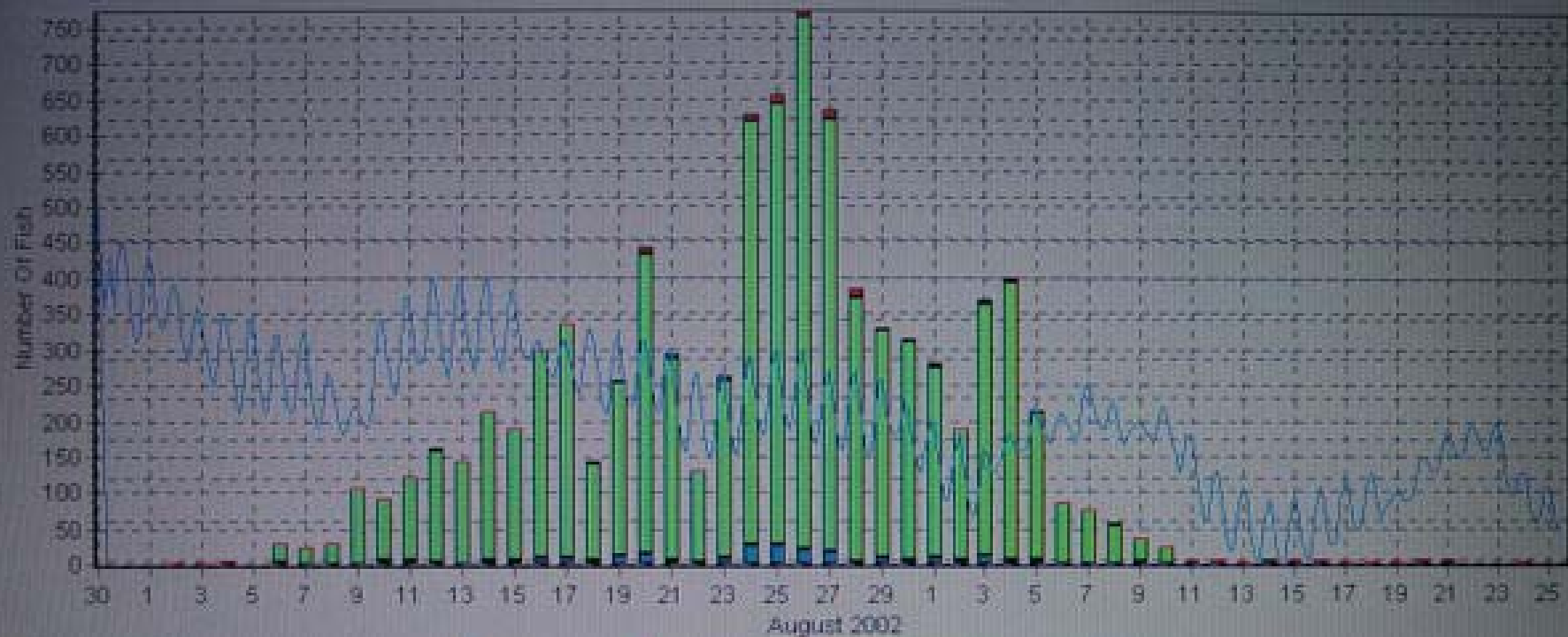
WinAri



2:11 PM

HITACHI

From: 8/30/02 To: 10/25/02 UP-DOWN



Settings and Counting results

Fish length up to:

Visible: 8823

Group 1: 45

☒ 297

Group 2: 95

☒ 8410

Big: 180

☒ 116

Movements shown:

