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# KLICKITAT HATCHERY

A COMPILATION AND SUMMARY OF  
IHOT AUDITS FOR FALL CHINOOK,  
SPRING CHINOOK, AND COHO

JULY 1998

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**HATCHERY EVALUATION REPORT  
SUMMARY FOR**

- Klickitat Hatchery**  
- **URB Fall Chinook**  
- **Spring Chinook**  
- **Coho (N)**

**A Summarized Compilation of Independent Audits Based on  
Integrated Hatchery Operations Team (IHOT) Performance  
Measures**

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## Executive Summary

This report compiles a summary of the findings of three separate Hatchery Evaluation Reports for Fall Chinook, Spring Chinook, and Coho at Klickitat Hatchery. The original Hatchery Evaluation Reports, prepared by Montgomery Watson, presented each species and program separately and include the complete findings. Details on the audit compliance status for each species and program are included in the original reports. The Hatchery Evaluation Reports were based upon audits conducted in 1996-1997 as part of a 2-year effort that will include 67 hatcheries and satellite facilities located on the Columbia and Snake River system in Idaho, Oregon, and Washington. The hatchery operating agencies include the U.S Fish and Wildlife Service, Idaho Department of Fish and Game, Oregon Department of Fish and Wildlife, and Washington Department of Fish and Wildlife.

The hatchery is located in a remote area on the Klickitat River at river mile 42, near the town of Glenwood, Washington. The hatchery is operated by the Washington Department of Fish and Wildlife and is used for adult collection, incubation, and rearing of spring chinook and the incubation and rearing of URB fall chinook and coho (Type N).

### Background

The audit is being conducted as a requirement of the Northwest Power Planning Council (NPPC) "Strategy for Salmon" and the Columbia River Basin Fish and Wildlife Program. Under the audit, the hatcheries are evaluated against policies and related performance measures developed by the Integrated Hatchery Operations Team (IHOT) in January 1995. IHOT is a multi-agency group established by the NPPC to direct the development of new basinwide standards for managing and operating fish hatcheries. The Bonneville Power Administration (BPA) contracted with Montgomery Watson to act as an independent contractor for the audit.

IHOT has established five basic policies that cover: (1) hatchery coordination, (2) hatchery performance standards, (3) fish health, (4) ecological interaction, and (5) genetics. The audit focuses on all these policies, with the exception of hatchery coordination. These policies are set forth in *Policies and Procedures for Columbia Basin Anadromous Salmonid Hatcheries (IHOT 1995)*, which is the source for the performance measures that are the basis of this audit.

### The Audit Process

The audit was based on the facility management's response to a 109-page questionnaire. This audit form was completed through a five-step process in which:

- Information was obtained from headquarters.
- The hatchery manager was asked to fill out and return the audit form.
- A 1-2 day site audit visit was conducted to inspect facilities, review hatchery records, discuss audit form responses, and develop remedial action plans.
- A compliance report was developed to document the compliance status of each performance measure. This report was then shared with the hatchery manager and IHOT representative.

- This hatchery evaluation report was written to document compliance with IHOT performance measures and develop cost estimates for remedial actions when needed.

## **Klickitat Hatchery - URB Fall Chinook, Spring Chinook, and Coho (N) Results**

The Klickitat facility includes one pond for adult holding, 22 concrete raceways, 12 vinyl raceways, 3 rearing ponds, and incubation facilities. Klickitat Hatchery was authorized and constructed under the Mitchell Act and began operation as part of the Columbia River Fisheries Development Program - a program to mitigate for fishery losses caused by hydroelectric system development. The purpose of the hatchery is to produce adult fall chinook, Type-N coho, and spring chinook that will contribute to NE Pacific and Columbia River Basin commercial and sport fisheries.

