

# Getting to Viability for Middle Columbia River Steelhead Distinct Population Segment:

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Figure ES-4. Middle Columbia River Steelhead Populations and Major Population Groups.

## *Mid-C Steelhead DPS Status: 2015/2016*

### **Minimum requirements to meet VSP objectives**

- **Yakima MPG:** One population to highly viable, Upper Yakima to maintained (increase in average abundance/productivity, spatial distribution)
- **East Cascades MPG:** Two additional populations improve to viable (one to highly viable). Confirm that Klickitat natural production is meeting viability objectives
- **John Day MPG:** Current viable and highly viable populations do not decline, increase Lower John Day population to viable (increased abundance/productivity)
- **Umatilla/Walla Walla MPG:** Umatilla and Walla Walla most likely candidates to improve to Highly Viable and Viable. Touchet River improved to Maintained status.

# NMFS' Overall Goal for DPS Viability

All four MPGs at viable (low risk) status

Representation of all the major life history strategies historically present

Representation of abundance, productivity, spatial structure & diversity attributes required for long-term persistence



DPS viability depends on the abundance, productivity, spatial arrangement, and genetic diversity *associated with its Major Population Groups*

MPG viability depends on the abundance, productivity, spatial arrangement, and genetic diversity *associated with its component populations, (MaSAs & MiSAs)*

Major Spawning Areas (MaSAs) and Minor Spawning Areas (MiSAs): *The intrinsic viability of a population increases with the number of discrete spawning areas and the complexity of their geographic distribution (abundance, productivity, spatial diversity and genetic diversity).*

Achieving (ICTRT) biological viability status must be achieved at the:

(1) population level, then

(2) viability at each MPG level before the

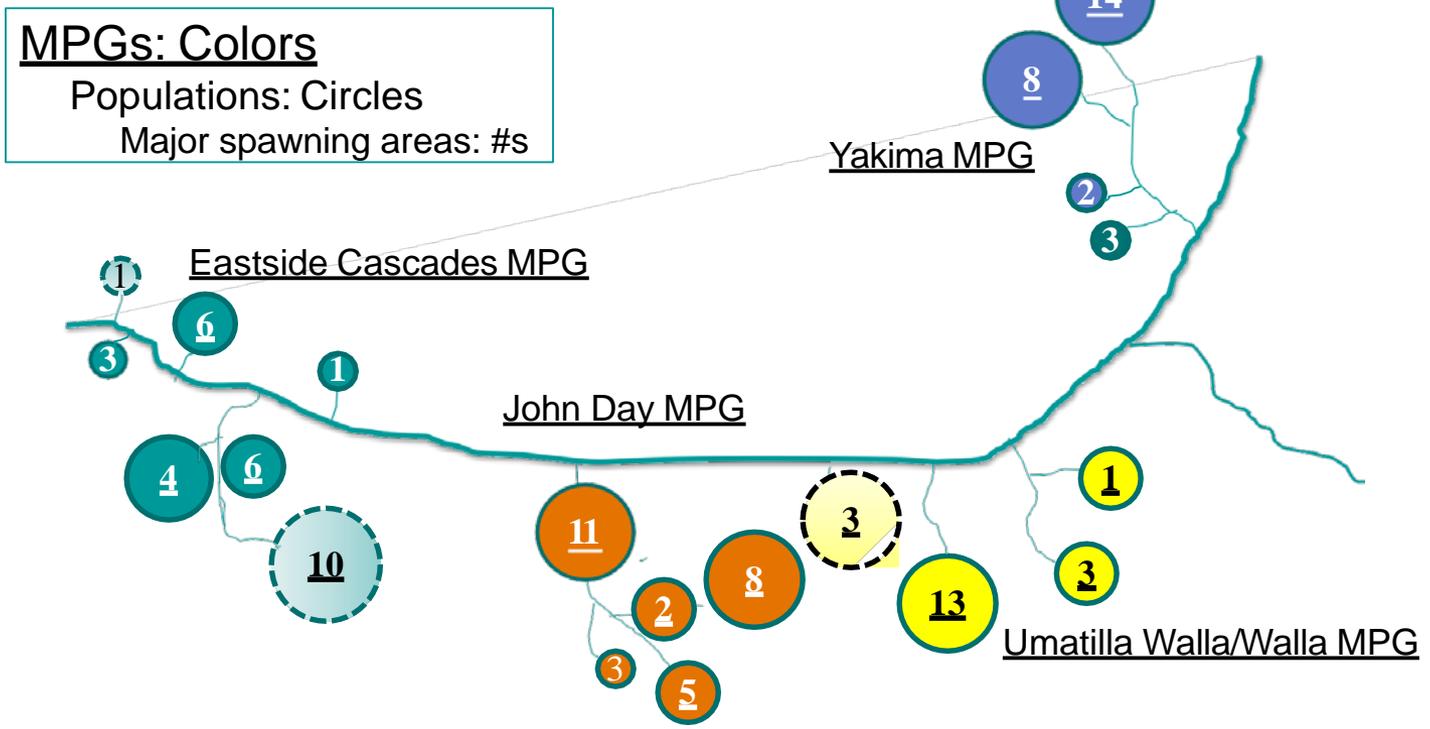
(3) DPS can be considered viable (at low risk of extinction) and a candidate for delisting.