☐ Up☐ Down☒ Up-Down

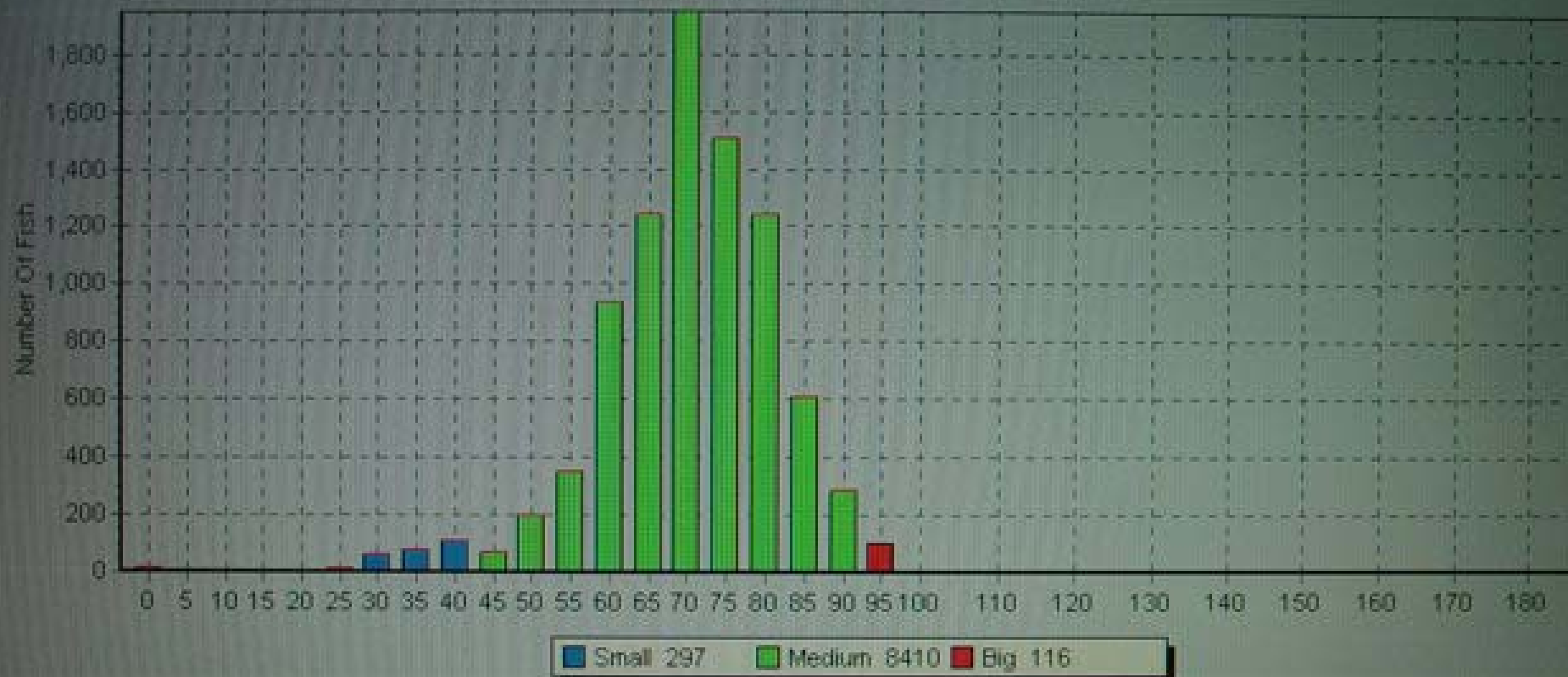
Temperature

☒ Visible☐ Daily average☐ Operating status

Charts

Stacked Chart | Time Chart | Migration Chart | Length chart

From: 8/30/02 To: 10/25/02 UP-DOWN



Group Size [cm] 5

← Year | ← Month | ← Day | ← Hour | All | Hour → | Day → | Month → | Year →

Settings and Counting results

Fish length up to

Visible 8823

Group 1: 45

✓ 297

Group 2: 95

✓ 8410

Movements shown

☐ Up

☐ Down

Temperature

☒ Visible

☐ Only average

☐ Operating status

Charts

Standard Chart Time Chart Migration Chart Length chart

From: 8/30/02 To: 10/25/02 UP-DOWN



← Year ← Month ← Day ← Hour All Hour → Day → Month → Year →

Settings and Counting results:

