

**Hanford Reach Working Group
Statement of Agreement on the
Protocol for conducting the first Vernita Bar ground survey and concurrent
aerial redd count**

Submitted to Hanford Reach Working Group: October 08, 2010

Approved by Hanford Reach Working Group: November 02, 2010

Statement:

The Hanford Reach Working Group (HRWG) agrees that the first Vernita Bar ground survey and the first aerial redd counts will commence on the first Sunday following October 15 annually.

Background:

The Hanford Reach Fall Chinook Protection Program Agreement established a Vernita Bar redd monitoring team consisting of representatives from the Washington Department of Fish & Wildlife (WDFW), Public Utility District No.2 of Grant County (GCPUD) and the Fisheries Agencies and Tribes (HRFCPPA Section C.6.a). Activities of the Monitoring Team include determination of the dates of; Initiation of Spawning, End of Spawning, Hatching, Emergence, the End of the Emergence Period, and the End of the Rearing Period.

C.6.(a) The Monitoring Team will survey Redds on Vernita Bar in the area specified on Exhibit A for the purpose of determining the Initiation of Spawning, the location of Redds and the extent of spawning. The Monitoring Team will also provide a concurrent aerial survey of the Hanford Reach on the same weekend(s). The aerial survey(s) will be utilized to determine if Initiation of Spawning in areas of the Hanford Reach below the 36 kcfs level and/or outside the area specified on Exhibit A occurs prior to Initiation of Spawning within the Exhibit A area above the 36 kcfs level. Once an initiation of Spawning date has been determined, based upon the presence of 5 or more redds in an individual survey, the aerial surveys maybe discontinued for that year. The surveys will be conducted on weekends beginning on the weekend prior to October 15 of each year.

According to the Vernita Bar Agreement, the first Vernita Bar ground survey would be conducted on the Sunday closest to October 15. (Reverse loading operations begin on October 15 annually. This operation maintains lower river elevations during daylight hours in an effort to reduce redd construction at higher elevations on Vernita Bar). Under this protocol the first Vernita Bar surveys would occur between October 12 and 18. If five or more redds are observed within the transects of the Vernita Bar survey on this first survey the Initiation of Spawning could be established between October 8 and 14. The "Initiation of Spawning" date is the Wednesday before the Sunday on which the Monitoring Team first identifies five (5) or more Redds.

The HRFCPPA modified the starting date for the first Vernita Bar survey to the Sunday prior to October 15. Under this protocol the first Vernita Bar surveys would occur between October 8

and 14 and could result in the setting of the Initiation of Spawning between October 4 and 10 (Table 1).

Both of these prior established protocols for the first Vernita Bar survey mandated surveys well prior to the typical spawn timing for Hanford Reach fall chinook. This Amendment, establishing the first Vernita Bar survey on the Sunday on or after October 15, would result with the first Vernita Bar ground and aerial redd surveys to be conducted between October 15 and 21 and would result in setting the Initiation of Spawning between October 11 and 17 if five redds were observed in either survey (ground or aerial¹). These dates are still prior to the Initiation of Spawning date set for any of the years 1988 to 2009.

Table 1. Options to establish dates for the first Vernita Bar surveys and resulting Initiation of Spawning.

	First Vernita Bar Survey		Initiation of Spawning	
	Earliest	Latest	Earliest	Latest
Sunday Closest to the 15th	Oct 12	Oct 18	Oct 8	Oct 14
Sunday Prior to the 15th	Oct 8	Oct 14	Oct 4	Oct 10
Sunday On or After the 15th	Oct 15	Oct 21	Oct 11	Oct 17

Over the past 22 years of the Vernita Bar/HRFCPP Agreements, Initiation of Spawning has begun as early as October 18 and as late as November 1 (Figure 1). Redd counts conducted on Vernita Bar have been conducted as early as October 9. Only 9 of the 50 Vernita Bar surveys conducted on or before October 28 resulted in sufficient redd counts (5 redds above 36kcfs) to establish the Initiation of Spawning and none of the 29 redd counts conducted on or before October 21 resulted in the establishment of the Initiation of Spawning (Figure 2).

¹ See Amendment SOA 2007-HR04 for the establishment of the Initiation of Spawning based on aerial redd counts.