### **FALL CHINOOK**

The Klickitat Hatchery – Up River Bright (URB) Fall Chinook program was in general compliance with most of the performance measures. In the area of program objectives, the hatchery was not meeting its adult return goal and needed to document its adult contribution. The audit found that the hatchery was not in compliance with the water quality monitoring criteria, screen approach criteria, alarm requirements, predation control facilities, and pathology-free water criteria, which are all facilities requirements. The hatchery was not meeting the loading and flow criteria for incubation. The hatchery needed to develop a smoltification goal, a smoltification monitoring plan, and specific incubation and rearing standards for the IHOT Operations Plan. The hatchery did not have a Genetics Monitoring and Evaluation Program.

The specific areas in which the Klickitat Hatchery - URB Fall Chinook program requires remedial actions based on the IHOT performance measures are listed below. These remedial actions are listed in alphabetical order without intent of ranking or otherwise assigning priority:

- Conduct IHOT QA/QC tests for feed preparation
- Develop additional water supply for rearing or construct water reuse system
- Develop approved genetics M&E plan
- Develop smoltification goal and monitor
- Develop specific incubation and rearing standards for IHOT Operations Plan
- Document adult contribution
- Follow IHOT flow and loading criteria for incubation or change criteria
- Follow IHOT protocols for checking flow alarms daily
- Install alarms at 3 intakes and 2 ponds
- Install security alarms
- Install telephone pagers
- Monitor and record DO and TGP
- Provide bird screening for 108,000 sf of rearing area
- Provide disease-free water for incubation and early rearing
- Provide new screening system for river (8,000 gpm) and creeks
- Review temperature criteria for rearing
- Run analysis for water chemistry parameters, turbidity, alkalinity, hardness, nitrite, and contaminants

Non-compliance issues resulting from items beyond human control or Performance Measures not relevant to this hatchery were not listed above.

### **SPRING CHINOOK**

The Klickitat Hatchery - Spring Chinook program was in general compliance with most of the performance measures. In the area of program objectives, the hatchery was not meeting its adult return goal and needed to document its adult contribution. The audit found that the hatchery was not in compliance with the water quality monitoring criteria, screen approach criteria, alarm requirements, predation control facilities, and pathology-free water criteria, which are all facilities requirements. The hatchery was not meeting the loading and flow criteria for incubation. The hatchery needed to develop a smoltification goal, a smoltification monitoring plan, and specific incubation and rearing standards for the IHOT Operations Plan. The hatchery did not have a Genetics Monitoring and Evaluation Program.

The specific areas in which the Klickitat Hatchery - Spring Chinook program requires remedial actions based on the IHOT performance measures are listed below. These remedial actions are listed in alphabetical order without intent of ranking or otherwise assigning priority:

- Collect temperature data in spawning facility
- Conduct IHOT QA/QC tests for feed preparation
- Develop approved genetics M&E plan
- Develop smoltification goal and monitor
- Develop specific incubation and rearing standards for IHOT Operations Plan
- Document adult contribution
- Follow IHOT flow and loading criteria for incubation or change criteria
- Follow IHOT procedures for reducing the number of eggs retained
- Follow IHOT protocols for checking flow alarms daily
- Install alarms at 3 intakes and 2 ponds
- Install security alarms
- Install telephone pagers
- Monitor and record DO and TGP
- Provide bird screening for 108,000 sf of rearing area
- Provide disease-free water for incubation and early rearing
- Provide new screening system for river (8,000 gpm) and creeks
- Review temperature criteria for rearing
- Run analysis for water chemistry parameters, turbidity, alkalinity, hardness, nitrite, and contaminants

Non-compliance issues resulting from items beyond human control or Performance Measures not relevant to this hatchery were not listed above.

#### **COHO (N)**

The Klickitat Hatchery - Coho (Type N) program was in general compliance with most of the performance measures. In the area of program objectives, the hatchery was not meeting its adult return, fry-to-smolt, and production goals. The audit found that the hatchery was not in compliance with the water quality monitoring criteria, screen approach criteria, alarm requirements, predation control facilities, and pathology-free water criteria, which are all facilities requirements. The hatchery was not meeting the loading and flow criteria for incubation. The hatchery needed to develop a smoltification goal, a smoltification monitoring plan, and specific incubation and rearing standards for the IHOT Operations Plan. The hatchery did not have a Genetics Monitoring and Evaluation Program.