Fish length up to:

Group 1: 45
Group 2: 95
Big: 180

Visible: 8823
297
8410
116

Movements shown: Temperature

☐ Up

☒ Visible

☐ Operating status

☐ Down

☐ Daily average

☒ Up-Down

Save

Edit Chart

Print Chart

Close

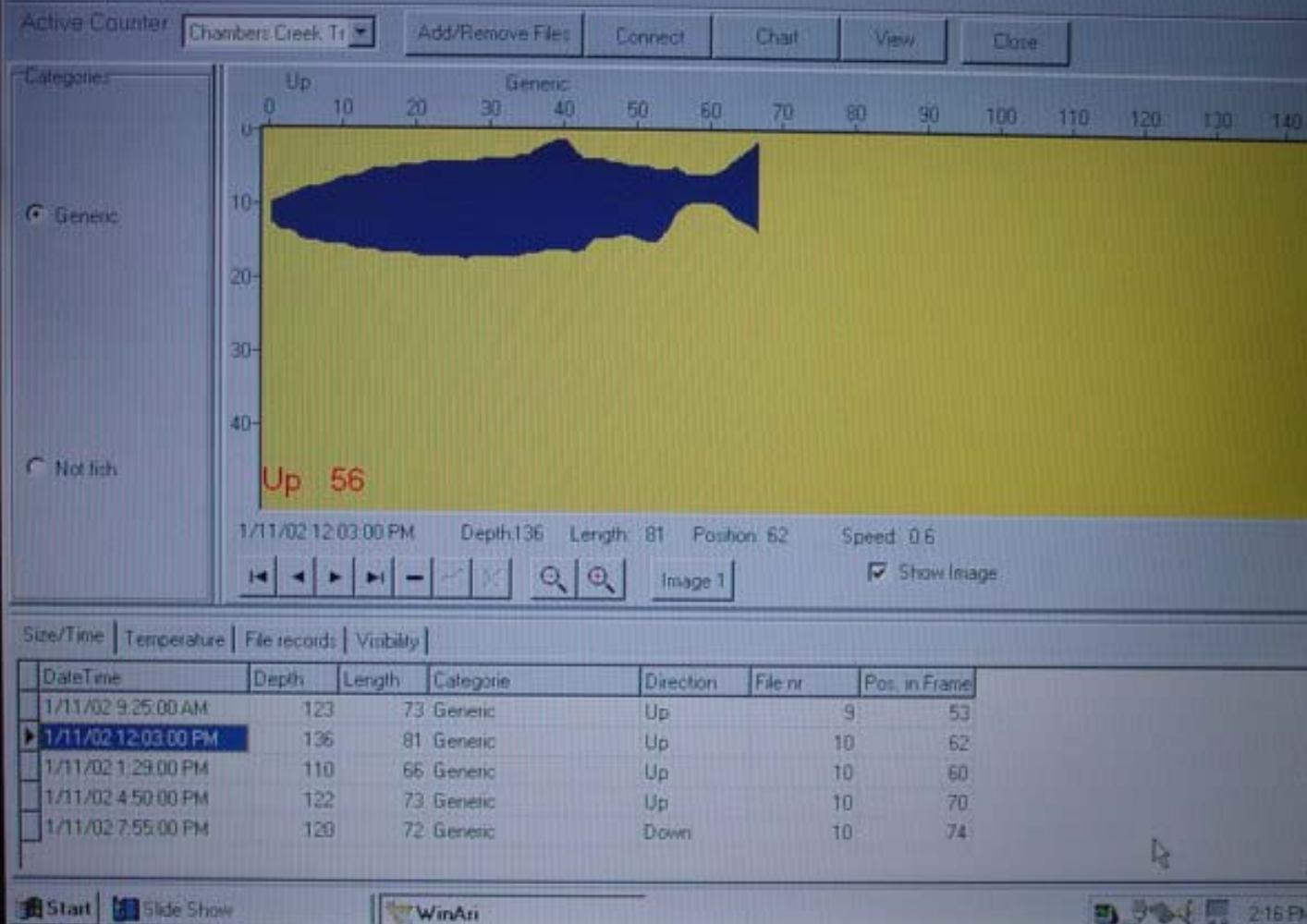
Start Slide Show

WinAri

1:55 PM

HITACHI

Comm...
Rob



HITACHI

WinAri - Chambers Creek Trap