ICTRT (Interior Columbia Technical Recovery Team). 2007. Viability Criteria for Application to Interior Columbia Basin Salmonid ESUs. Review draft March 2007. Available at: [https://www.nwfsc.noaa.gov/trt/col/trt\\_viability.cfm](https://www.nwfsc.noaa.gov/trt/col/trt_viability.cfm)

To attain viability at the MPG level, *the populations included in the viable MPG-level scenarios must be at or above viable status as defined by the ICTRT's viability criteria (ICTRT 2006)*. In addition, the criteria require that other extant populations within a MPG must be maintained at sufficient levels to provide for ecological functions and to preserve options for DPS recovery so that overall MPG productivity does not fall below replacement (see Table 1).

National Marine Fisheries Service

# Mid Columbia Steelhead DPS



# Middle Columbia Steelhead DPS Structure

4 MPGs 20 populations

Two States

Washington

## Yakima Basin MPG

Status Creek  
Toppenish Creek  
Naches  
Upper Yakima

## Cascade Eastern Slope Tributaries MPG

Klickitat  
Rock Creek  
White Salmon \*  
Fifteenmile Creek  
Deschutes East  
Deschutes West  
Deschutes Crooked River\*

## Umatilla/Walla Walla MPG

Touchet River  
Walla-Walla  
Umatilla  
Willow Creek\*

## John Day Basin MPG

Lower John Day  
North Fork John Day  
Middle Fork John Day  
South Fork John Day  
Upper John Day

Oregon

		Spatial Structure / Diversity Rating			
		Very Low	Low	Moderate	High
Abundance / Productivity Rating	Very Low (<1%)	Highly Viable	Highly Viable	Viable	Maintained
	Low (<5%)	Viable	Viable	Viable	Maintained
	Moderate (<25%)	Maintained	Maintained	Maintained	High Risk
	High	High Risk	High Risk	High Risk	High Risk

**Viability Criteria Metrics (ICTRT 2007 and NMFS 2009a)**

**Table 37 in NWFSC 2015. Summary NMFSC 2015 MCR Steelhead DPS status relative the 2007 ICTRT viability criteria, grouped by MPG**

