

## **APPENDIX B**

### **SUMMARY OF CORE AND GENETIC LEGACY POPULATIONS**

Historically, each evolutionarily significant unit (ESU) was characterized by a number of populations that represented the substantial portion of the ESU's abundance or contained life-history strategies that were specific to the ESU. These core populations are important components to maintaining the evolutionary legacy of the ESU. The Willamette Lower Columbia Technical Recovery Team (WLC-TRT) concluded that recovery agencies consider giving priority to these core populations in developing their recovery plans. In addition to sustaining the evolutionary legacy of the ESU, these core populations may offer the most likely path to recovery. If these populations sustained large populations historically, they may have the intrinsic capacity to sustain large populations into the future.

Populations are considered genetic legacies for two reasons. The population may have had minimal influence from nonendemic fish due to artificial propagation activities, or the population may exhibit important life-history characteristics that are no longer found throughout much of their historical range in the ESU. Populations that are determined to be genetic legacies should be considered for prioritization in recovery efforts because they retain the most intact representatives of the genetic character of the ESU. Furthermore, populations that have maintained their genetic integrity should have retained a high degree of adaptation to local watershed conditions and are therefore more likely to achieve viable salmonid population (VSP) sustainability than are newly introduced or domesticated populations.

Table B.1 Historical Lower Columbia River fall run chinook salmon populations.

<b>Population</b>	<b>Core Population (C)</b>	<b>Genetic Legacy (G)</b>
Coast Range		
Youngs Bay		
Grays River		
Big Creek	C	
Elochoman River	C	
Clatskanie River		
Mill Creek		
Scappoose Creek		
Cascade		
Upper Cowlitz River		
Lower Cowlitz River	C	
Coweeman River		G
Toutle River	C	
Kalama River		
Salmon Creek /Lewis River		G
Lewis River late	C	G
Clackamas River	C	
Washougal River		
Sandy River early		
Sandy River late	C	G
Columbia Gorge		
Lower gorge tributaries		
Upper gorge tributaries	C	
Big White Salmon River	C	
Hood River		

Table B.2 Historical Lower Columbia River spring-run chinook salmon populations.

<b>Population</b>	<b>Core Population (C)</b>	<b>Genetic Legacy (G)</b>
Cascade		
Upper Cowlitz River	C	G <sup>a</sup>
Cispus River	C	
Tilton River <sup>b</sup>		
Toutle River <sup>b</sup>		
Kalama River <sup>b</sup>		
Lewis River	C	
Sandy River	C	G
Columbia Gorge		
Big White Salmon	C	
Hood River		

<sup>a</sup> Cowlitz Salmon Hatchery broodstock

<sup>b</sup> These populations were probably historically sustainable, but there is still some debate concerning their status as demographically independent populations (DIPs).

Table B.3 Historical Upper Willamette River spring-run chinook salmon populations.

<b>Population</b>	<b>Core Population (C)</b>	<b>Genetic Legacy (G)</b>
Clackamas River	C	
Molalla River		
North Santiam River	C	
South Santiam River		
Calapooia River		
McKenzie River	C	G
Middle Fork Willamette River	C	

Table B.4 Historical Lower Columbia River winter steelhead populations.

<b>Population</b>	<b>Core Population (C)</b>	<b>Genetic Legacy (G)</b>
Cascade		
Cispus River	C	
Tilton River		
Upper Cowlitz River	C	G <sup>a</sup>
Lower Cowlitz River		
North Fork Toutle River (Green River)	C	
South Fork Toutle River		
Coweeman River		
Kalama River		
North Fork Lewis River	C	
East Fork Lewis River		
Clackamas River	C	
Salmon Creek		
Sandy River	C	
Washougal River		
Gorge		
Lower gorge tributaries		
Upper gorge tributaries		
Hood River	C	G

<sup>a</sup> Cowlitz Salmon Hatchery late-run winter steelhead.

Willamette/Lower Columbia Salmonid Viability Criteria

Table B.5 Historical provisional Lower Columbia River summer-run steelhead populations.

<b>Population</b>	<b>Core Population (C)</b>	<b>Genetic Legacy (G)</b>
Cascade		
Kalama River	C	
North Fork Lewis River		
East Fork Lewis River		G
Washougal River	C	G
Columbia Gorge		
Wind River	C	
Hood River		

Table B.6 Historical provisional Upper Willamette River winter-run steelhead populations.

<b>Population</b>	<b>Core Population (C)</b>	<b>Genetic Legacy (G)</b>
<i>Westside tributaries<sup>a</sup></i>		
Molalla River		
North Santiam River	C	G
South Santiam River	C	G
Calapooia River		

<sup>a</sup> There is still some debate concerning the historical status of this population.

Table B.7 Historical Lower Columbia River chum salmon.

<b>Population</b>	<b>Core Population (C)</b>	<b>Genetic Legacy (G)</b>
Coastal		
Youngs Bay	C	
Grays River	C	G
Big Creek	C	
Elochoman River	C	
Clatskanie River		
Mill Creek		
Scappoose Creek		
Cascade		
Cowlitz River fall-run/summer run	C	G?
Kalama River		
Salmon Creek		
Lewis River	C	
Clackamas River	C	
Washougal River		
Sandy River		
Columbia Gorge		
Lower gorge tributary	C	G
Upper gorge tributary		