The specific areas in which the Klickitat Hatchery - Coho (Type N) program requires remedial actions based on the IHOT performance measures are listed below. These remedial actions are listed in alphabetical order without intent of ranking or otherwise assigning priority:

- Conduct IHOT QA/QC tests for feed preparation
- Develop approved genetics M&E plan
- Develop smoltification goal and monitor
- Develop specific incubation and rearing standards for IHOT Operations Plan
- Follow IHOT flow and loading criteria for incubation or change criteria
- Follow IHOT protocols for checking flow alarms daily
- Improve fry-to-smolt survival
- Improve health of fish released
- Improve production to meet release number goal
- Install alarms at 3 intake and 2 ponds
- Install security alarms
- Install telephone pagers
- Monitor and record DO and TGP
- Provide bird screening for 108,000 sf of rearing area
- Provide disease-free water for incubation and early rearing
- Provide new screening system for river (8,000 gpm) and creeks
- Review temperature criteria for rearing
- Run analysis for water chemistry parameters, turbidity, alkalinity, hardness, nitrite, and contaminants

Non-compliance issues resulting from items beyond human control or Performance Measures not relevant to this hatchery were not listed above.



## Facility Description

<b>Name:</b>	Klickitat Fish Hatchery
<b>Stock/Species:</b>	Spring Chinook URB Fall Chinook Coho (Type N)
<b>Operating Agency:</b>	Washington Department of Fish and Wildlife
<b>Funding Agency:</b>	Mitchell Act (NMFS)
<b>Location:</b>	The hatchery is located in a remote area on the Klickitat River at river mile 42, near the town of Glenwood, Washington.
<b>Address:</b>	301 Fish Hatchery Road Glenwood, WA 98619-9102
<b>Hatchery Manager:</b>	Mr. Ted Anderson
<b>Phone:</b>	(509) 364-3310
<b>Fax:</b>	(509) 364-3639
<b>Purpose:</b>	Klickitat Hatchery was authorized and constructed under the Mitchell Act and began operation as part of the Columbia River Fisheries Development Program - a program to mitigate for fishery losses caused by hydroelectric system development. The purpose of the hatchery is to produce adult fall chinook, Type-N coho, and spring chinook that will contribute to NE Pacific and Columbia River Basin commercial and sport fisheries.

**Production Goal:**

**Spring Chinook**

Produce 600,000 yearlings for on-station release

Produce 1,200,000 subyearlings for release into the upper Klickitat River

**URB Fall Chinook**

Produce 4,000,000 subyearlings for on-station release

**Coho (Type N)**

Produce 1,350,000 yearlings for on-station releases

**Water Supply:**

Water rights total 28,338 gpm from four sources: Indian Ford Springs, an unnamed spring (designated Indian Ford “B”), Wonder Springs, and the Klickitat River.

**Facilities:**

Adult Holding:	1 concrete adult holding pond - 12,000 cf
Incubation:	72 full stacks of vertical tray incubators (1008 trays) 28 shallow troughs
Early Rearing:	None
Raceways:	22 concrete raceways - 3,000 cf each 12 vinyl raceways - 1,600 cf each (BPA experimental program)
Rearing Ponds:	3 rearing/release ponds - 82,800 cf, 80,213 cf, and 39,560 cf
Satellite Facilities:	None

## Remedial Actions

Based on the compliance status for each performance measure, remedial actions were developed. The required remedial actions are organized into five categories. The types of categories range across a spectrum from those actions that are beyond human control, to those that require a change in agency policy or procedures, to those that involve a significant capital cost to put in place. The following are the five types of remedial actions identified under phase 1 of the audit:

### The Five Types of Remedial Actions

Type	Description
1	Non-compliance issues resulting from items beyond human control or Performance Measures not relevant for this hatchery
2	Remedial actions requiring changes in agency policies or procedures
3	Remedial actions requiring changes in monitoring coverage or interval
4	Remedial actions requiring significant capital expenditures
5	Remedial actions that may require significant capital expenditures but are not clearly definable at this time

### Remedial Actions at Klickitat Hatchery - URB Fall Chinook

This section presents the corrective actions required to bring the Klickitat Hatchery - URB Fall Chinook, Spring Chinook, and Coho (N) programs into compliance with IHOT performance measures. The remedial actions described here are suggestions developed by the Montgomery Watson Audit Team. The remedial actions and associated cost estimates have not been analyzed or prioritized by the respective operating agencies, fishery managers, or IHOT. There may be additional remedial actions, not included in this report, proposed by the respective operating agencies.