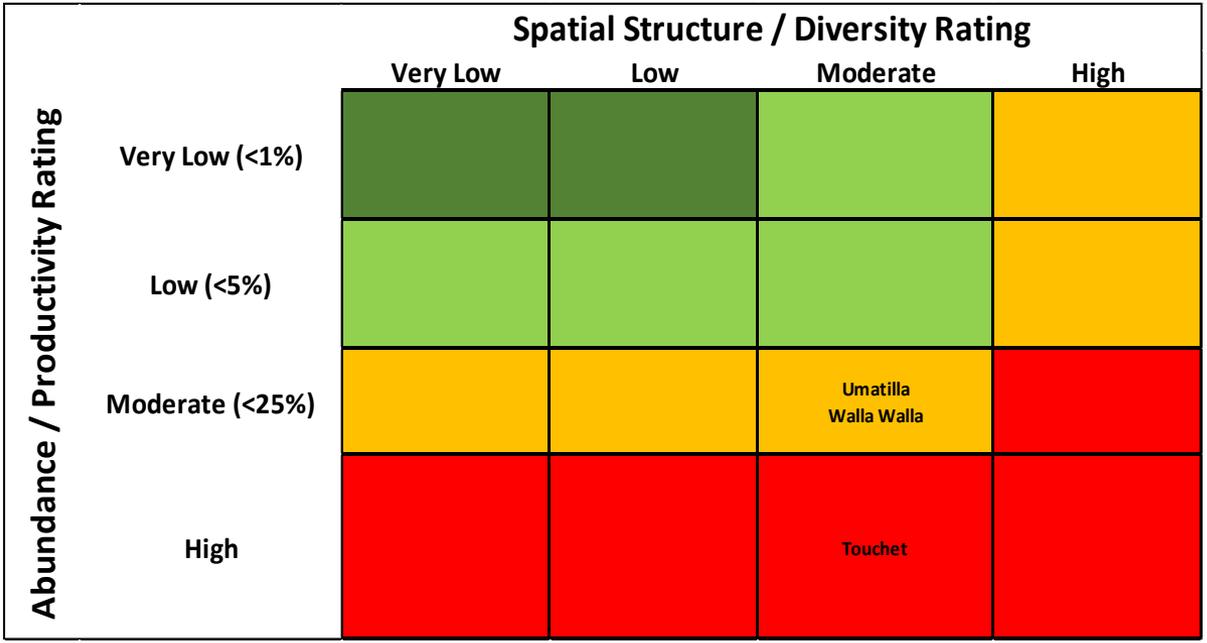
	ICTRT Minimum Threshold	Abundance/Productivity Metrics			Spatial Structure and Diversity Metrics			Overall Viability Rating
		Natural Spawning Abundance	ICTRT Productivity	Integrated A/P Risk	Natural Processes Risk	Diversity Risk	Integrated SS/D Risk	
Yakima River MPG								
Satus Creek	1,000 (500)	1127 (.17)	1.93 (.12)	Low	Low	Moderate	Moderate	Viable
Toppenish Creek	500	516 (.14)	2.52 (.19)	Low	Low	Moderate	Moderate	Viable
Naches River	1,500	1,244 (.16)	1.83 (.10)	Moderate	Low	Moderate	Moderate	Moderate
Yakima R Upper Mainstem	1,500	246 (.18)	1.87 (.10)	Moderate	Moderate	High	High	High Risk
Eastern Cascades MPG								
Fifteen Mile Creek	500	356 (.16)	1.84 (.19)	Moderate	Very Low	Low	Low	Maintained
Deschutes (Westside)	1,500 (1,000)	634 (.13)	1.16 (.15)	High	Low	Moderate	Moderate	High Risk
Deschutes (Eastside)	1,000	1,749 (.05)	2.52 (.24)	Low	Low	Moderate	Moderate	Viable
Klickitat River	1,000			Moderate??	Low	Moderate	Moderate	Maintained(?)
Rock Creek	500				Moderate	Moderate	Moderate	High Risk?
Crooked River (ext)	2,000							Extirpated
White Salmon R.(ext)	500							Extirpated.
John Day River MPG								
John Day Lower Mainstem Tribs	2,250	1,270 (.22)	2.67 (.19)	Moderate	Very Low	Moderate	Moderate	Maintained
Middle Fork John Day	1,000	1,736 (.41)	3.66 (.26)	Low	Low	Moderate	Moderate	Viable
North Fork John Day	1,000	1,896 (.19)	2.48 (.23)	Very Low	Very Low	Low	Low	Highly Viable
South Fork John Day	500	697 (.27)	2.01 (.21)	Low	Very Low	Moderate	Moderate	Viable
John Day Upper Mainstem	1,000	641 (.21)	1.32 (.18)	Moderate	Very Low	Moderate	Moderate	Maintained
Umatilla/Walla Walla MPG								
Umatilla River	1,500	2,379 (.11)	1.20 (.32)	Moderate	Moderate	Moderate	Moderate	Maintained
Walla Walla River	1,000	877 (.13)	1.65 (.11)	Moderate	Moderate	Moderate	Moderate	Maintained
Touchet River	1,000	382 (.12)	1.25 (.11)	High	Low	Moderate	Moderate	High Risk

