



**FISH HEALTH INSPECTION REPORT**

This report is NOT evidence of future disease status. To determine current status, contact inspecting biologist below.

Name of Fish Source Livingston Stone National Fish Hatchery		Address & Location of Fish Source 16349 Shasta Dam Blvd Shasta Lake, CA 96019			Name of Owner <input type="checkbox"/> or Manager <input checked="" type="checkbox"/> John Rueth 530-275-0549								Inspection Dates This 25Jan05 12Jan04 13Jan03 09Jan02 24 Jan 01 25 Jan 00		Classification RS s-RS, s-IHNV s-RS, s-IHNV s-RS, s-IHNV RS, s-IHNV s-RS, s-IHNV	
FISH EXAMINED					Pathogens Inspected for and Results <sup>3</sup>								Type of fish examined <input checked="" type="checkbox"/> Hatchery <input type="checkbox"/> Feral <input checked="" type="checkbox"/> Salmonid <input type="checkbox"/> Non-salmonid  Type of Water Supply <input type="checkbox"/> Spring <input type="checkbox"/> Well <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Impound <input type="checkbox"/> Enclosed <input type="checkbox"/> Free of fish			
Species <sup>1</sup>	Lot Number	Age <sup>2</sup>	Number In Lot	Obtained as Eggs(E) or Fish (F) FROM:	AS	YR	RS	MC	IHN	VHS	IPN	OMV				
WCS	WCS-SRW-2004 Naturals Units: T5 & T11	5 mo	116,000	(E): Sacramento River (wild x wild)	20	20	20	20	40	40	40	40			<input checked="" type="checkbox"/>	<input type="checkbox"/>
	WCS-SRW-2004 Captives Unit: AC2	5 mo	20,000	(E) Sacramento River (E) LSNFH (wild x captive)	10	10	10	20	20	20	20	20			<input type="checkbox"/>	<input checked="" type="checkbox"/>
	WCS-SRW-2004 Hatchery Unit: T14	5 mo	32,000	(E): Sacramento River (hatchery x wild)	10	10	10	20	20	20	20	20			<input type="checkbox"/>	<input type="checkbox"/>
<b>TOTAL No. Fish Examined</b>					<b>40</b>	<b>40</b>	<b>40</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>			Inspecting Biologist Signature  Date: 2/15/2005	
													Name & Title Kimberly True, AFS Fish Health Inspector			

**METHODS:** Virology (VE,VH,VP): Inoculation of kidney and viscera 5-fish tissue pools, onto EPC and CHSE-214 cell lines, and observation for viral cytopathic effects (CPE) over an 18 day incubation period. *Renibacterium salmoninarum* (Rs) assayed by ELISA and confirmed by QPCR. *Aeromonas salmonicida* (AS) and *Yersinia ruckeri* (YR) assayed by direct culture of individual kidney tissue onto appropriate growth media and subsequent biochemical tests on presumptive bacterial isolates. Fish Health Exams were conducted on 10/26/2004 (Case No. 04-160, n=20) and 01/25/2005 (Case No. 05-013, n=60).

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**REMARKS:**Presumptive Rs classification is based on detection of the P57 protein of *Renibacterium salmoninarum* by ELISA. P57 is a soluble protein which is excreted as a cellular metabolite, and is also a component of the cell wall of this bacterium. Once fish become infected with Rs, the P57 protein can persist long after a bacterial infection has been cleared by the fish immune system. Because P57 protein can persist, without the presence of viable Rs bacterial cells, confirmation of Rs infection is performed with Quantitative Polymerase Chain Reaction (QPCR). QPCR detects the specific DNA of *Renibacterium salmoninarum* bacteria, viable cells, if present in the fish tissue. ELISA values ranged from 0.070 - .403; 7/40 samples demonstrated low levels of P57 protein, and 3/40 samples had moderate levels of P57 protein present. Negative/Positive Cutoff Value (2 std above Negative Control Tissue) = .092 and the Blank OD (assay negative control) = .077. QPCR detected viable Rs cells in 6/40 samples, at levels indicating low level infections of *Renibacterium salmoninarum* in 15% of the juvenile fish tested.

1 - Use standard FWS abbreviations (see back of this page)

2 - For hatchery fish give age in months: for feral fish use symbols e=eggs or fry; f=fingerling; y=yearlings; b=older fish.