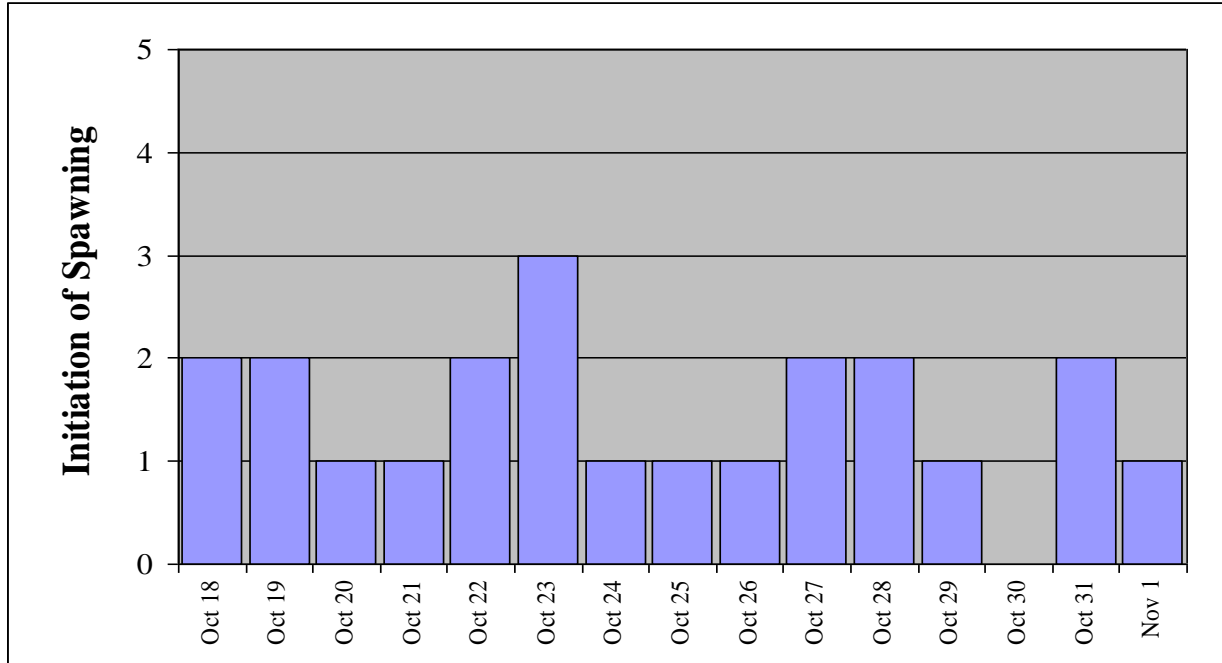


Figure 1. Initiation of Spawning dates established by the Vernita Bar Monitoring Team, 1988 - 2009.

