

# Tieton Hydro Fish Salvage Project

Presented by

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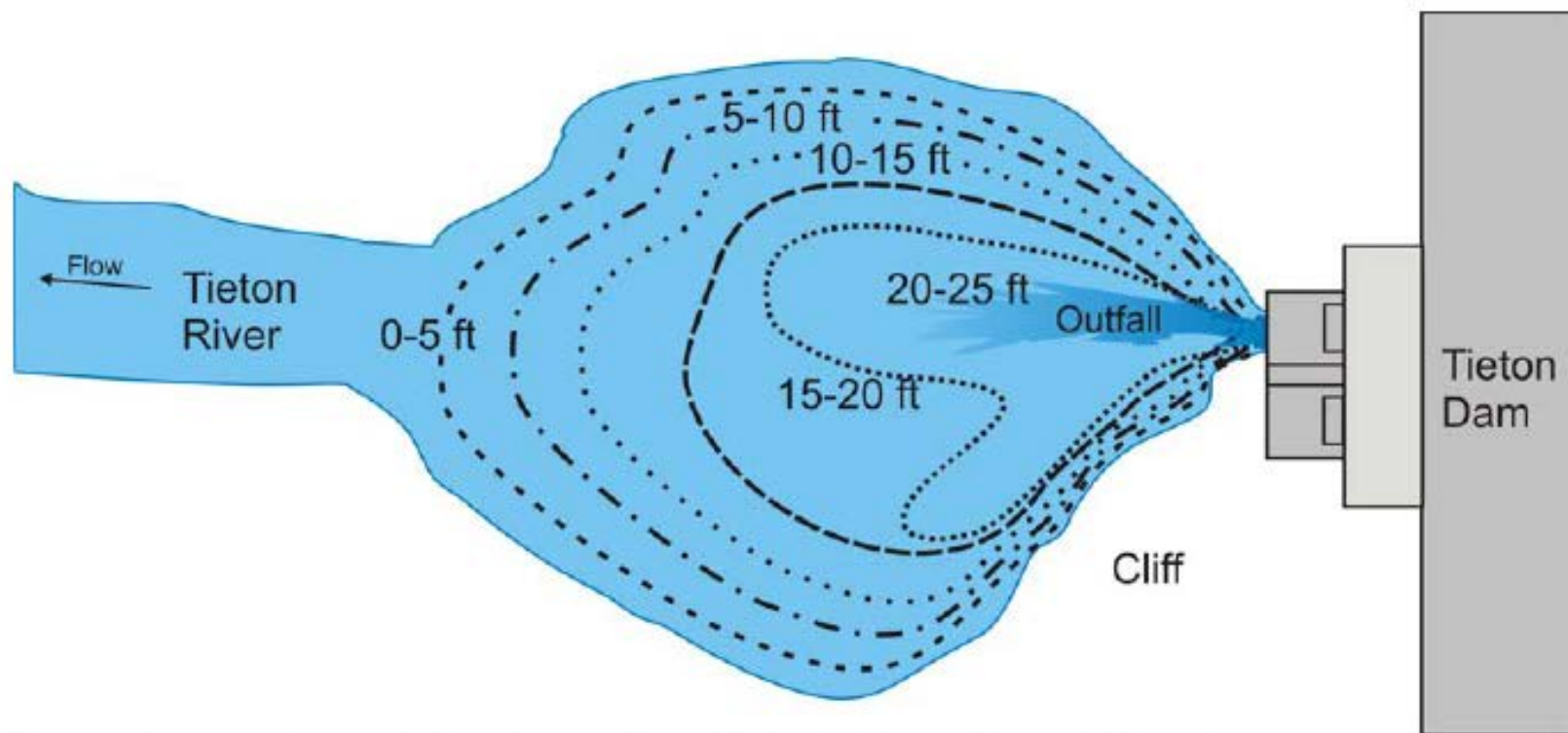


The Setting

Rimrock Dam on the Teton  
River

Pool must be completely  
dewatered





**Figure 1.** General depth profile of the Tieton Dam stilling basin based on the deployment depth of an underwater camera during the reconnaissance survey in March, 2005.