File Counter About

Active Counter: Chambers Creek Tr

Add/Remove Files

Connect

Chart

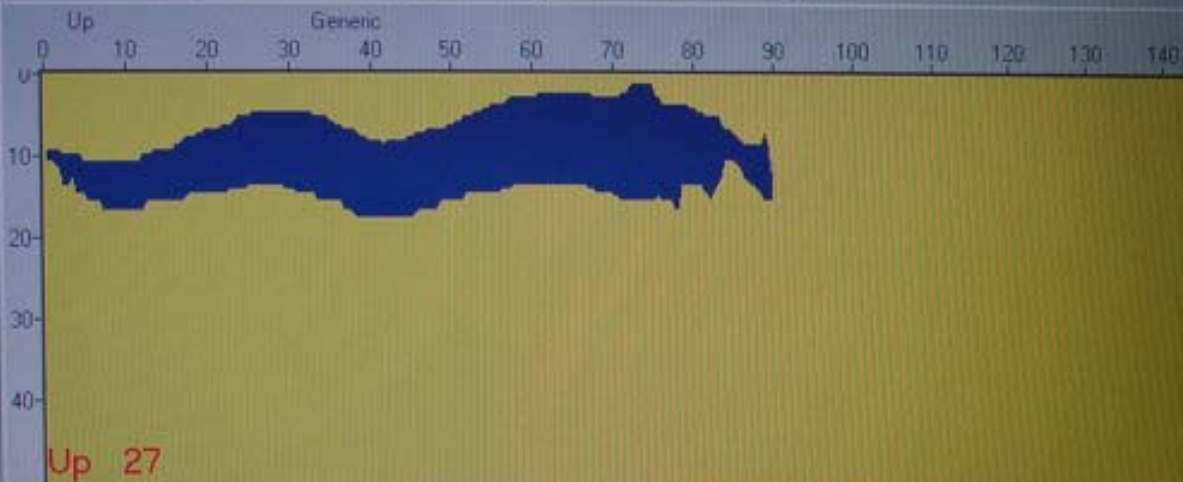
View

Close

Categories

☒ Generic

☐ Not fish



1/12/02 8:38:00 PM Depth:108 Length: 64 Position: 81 Speed: 0.2

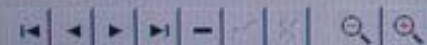


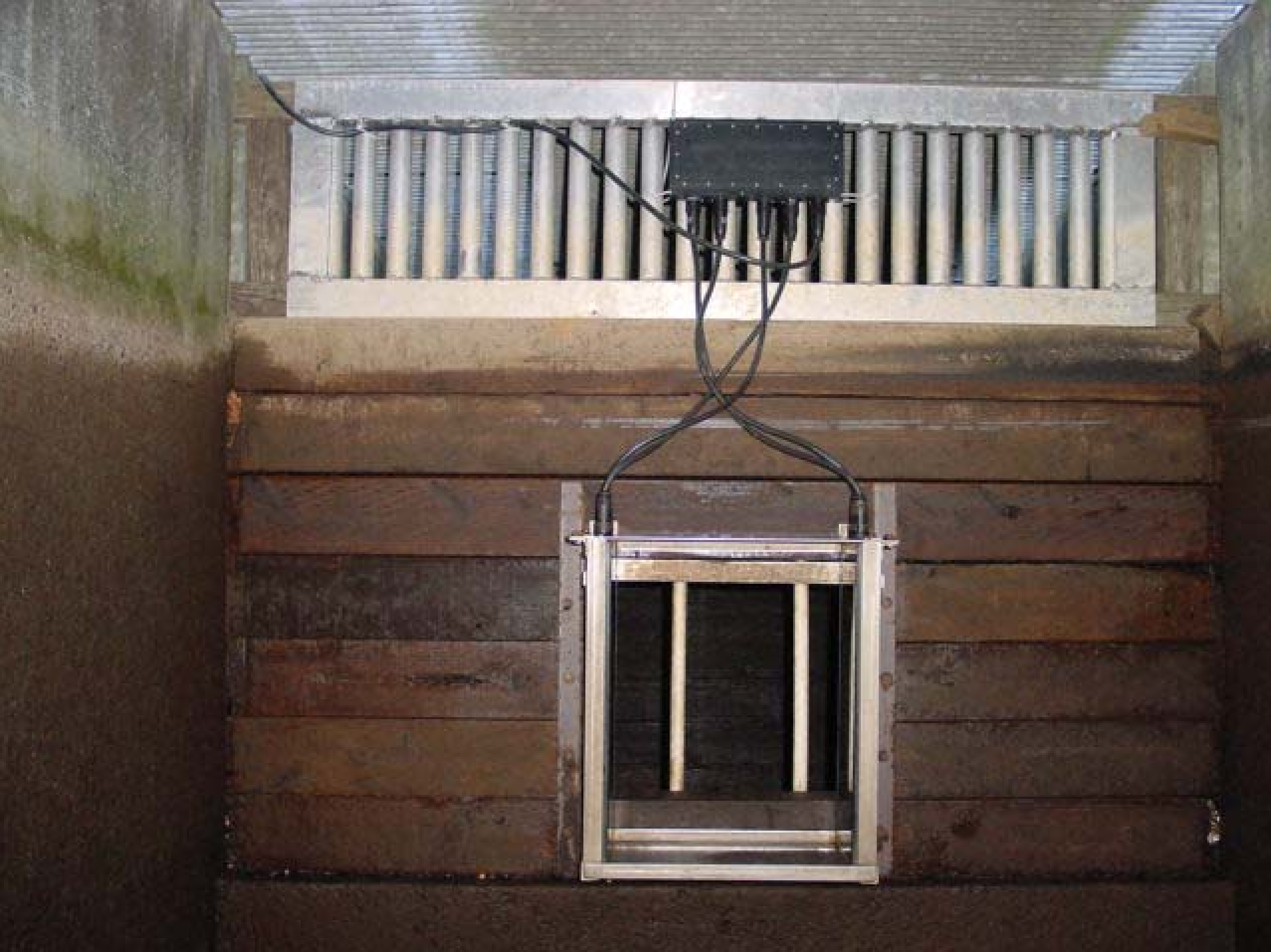
Image 1

☒ Show Image

Size/Time | Temperature | File records | Visibility

Date/Time	Depth	Length	Category	Direction	File nr	Pos. in Frame
1/12/02 5:11:00 PM	121	72	Generic	Up	10	65
1/12/02 5:50:00 PM	127	76	Generic	Up	10	73
1/12/02 6:59:00 PM	137	82	Generic	Up	10	71
1/12/02 8:29:00 PM	141	84	Generic	Up	10	78
1/12/02 8:38:00 PM	108	64	Generic	Up	10	81