For some non-compliance areas, other remedial actions could be proposed. The required remedial actions are cross-referenced to each IHOT performance measure that was not in compliance. Where appropriate, the costs associated with the remedial actions are also presented (Table 3a, 3b, and 3c).

The cost estimates presented in this section are based on professional experience from similar projects. In most cases, only a lump-sum figure is presented, and detailed take-off lists have not been prepared. The cost estimates are essentially order of magnitude estimates ( $\pm 40\%$ ).

The suggested remedial activities may also present several levels of action. Optional actions have been listed for several problems. These optional actions are desirable for either operational or safety considerations.

**Table 3a. Remedial Actions Required at Klickitat Hatchery - URB Fall Chinook**

Remedial Action Required	Cost	PMS <sup>1</sup>
<p><b>Type 1</b> – Non-compliance issues resulting from items beyond human control or Performance Measures not relevant for this hatchery</p> <p>Increase adult returns</p>	----	4h
<p><b>Type 2</b> – Remedial actions requiring changes in agency policies or procedures</p> <p>Document adult contribution</p> <p>Review temperature criteria for rearing</p> <p>Follow IHOT protocols for checking flow alarms daily</p> <p>Conduct IHOT QA/QC tests for feed preparation</p> <p>Develop specific incubation and rearing standards for IHOT Operations Plan</p> <p>Follow IHOT flow and loading criteria for incubation or change criteria</p> <p>Develop smoltification goal and monitor</p> <p>Develop approved genetics M&amp;E plan</p>	<p>----</p> <p>----</p> <p>----</p> <p>----</p> <p>----</p> <p>----</p> <p>----</p> <p>----</p>	<p>4a</p> <p>5a</p> <p>6</p> <p>12</p> <p>18-19</p> <p>18</p> <p>22a1</p> <p>43</p>
<p><b>Type 3</b> – Remedial actions requiring changes in monitoring coverage or interval</p> <p>Monitor and record DO and TGP</p> <p>Run analysis for water chemistry parameters, turbidity, alkalinity, hardness, nitrite, and contaminants</p>	<p>----</p> <p>----</p>	<p>5b</p> <p>5c-5g</p>

<sup>1</sup> PMS are performance measures that were extracted from the IHOT 1995 report.

Remedial Action Required	Cost	PMS <sup>1</sup>
<b>Type 4</b> - Remedial actions requiring significant capital expenditures		
Install alarms at 3 intakes and 2 ponds	\$40,000	6
Install security alarms	\$10,000	6
Install telephone pagers	5,000	6
Provide new screening system for river (8,000 gpm) and 1 creeks	\$150,000	10
Provide bird screening for 108,000 sf of rearing area	\$200,000	11
<b>Type 5</b> - Remedial actions that may require significant capital expenditures but are not clearly definable at this time		
Provide disease-free water for incubation and early rearing	----	5h, 28
Develop additional water supply for rearing or construct water reuse system	----	19

**Table 3b. Remedial Actions Required at Klickitat Hatchery - Spring Chinook**

Remedial Action Required	Cost	PMS <sup>2</sup>
<b>Type 1</b> – Non-compliance issues resulting from items beyond human control or Performance Measures not relevant for this hatchery		
Increase adult returns	----	4h
<b>Type 2</b> – Remedial actions requiring changes in agency policies or procedures		
Document adult contribution	----	4a
Review temperature criteria for rearing	----	5a
Follow IHOT protocols for checking flow alarms daily	----	6
Conduct IHOT QA/QC tests for feed preparation	----	12
Develop specific incubation and rearing standards for IHOT Operations Plan	----	18-19
Follow IHOT flow and loading criteria for incubation or change criteria	----	18

<sup>1</sup> PMS are performance measures that were extracted from the IHOT 1995 report.