**Pool Area: 49,000 square feet; Pool Volume: 4.5 million gallons**











# Preparation











LEGACY  
Professional  
Rafting

















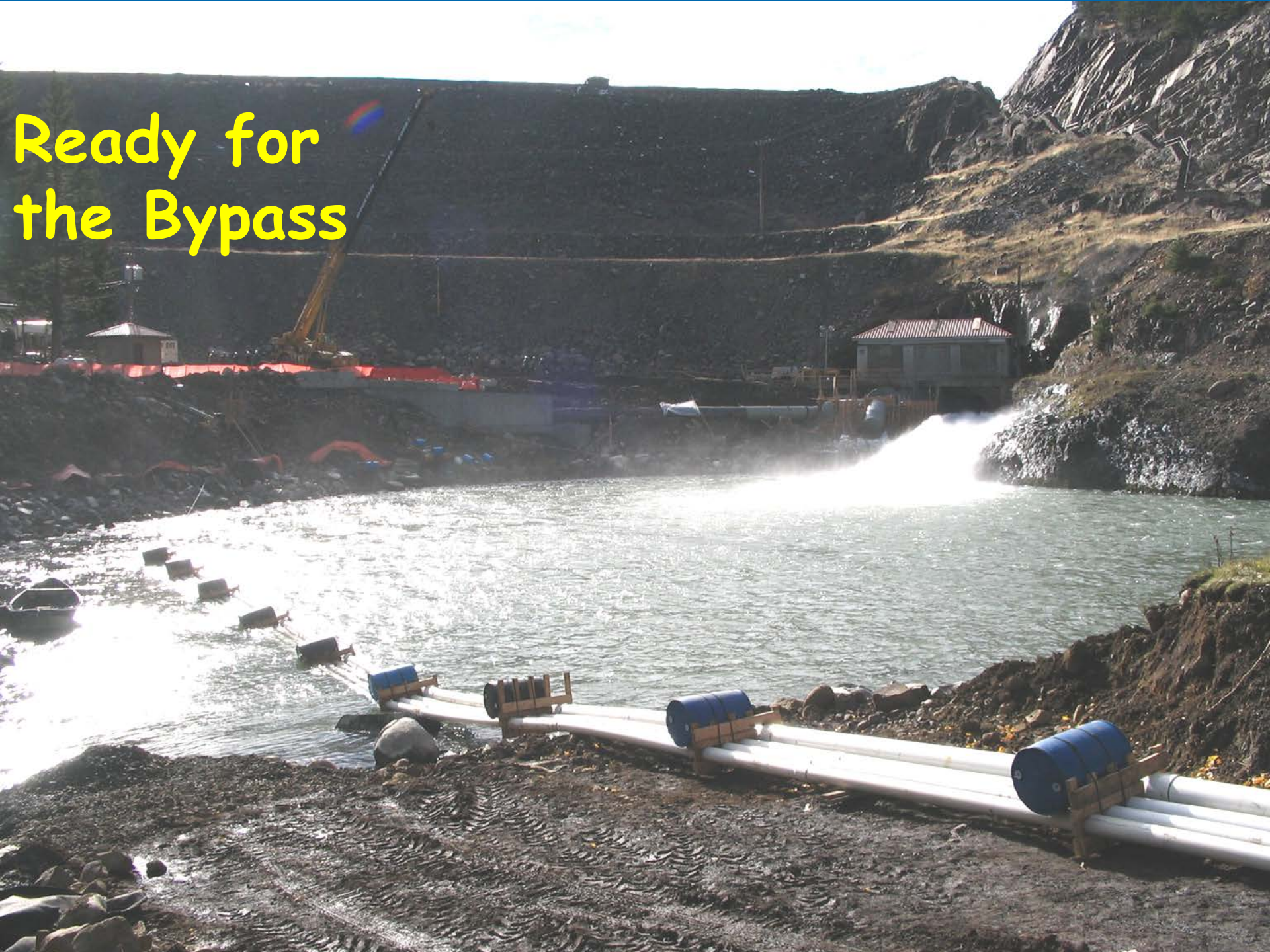
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Ready for  
the Bypass















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# Stranding Surveys



**Table 1. General guidelines for stilling basin drawdown rates.**

| <b>Drawdown Rate</b>  | <b>Duration</b> | <b>Total Drawdown</b> | <b>Contingency</b>   |
|---|-----------------|-----------------------|--|
| 6 inches/hour   | 40 hrs          | 20 feet               | Slow or cease drawdown if fish stranding or stress is observed |
| 2 inches/hour   | 6 hrs           | 1 foot                |  |
| Evaluate rate based upon observations from previous drawdown rates and initial salvage success. |                 |                       |  |





