

Aquatic Settlement Agreement
Statement of Agreement (SOA) Regarding Wells Reservoir White Sturgeon
Supplementation 2023-2026

Date of Approval: August 10, 2022

Statement

Public Utility District No. 1 of Douglas County (Douglas PUD) will release 325 ($\pm 10\%$) White Sturgeon into the Wells Reservoir annually between 2023 and 2026 (Brood Years [BY] 2022-2025) to complete the supplementation goals in the first four years of Phase II of the White Sturgeon Management Plan (WSMP).

Douglas PUD will rear fish to a target of ≥ 350 grams/fish. White Sturgeon used during this period of supplementation will be captured as wild larval fish (born in river) and raised at the Wells Fish Hatchery for approximately 11 months prior to release into the Wells Reservoir section of the Columbia River. Wild caught larvae from Lake Roosevelt will be used to meet this program. If stocking numbers cannot be met in a given year the Aquatic Settlement Workgroup (Aquatic SWG) will discuss revising stocking numbers in the subsequent year(s). Aquatic SWG members can request reconsideration of this SOA at any time during the supplementation period.

Additionally, BY 2022-2025 sturgeon will be blood sampled and tested for spontaneous autopolyploidy (SAP). Fish identified to have anything other than 8N chromosome types will be euthanized. The need for continued SAP testing after BY 2025 will be evaluated by the Aquatic SWG, taking into consideration available information about natural SAP rates in the wild, the facility's likelihood to increase rates within the entire Wells population above that expected for wild populations, and the risks associated with the occurrence of SAP.

Background

From 2014-2021, Douglas PUD has released 22,149 yearling White Sturgeon into the Wells Reservoir as part of the WSMP Phase 1 Supplementation Objective 4.1.2. (Table 1). In 2017, the Aquatic SWG agreed to a reduction of White Sturgeon stocking numbers from 5,000 fish per year to 315-325 fish per year at a size ≥ 200 grams/fish (Aquatic SWG, 2017). This stocking rate and size was determined to be consistent with the goal of maintaining a population of 1,000-1,100 adult (>165 cm fork length) White Sturgeon in the Wells Reservoir.

Table 1. Number and average weight of White Sturgeon at release in the Wells Reservoir BY 2013-2021.

BROOD YEAR	RELEASE YEAR	2022 AGE	NUMBER RELEASED	WEIGHT AT RELEASE (G)
2013	2014	9	5044	166.5 (0.8)
2014	2015	8	5009	97.6 (0.5)
2015	2016	7	5289	147.0 (0.8)
2016	2017	6	5131	118.4 (0.7)
2017	2018	5	337	281.0 (2.9)
2018	2019	4	99	364.7 (13)
2019	2020	3	570	495.7 (4.9)
2020	2021	2	338	916.7 (10.8)
2021	2022	1	333	488.1 (5.6)

Total abundance of White Sturgeon 45-170cm long in the Wells Reservoir is estimated at approximately 2,000 fish, based on mark-recapture abundance modeling, using the most recent indexing and monitoring data. BY specific survival estimates for fish released 2014-2017 were imprecise, however appeared to be lower than survival rates observed in other White Sturgeon supplementation programs in the mid and upper Columbia River. Data were insufficient to estimate survival for fish released 2018-2021 following the reduction in stocking numbers and an increase in fish size at release. It is suspected that these larger fish will exhibit higher survival, however additional monitoring is needed to confirm this assumption.

Continued releases of 325 White Sturgeon but at a larger size of ≥ 350 grams/fish annually (2023-2026) are anticipated to increase the current abundance level in the Wells Reservoir. Following the collection of additional data on more recent release groups of sturgeon and the ability to produce reliable estimates of survival, the Aquatic SWG will reevaluate stocking numbers.

In March 2022 the Aquatic SWG approved a new 4-year stocking SOA to stock 325 fish annually at a minimum size of 350 grams/fish and between the years of 2023-2026. However, the SOA did

not include requirements to blood sample and test White Sturgeon to be stocked for SAP. The revised SOA here addresses this testing commitment.

SAP has been observed in Columbia River White Sturgeon that are a product of direct gamete and wild caught larvae supplementation programs. Members of the Priest Rapids and Rocky Reach Fish Forums developed a Guiding Document in 2020 to support management of White Sturgeon supplementation programs while the uncertainty of population effects and prevalence are high (PRFF and RRFF, 2020). In support of this guidance, Douglas PUD has committed to screening White Sturgeon juveniles to be stocked in the Wells Reservoir for SAP and ensure the release of only 8N fish during the implementation of this SOA. During the term of this SOA, the Confederated Tribes of the Colville Reservation will be conducting evaluations of ploidy rates among the extant population of White Sturgeon within the upper Columbia River in Washington. The extant population being comprised of both wild and hatchery fish from direct gamete and wild caught larvae approaches. The information from this effort will be shared with the Aquatic SWG to help inform future decisions regarding SAP screening of the White Sturgeon to be stocked into Wells Reservoir. The need for screening beyond BY 2025 will be determined by the Aquatic SWG.

References:

Aquatic Settlement Workgroup (Aquatic SWG). 2017. Wells Reservoir White Sturgeon Supplementation 2018-2022 Statement of Agreement. Approved January 11, 2017.

Priest Rapids and Rocky Reach Fish Forums (PRFF and RRFF). 2020. Guidance for Evaluating Spontaneous Autopolyploidy in White Sturgeon Supplementation Programs. Priest Rapids and Rocky Reach Fish Forums. Ephrata, WA.