<sup>2</sup> PMS are performance measures that were extracted from the IHOT 1995 report.

<b>Remedial Action Required</b>	<b>Cost</b>	<b>PMS<sup>2</sup></b>
Follow IHOT procedures for reducing the number of eggs retained	----	42g
Develop approved genetics M&E plan	----	43
Develop smoltification goal and monitor	----	22a1
<b>Type 3</b> – Remedial actions requiring changes in monitoring coverage or interval		
Collect temperature data in spawning facility	----	5a
Monitor and record DO and TGP	----	5b
Run analysis for water chemistry parameters, turbidity, alkalinity, hardness, nitrite, and contaminants	----	5c-5g

Remedial Action Required	Cost	PMS <sup>1</sup>
<b>Type 4</b> - Remedial actions requiring significant capital expenditures		
Install alarms at 3 intakes and 2 ponds	\$40,000	6
Install security alarms	\$10,000	6
Install telephone pagers	\$5,000	6
Provide new screening system for river (8,000 gpm) and 1 creeks	\$150,000	10
Provide bird screening for 108,000 sf of rearing area	\$200,000	11
<b>Type 5</b> - Remedial actions that may require significant capital expenditures but are not clearly definable at this time		
Provide disease-free water for incubation and early rearing	----	5h, 28

**Table 3c. Remedial Actions Required at Klickitat Hatchery - Coho (Type N)**

Remedial Action Required	Cost	PMS <sup>2</sup>
<b>Type 1</b> - Non-compliance issues resulting from items beyond human control or Performance Measures not relevant for this hatchery		
Increase adult returns	----	4h
<b>Type 2</b> - Remedial actions requiring changes in agency policies or procedures		
Review temperature criteria for rearing	----	5a
Follow IHOT protocols for checking flow alarms daily	----	6
Conduct IHOT QA/QC tests for feed preparation	----	12
Develop specific incubation and rearing standards for IHOT Operations Plan	----	18-19
Follow IHOT flow and loading criteria for incubation or change criteria	----	18
Develop smoltification goal and monitor	----	22a1
Develop approved genetics M&E plan	----	43

<sup>1</sup> PMS are performance measures that were extracted from the IHOT 1995 report.

<sup>2</sup> PMS are performance measures that were extracted from the IHOT 1995 report.

Remedial Action Required	Cost	PMS <sup>2</sup>
<p><b>Type 3</b> - Remedial actions requiring changes in monitoring coverage or interval</p> <p>Monitor and record DO and TGP</p> <p>Run analysis for water chemistry parameters, turbidity, alkalinity, hardness, nitrite, and contaminants</p>	<p>----</p> <p>----</p>	<p>5b</p> <p>5c-5g</p>



<b>Remedial Action Required</b>	<b>Cost</b>	<b>PMs<sup>1</sup></b>
<b>Type 4 - Remedial actions requiring significant capital expenditures</b>		
Install alarms at 3 intakes and 2 ponds	\$40,000	6
Install security alarms	\$10,000	6
Install telephone pagers	\$5,000	6
Provide new screening system for river (8,000 gpm) and 1 creeks	\$150,000	10
Provide bird screening for 108,000 sf of rearing area	\$200,000	11
<b>Type 5 - Remedial actions that may require significant capital expenditures but are not clearly definable at this time</b>		
Improve fry-to-smolt survival	----	4f-g
Provide disease-free water for incubation and early rearing	----	5h, 28
Improve health of fish released	----	20
Improve production to meet release number goal	----	22a4

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<sup>1</sup> PMs are performance measures that were extracted from the IHOT 1995 report.