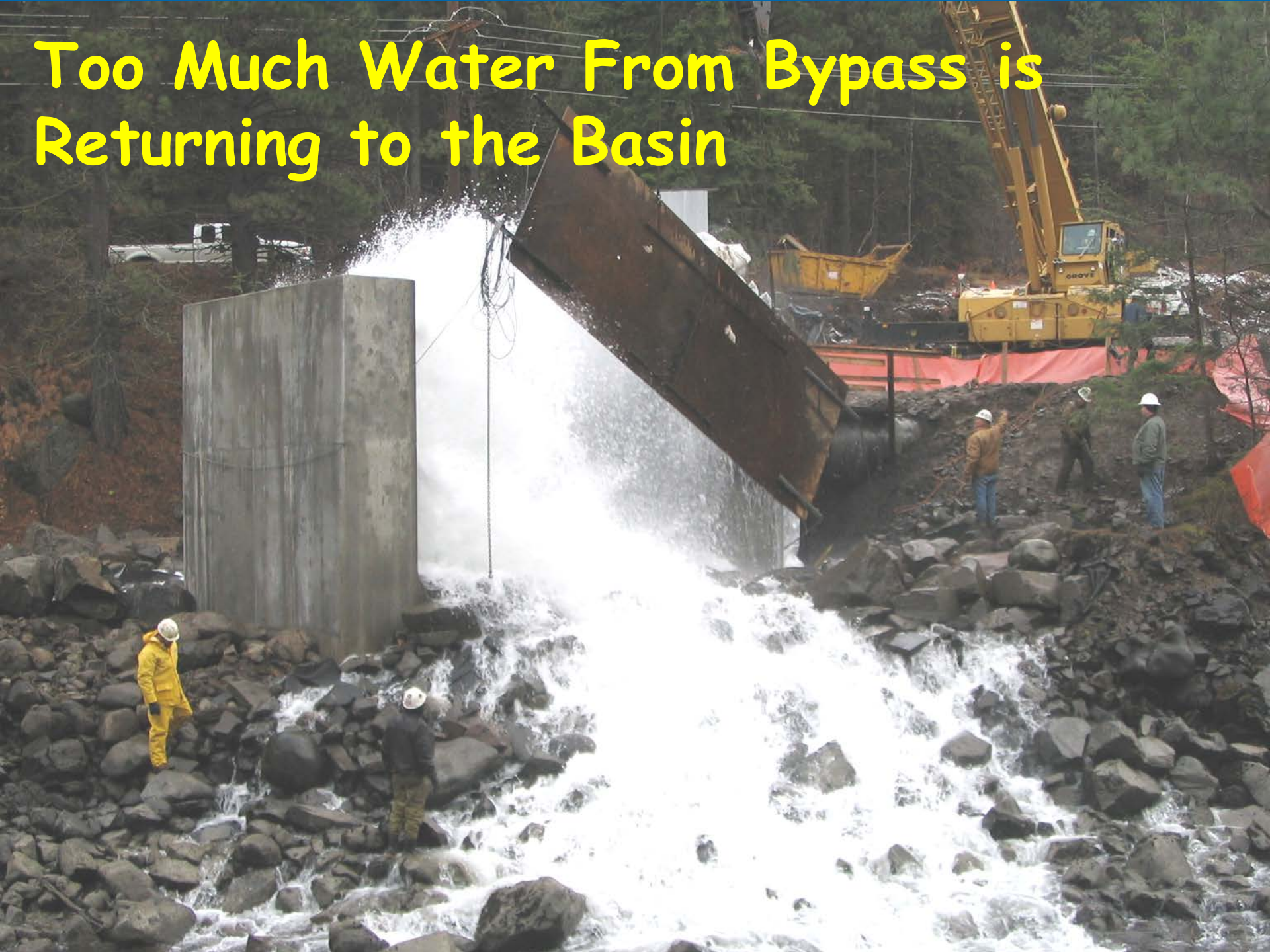


After 1 Night of Pumping Almost No Ground is Gained – Pumps Malfunction and Can't Keep Up