# 2015 Viability Rating for MCR Steelhead Populations in the Umatilla/Walla Walla River Major Population Group (NWFSC 2015)

		Spatial Structure / Diversity Rating			
		Very Low	Low	Moderate	High
Abundance / Productivity Rating	Very Low (<1%)				
	Low (<5%)				
	Moderate (<25%)			Umatilla Walla Walla	
	High			Touchet	

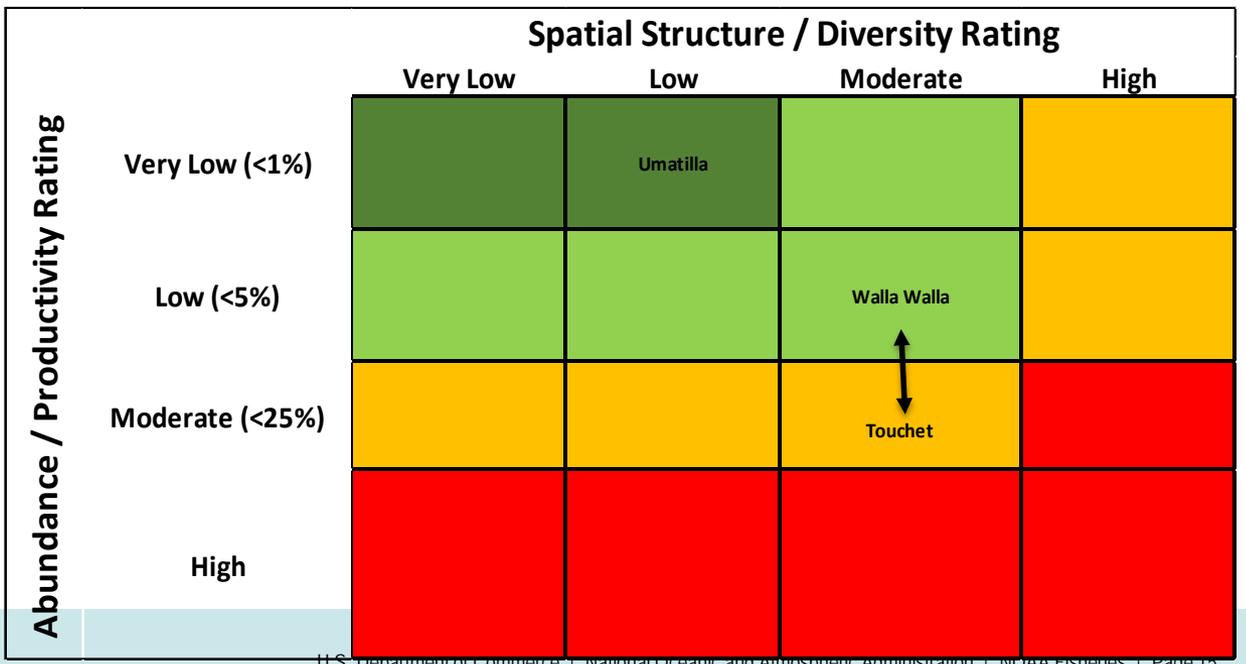
## Recovery Scenario for MCR Steelhead Populations in the Umatilla/Walla Walla River Major Population Group (ICTRT 2007; NMFS 2009a; ODFW 2010; SRSRB 2011)

		Spatial Structure / Diversity Rating			
		Very Low	Low	Moderate	High
Abundance / Productivity Rating	Very Low (<1%)		Umatilla		
	Low (<5%)			Walla Walla	
	Moderate (<25%)			Touchet	
	High				



Where we are 2015

Where we need to be for viability



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