## Hatchery Contribution to Fisheries, Spawning Grounds, and Hatcheries

This section presents the audit findings for the Klickitat Hatchery - URB Fall Chinook, Spring Chinook, Coho (N) programs contribution of adult fish to fisheries, local fisheries, spawning grounds, and hatcheries (Tables 4a, 4b, and 4c). Data is reported by broodyear. A broodyear refers to the adult contribution from the eggs produced from a single group of spawning adults. For some species, this may include fish caught as 2-, 3-, 4-, 5-, and 6-year old fish. Because of the return distribution and data processing delays, the complete adult contribution for a given broodyear may not be available until 4 to 5 years after the fish have been released from the hatchery.

**Table 4a. Adult Contribution to Fisheries, Spawning Grounds, and Hatcheries:  
Klickitat Hatchery - URB Fall Chinook**

Year	Fisheries <sup>1</sup> (Broodyear)	Spawning Grounds <sup>1</sup> (Broodyear)	Hatchery <sup>1</sup> (Broodyear)	Total Combined Contribution <sup>2</sup> (Broodyear)	Smolt to Adult Survival (percent)
1982					
1983					
1984					
1985					
1986	371	82	No information provided	435	0.44%
1987	No information provided	No information provided	No information provided	No information provided	No information provided
1988	No information provided	No information provided	No information provided	No information provided	No information provided
1989	123	14	No information provided	137	0.06%
1990					
1991					

<sup>1</sup> Data obtained from Missing Production Groups Annual Report or from the Regional Mark Information System database.

<sup>2</sup> Total combined adult contribution; presented when it is not possible to subdivide the contribution into fisheries, spawning grounds, and hatchery contributions.

1992					
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**Table 4b. Adult Contribution to Fisheries, Spawning Grounds, and Hatcheries:  
Klickitat Hatchery - Spring Chinook**

Year	Fisheries <sup>1</sup> (Broodyear)	Spawning Grounds <sup>1</sup> (Broodyear)	Hatchery <sup>1</sup> (Broodyear)	Total Combined Contribution <sup>2</sup> (Broodyear)	Smolt to Adult Survival (percent)
1982					
1983					
1984					
1985					
1986					
1987					
1988					
1989	114	9	558	681	0.29%
1990					
1991					
1992					

**Table 4c. Adult Contribution to Fisheries, Spawning Grounds, and Hatcheries:  
Klickitat Hatchery - Coho (Type N)**

Year	Fisheries <sup>3</sup> (Broodyear)	Spawning Grounds <sup>1</sup> (Broodyear)	Hatchery <sup>1</sup> (Broodyear)	Total Combined Contribution <sup>4</sup> (Broodyear)	Smolt to Adult Survival (percent)
1982					

<sup>1</sup> Data obtained from Missing Production Groups Annual Report or from the Regional Mark Information System database.

<sup>2</sup> Total combined adult contribution; presented when it is not possible to subdivide the contribution into fisheries, spawning grounds, and hatchery contributions.

<sup>3</sup> Data obtained from Missing Production Groups Annual Report or from the Regional Mark Information System database.

<sup>4</sup> Total combined adult contribution; presented when it is not possible to subdivide the contribution into fisheries, spawning grounds, and hatchery contributions.

1983					
1984					
1985					
1986					
1987					
1988	762	1	No information provided	763	1.69%
1989	254	No information provided	No information provided	254	0.55%
1990	53	No information provided	No information provided	53	0.13%
1991	52	No information provided	No information provided	53	0.14%
1992					

## Annual Operating Expenditures

The level and detail of annual operating expenditures varies widely depending on hatchery, operating agency, and funding source. When provided, expenditures were presented in terms of personnel costs, operating costs (power, feed, and supplies), capital costs, indirect costs charged to the federal government, third-party costs, and other costs. These cost components were summed to determine a total hatchery annual cost. Based on discussion with the hatchery manager, the percent of total hatchery costs allocated to a given program was estimated. The total hatchery costs and the percent of hatchery costs allocated to a given program were used to compute the cost of a given program. The total expenditures for the Klickitat Hatchery are presented in Table 5 by program. The detailed breakdown of program expenditures at this hatchery are presented in separate tables (Tables 6a, 6b, and 6c).