Too Much Water From Bypass is Returning to the Basin







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WACKER

572034





**2<sup>nd</sup> Full Day of Pumping: Finally Ground is Gained - Weather Turns to Snow**









**After 56 Hours of Pumping - Time to Get to Work: Salvage Begins**







# Method # 1: Tangle Netting

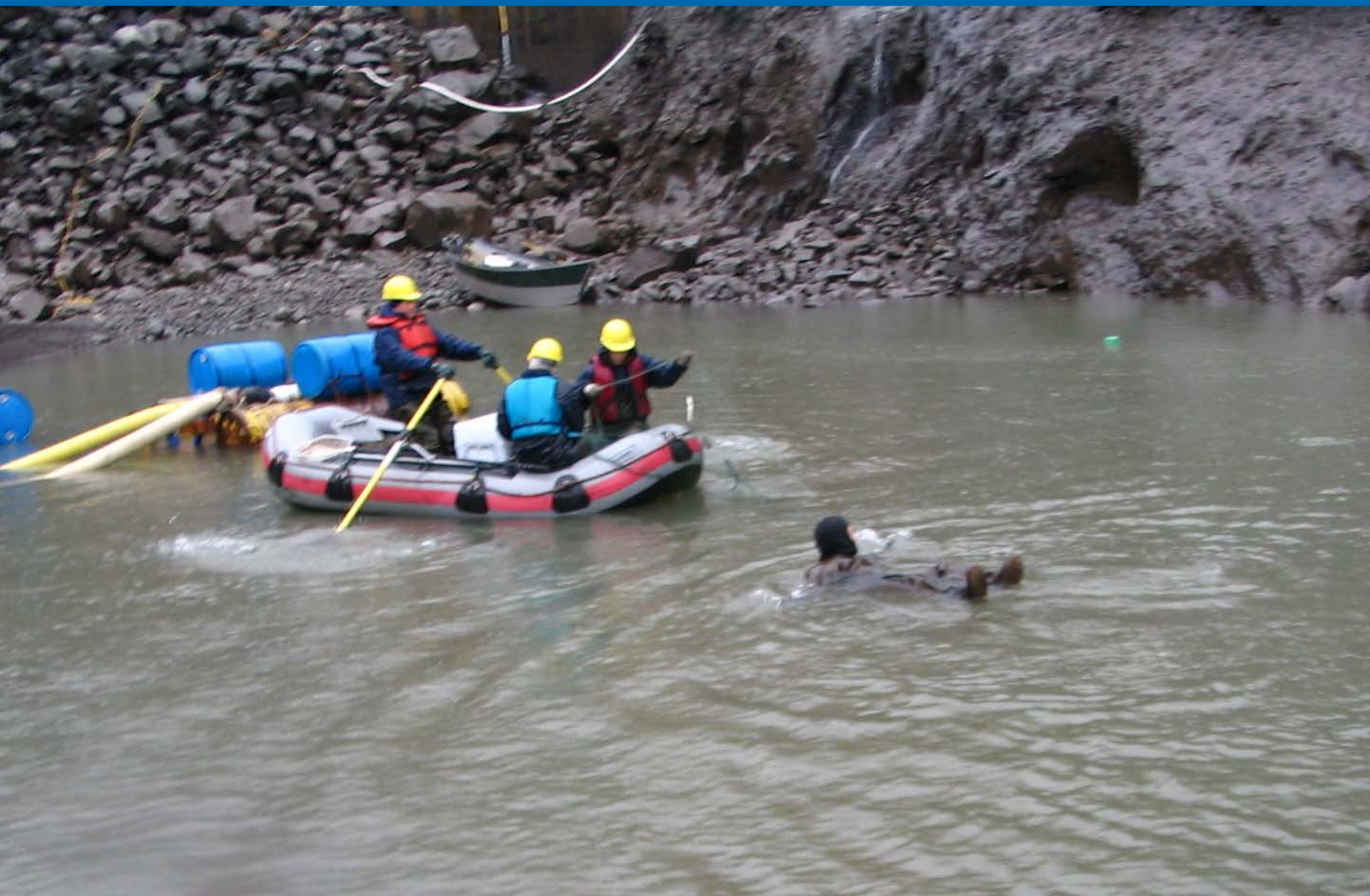


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**ser·en·dip·i·ty** *n. pl. ser·en·dip·i·ties*

1. The faculty of making fortunate discoveries by accident.  © 2013 Merriam-Webster, Inc.

2. The fact or occurrence of such discoveries.

3. An instance of making such a discovery.





# Processing Fish







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# Biggest Bull of the Project

62 cm & 7 lbs

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# WDFW Radio Tagging



NDC 82388-11  
Stock No. 82388-11  
**Povidone-iodine**  
Topical  
Povidone-iodine  
1% Available Iodine  
Antiseptic  
For Hand Disinfection

AB  
E1





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# Begin Day 2 of Salvage - Beach Seining



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Near the End of Day 2: Turbidity  
Excessive and Pumps Need to be Moved



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Day 3: Water has Cleared Showing  
There is Still Work to be Done



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Resort to Dip Netting and  
Electrofishing