2:17 PM



Counter

Chambers Creek, Tr

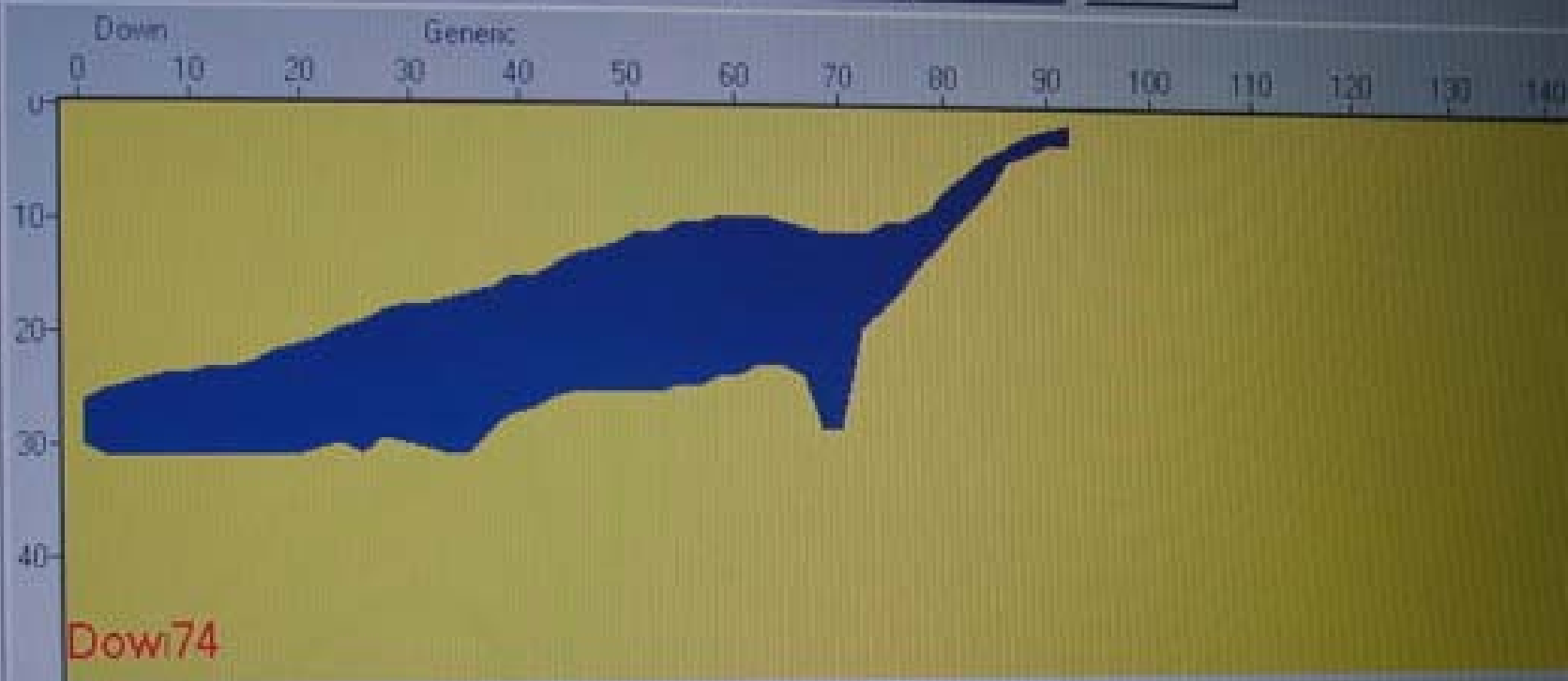
Add/Remove Files

Connect

Chart

View

Close



1/29/02 8:49:00 AM

Depth: 131

Length: 78

Position: 72

Speed: 0.9



Image 1

☒ Show Image

Temperature | File records | Visibility

Time	Depth	Length	Categorie	Direction	File nr	Pos. in Frame
02 7:53:00 AM	85	51	Generic	Up	12	9
02 8:36:00 AM	148	88	Generic	Up	12	68
02 8:41:00 AM	142	85	Generic	Up	12	74
02 8:47:00 AM	142	85	Generic	Down	12	78
02 8:49:00 AM	131	78	Generic	Down	12	72

Counter results for Tumwater Falls

Year	Hand counted	Counter #	% Accurate
2000	5,671	6,381	88.8 % +
2001	5,622	5,114	90.9 % -
2002	8,698	8,778	99.0 % +

In Summary

- For our application the unit provided accurate counts allowing staff to manage in coming fish on a daily basis
- Counter placement and adequate water flow through the unit were critical in receiving consistent, reliable information
- Software was easy to use and data could be edited and compiled in several different configurations