**Table 5. Annual Operating Expenses - Klickitat Hatchery**

<b>Program</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
1. Spring Chinook	<b>\$228,420</b>	<b>\$199,600</b>	<b>\$214,400</b>
2. URB Fall Chinook	<b>\$102,060</b>	<b>\$139,720</b>	<b>\$150,080</b>
3. Coho (Type N)	<b>\$155,520</b>	<b>\$159,680</b>	<b>\$171,520</b>
4.			
5.			
<b>Total Hatchery Costs</b>	<b>\$486,000</b>	<b>\$499,000</b>	<b>\$536,000</b>

**Table 6a. Detailed Expenditures at Klickitat Hatchery by Program**  
**Spring Chinook**

<b>Component</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Personnel Costs	\$166,000	\$167,000	\$191,000
Operational Costs	\$165,000	\$198,000	\$208,000
Capital Costs	\$50,000	\$50,000	\$50,000
Indirect Costs	\$35,000	\$44,000	\$45,000
Lumped Hatchery Costs <sup>1</sup>			
Lumped Third-Party Costs	\$70,000	\$40,000	\$42,000
<b>Total Hatchery Costs</b>	<b>\$486,000</b>	<b>\$499,000</b>	<b>\$536,000</b>
<b>Source of Funds</b>			
NMFS	<b>100%</b>	<b>100%</b>	<b>100%</b>
Program Production (lb)	86,576	83,034	95,797
Total Production (lb)	183,140	20,6621	241,208
Program as Percent of Total	47%	40%	40%
<b>Program Costs</b>	<b>\$228,420</b>	<b>\$199,600</b>	<b>\$214,400</b>

<sup>1</sup> When it was not possible to obtain a detailed cost breakdown from an agency or third party, the undivided costs were entered here.

**Table 6b. Detailed Expenditures at Klickitat Hatchery by Program**

**URB Fall Chinook**

<b>Component</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Personnel Costs	\$166,000	\$167,000	\$191,000
Operational Costs	\$165,000	\$198,000	\$208,000
Capital Costs	\$50,000	\$50,000	\$50,000
Indirect Costs	\$35,000	\$44,000	\$45,000
Lumped Hatchery Costs <sup>1</sup>			
Lumped Third-Party Costs	\$70,000	\$40,000	\$42,000
<b>Total Hatchery Costs</b>	<b>\$486,000</b>	<b>\$499,000</b>	<b>\$536,000</b>
<b>Source of Funds</b>			
NMFS	<b>100%</b>	<b>100%</b>	<b>100%</b>
Program Production (lb)	39,076	57,893	68,365
Total Production (lb)	183,140	20,6621	241,208
Program as Percent of Total	21%	28%	28%
<b>Program Costs</b>	<b>\$102,060</b>	<b>\$139,720</b>	<b>\$150,080</b>

<sup>1</sup> When it was not possible to obtain a detailed cost breakdown from an agency or third party, the undivided costs were entered here.

**Table 6c. Detailed Expenditures at Klickitat Hatchery by Program  
Coho (Type N)**

<b>Component</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Personnel Costs	\$166,000	\$167,000	\$191,000
Operational Costs	\$165,000	\$198,000	\$208,000
Capital Costs	\$50,000	\$50,000	\$50,000
Indirect Costs	\$35,000	\$44,000	\$45,000
Lumped Hatchery Costs <sup>1</sup>			
Lumped Third-Party Costs	\$70,000	\$40,000	\$42,000
<b>Total Hatchery Costs</b>	<b>\$486,000</b>	<b>\$499,000</b>	<b>\$536,000</b>
<b>Source of Funds</b>			
NMFS	<b>100%</b>	<b>100%</b>	<b>100%</b>
Program Production (lb)	57,488	65,694	77,046
Total Production (lb)	183,140	20,6621	241,208
Program as Percent of Total	32%	32%	32%
<b>Program Costs</b>	<b>\$155,520</b>	<b>\$159,680</b>	<b>\$171,520</b>

<sup>1</sup> When it was not possible to obtain a detailed cost breakdown from an agency or third party, the undivided costs were entered here.