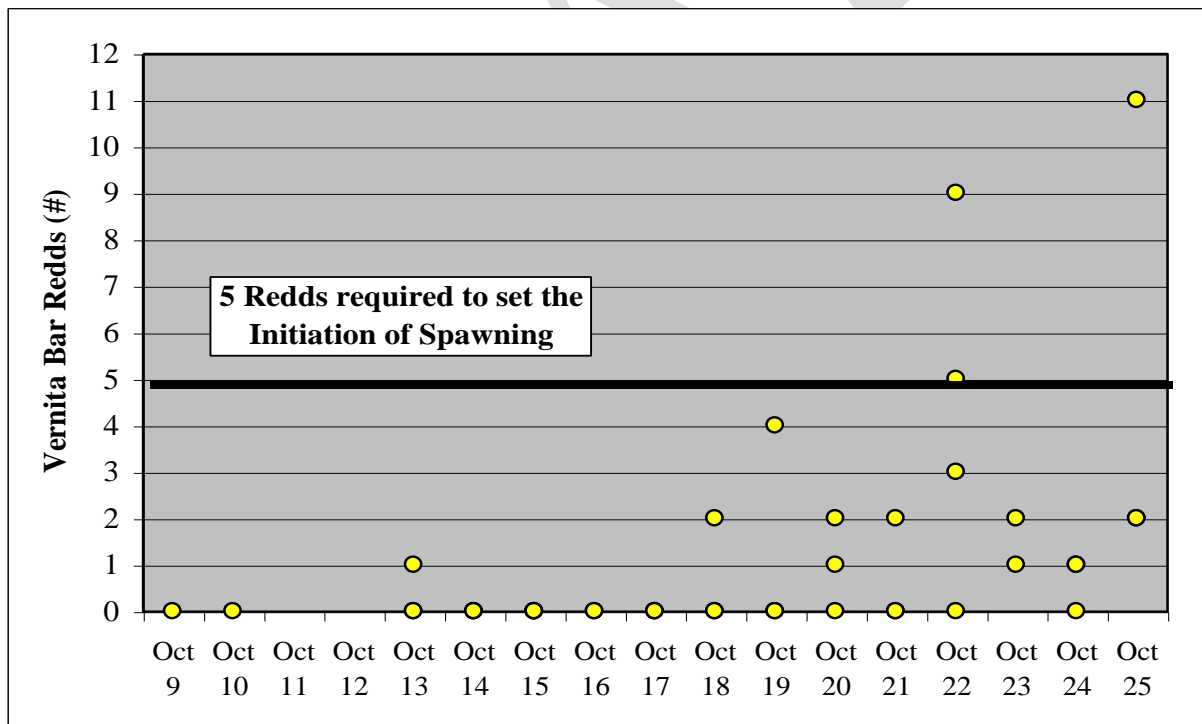


Figure 2. Summary of Vernita Bar redd counts between October 9 and October 25, 1988 -2009.

HRFCPPA SOA 2007-HR04 established a protocol wherein the results of the aerial redd counts conducted by Pacific Northwest National Laboratory (PNNL) can be used to establish the Initiation of Spawning below the 36kcs elevation. These redd counts are recorded by area. Aerial redd counts have remained low through late October each year, 1988-2009 (Figure 3).

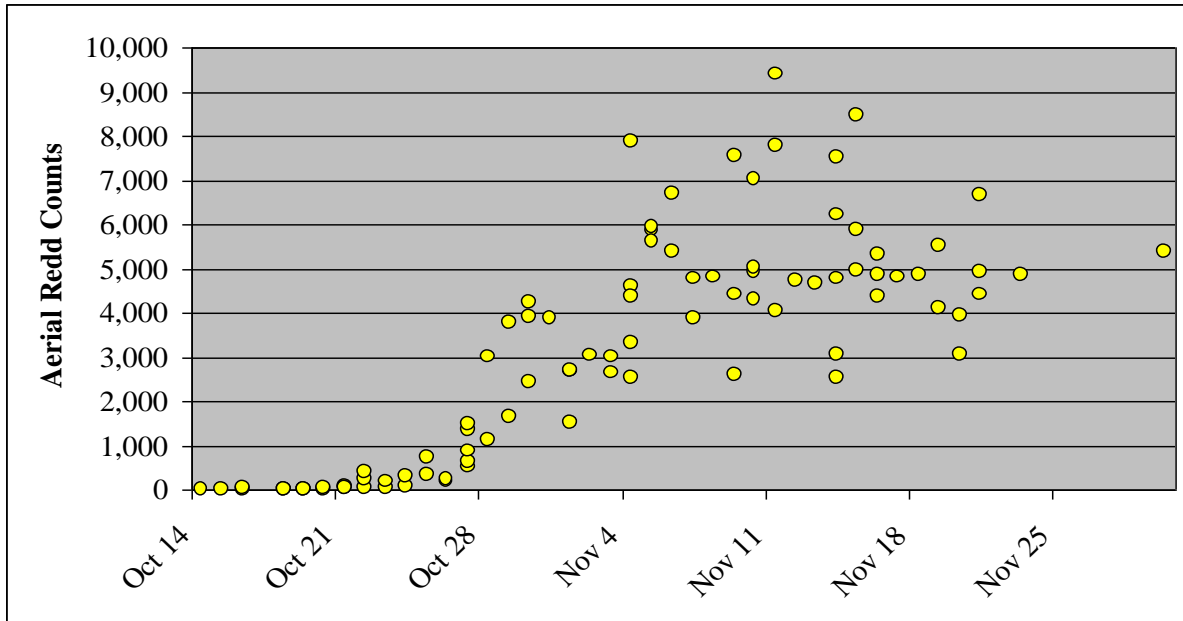


Figure 3. Summary of PNNL aerial redd counts between October 14 and November 30, 1988 - 2009.

Aerial redd counts observed on or before October 21 have been below 100 redds for the Hanford Reach and 17 or fewer redds have been observed near Vernita Bar (Figures 4 & 5).