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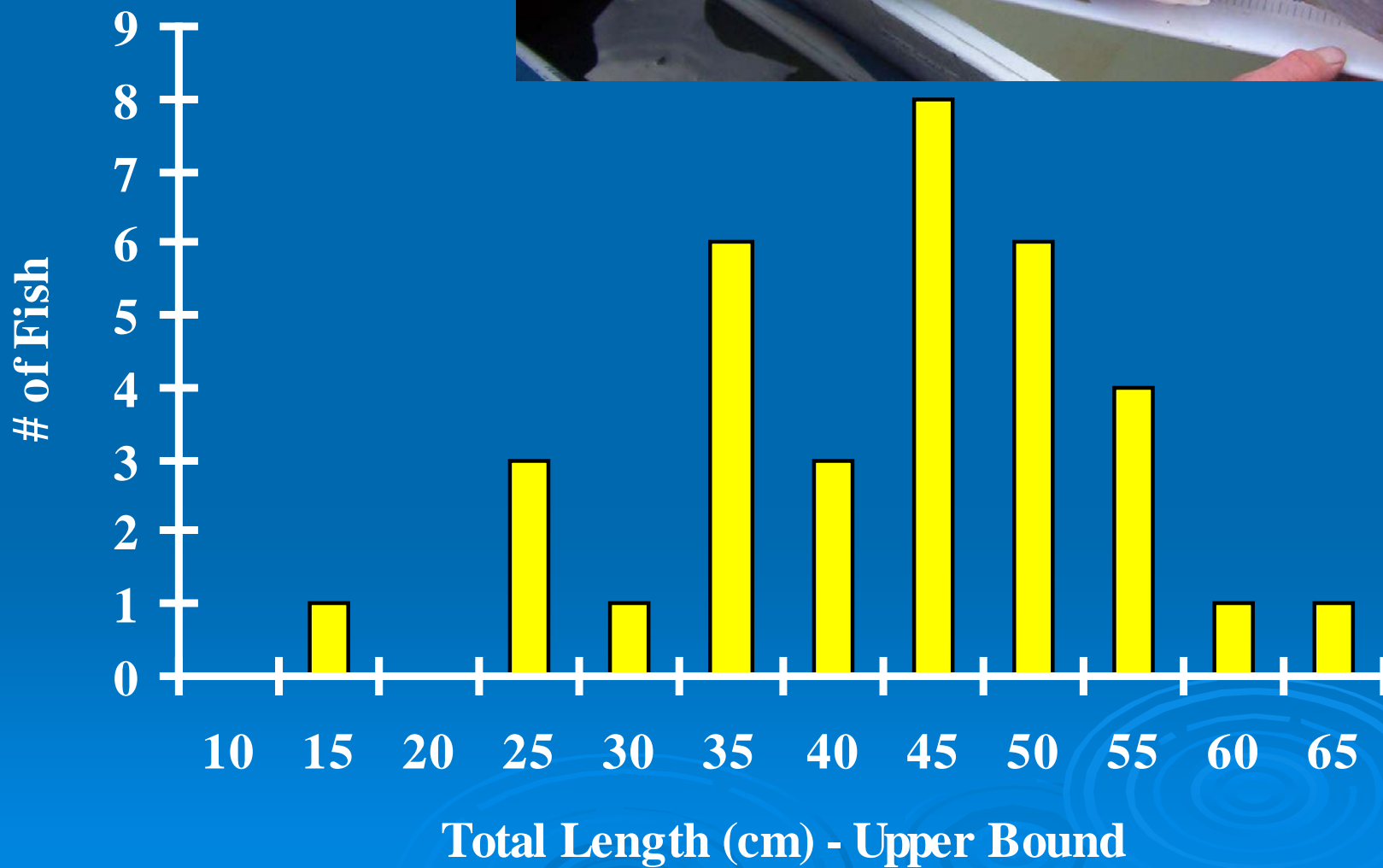
# The Sun Sets on a Successful Salvage Project - Only a Few Kokanee Remain





| Species        | # Salvaged | # Mortalities |
|----------------|------------|---------------|
| Bull Trout     | 37         | 0             |
| O. Mykiss      | 4,726      | 25            |
| Cutthroat      | 9          | 0             |
| Kokanee        | 4,400      | 4,400         |
| Whitefish      | 387        | 2             |
| Dace spp.      | 52         | 0             |
| Sculpin spp.   | 100        | 0             |
| Coho           | 9          | 1             |
| Chinook        | 10         | 0             |
| Sucker         | 61         | 0             |
| Redside Shiner | 13         | 0             |
| Total          | 9,804      | 4,428         |







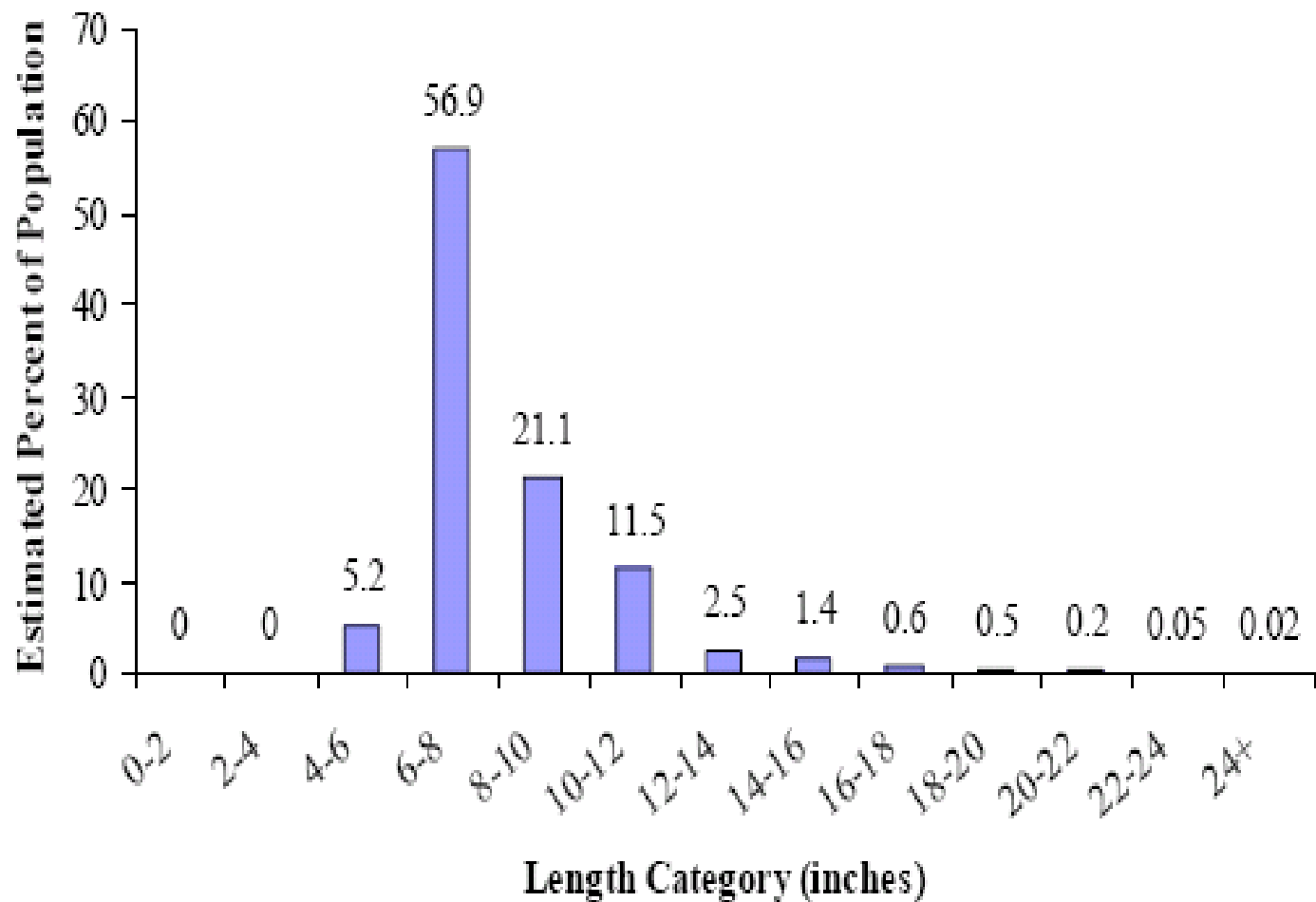


Figure 6. Estimated length frequency of *O. mykiss* salvaged from the Tieton Dam stilling basin.



# Conclusions

- Most injury/mortality of target salvage species were from electrofishing
- *O. mykiss* appeared to be resident, not steelhead
- Bull trout were all sub-adult or adult, likely flushed from reservoir and resident in pool



# Acknowledgements

- Tieton Hydro
- WDFW: Anderson, Bartrand, Mizell, Cummins and others!
- USFWS: Jeff Thomas
- Mountain States Construction
- USBR