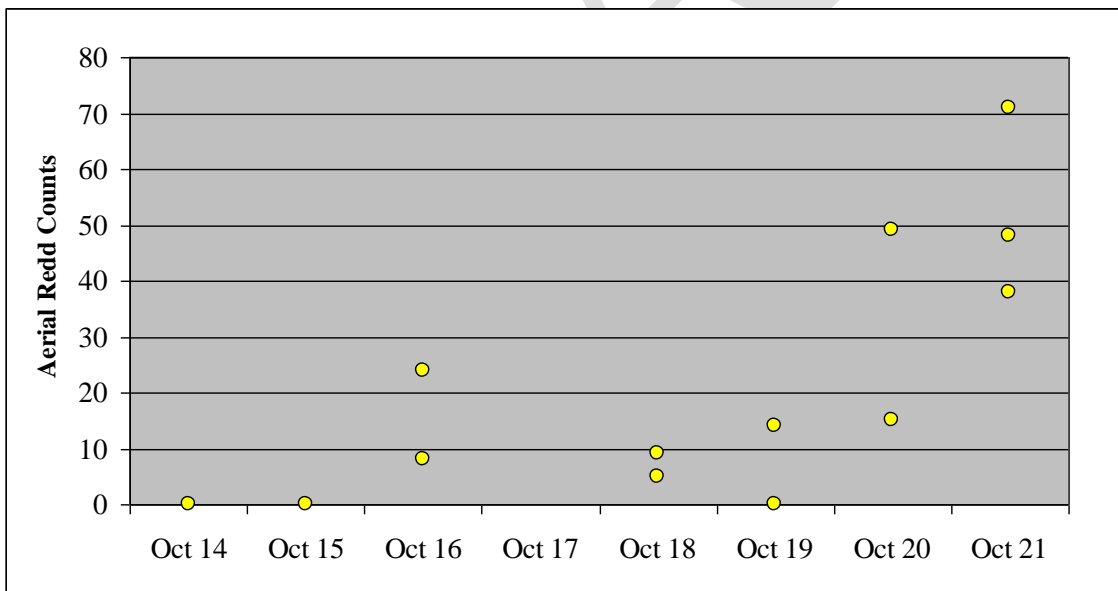


Figure 4. Summary of PNNL aerial redd counts for the Hanford Reach between October 14 and October 21, 1988 -2009.

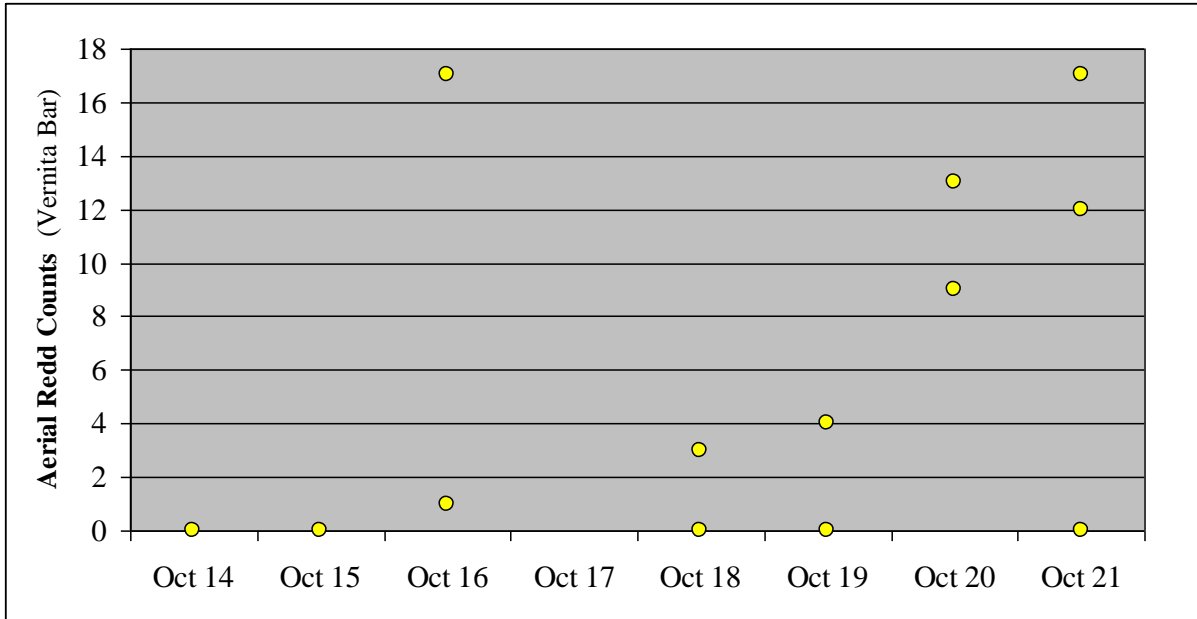


Figure 5. Summary of PNNL aerial redd counts near Vernita Bar between October 14 and October 21, 1988 -2009.

The adoption of this Amendment will reduce costs and manpower associated with the ground surveys, aerial surveys, and Project operations. Surveys conducted over the most recent 22 years have illustrated that minimal redd formation (spawning) has occurred in the Hanford Reach prior to October 22. This modification to the HRFCPP will continue to provide adequate protection for the earliest spawning and emerging fall chinook while removing unnecessary monitoring.