

TO: Rebecca Brown, Ecology  
FR: Jason Hatch, Washington Water Trust  
DT: April 1, 2020  
RE: WRIA 10 Preliminary Water Rights Analysis-Update



1500 Westlake Ave N Suite 202  
Seattle, WA 98109  
[www.washingtonwatertrust.org](http://www.washingtonwatertrust.org)  
206-675-1585

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Washington Water Trust (WWT) is nearing completion of the irrigation assessment for WRIA 9 as the first step in their Preliminary Water Rights Analysis.

WWT was enlisted to undertake a water rights assessment in WRIA 10. The assessment was to identify water right acquisition opportunities that could serve in a rural well offset portfolio for new uses through 2038. The source of water right opportunities would include: irrigation analysis in specific subbasins; water rights currently held in temporary trust with DOE; pre-identified water rights (some held by local jurisdictions); water rights/water use within 1 mile of the distribution line of the Cascadia Treatment Plant (recycled water facility) and other water rights identified through the course of the assessment.

Specifically, WWT was asked to evaluate:

- *Trust Water:* Assess up to 15 trust water temporary donations in WRIA that could be changed to permanent donation;
- *Water Rights:* Assess up to 10 water right acquisition opportunities per WRIA as identified by Ecology;
- *Recycled Water:* Irrigation Analysis-Within 1 mile from distribution line of the Cascadia Wastewater Treatment Plant for WRIA 10, identify up to 10 properties with water rights that could change to recycled water service; and
- *Irrigation Analysis:* Up to 20 water right opportunities through identifying private properties of 5 acres or greater with beneficially used water rights within: Boise Creek, Fennel Creek, Greenwater River, South Prairie Creek-Wilkeson Creek, Voights Creek, Kapowsin Creek/Ohop Creek, Rody Creek, Wapato/Simons Creek, and Horsehaven Creek drainages.

This assessment would include aerial photo analysis and underlying preliminary records review. WWT would in coordination with the DOE Watershed Planner, share findings and solicit feedback, resulting in 10 project profiles of water rights which could contribute to the offset portfolio if the water rights holder (s) were willing sellers.

## Water Rights

An irrigation analysis helps identify through aerial photo analysis where irrigation is likely occurring and where an underlying water right document supports that use. The Department of Ecology's WRTS database provides for **675 water right documents** within WRIA 10 priority basin, which are certificates, claims, or change record of examinations (ROE's). This number will be significantly pared down by focusing on documents which include irrigation as a purpose of use and demonstrate likely beneficial use through analysis of aerial photography from NAIP (National Agricultural Imagery Photography).

WWT is nearing completion of an irrigation analysis, which involves utilizing ArcGIS and measuring (delineating) areas of water use in 2013 and 2017. 2015 NAIP imagery was not used due to drought conditions that year. The irrigation analysis identifies water rights places of use with aerial imagery which aligns with the water use. The GIS analyst will assign high, medium, and low irrigation confidence. After water use and water right place of use is matched, the next phase of the water rights analysis is to use irrigation analysis results to prioritize and select water rights in each area to undergo a due diligence review.

Recommended and conventionally used selection criteria include:

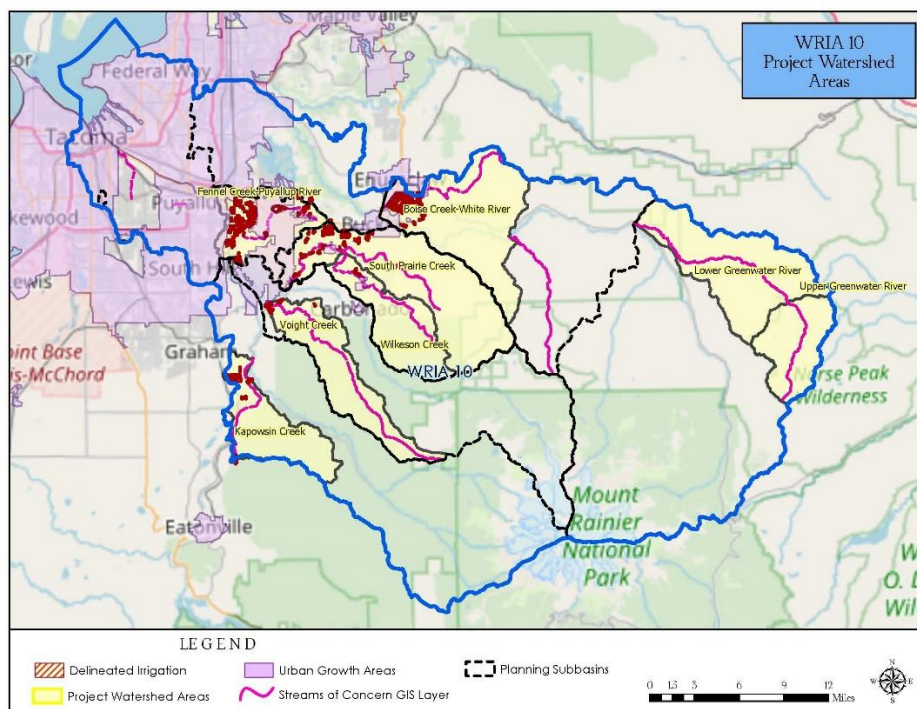
- Water Right Document Type- Certificates and claims receive preference.
- Irrigated Acreage- Water rights with less than 5 acres of authorized or asserted use should be excluded from further consideration as they would not offer enough water to be viable offset projects. Water rights with more irrigated acreage identified receive preference.
- Confidence of Irrigated Acreage- Water rights with places of use seeing higher and more frequent (2013 and 2017) irrigation confidence receive preference.
- Priority Date- Water rights with more senior priority dates receive preference. (Puyallup-White Instream Flow Rule-3/21/80).
- Distance Upstream- Water rights higher in the sub-basin receive preference.
- Purpose of Use- Irrigation water rights receive preference due to ability to demonstrate beneficial use.
- Qa/Qi Annual and Instantaneous Quantity on Water Right- Water rights with greater quantities receive preference.

## Geography Area Initial Findings

WRIA	Name	Number of Total Water Rights	Sum of Irrigated Acres on WR	Delineated Irrigation Count	Delineated Irrigation Acres
10	Boise Creek-White River	38	686	71	972
10	Fennel Creek-Puyallup River	106	1,213	106	1,208
10	Kapowsin Creek	5	-	10	264
10	Lower Greenwater River	18	-	0	0
10	South Prairie Creek	44	417	73	469
10	Upper Greenwater River	17	-	0	0
10	Voight Creek	15	355	7	119
10	Wilkeson Creek	3	44	3	38
	<b>TOTAL</b>	<b>246</b>	<b>2715</b>	<b>270</b>	<b>3070</b>

WRIA	PENDING
10	Rody Creek
10	Clear Creek
10	Wapato/Simon Creek
10	Horsehaven Creek

The findings above identify water rights within the basin, the authorized acres allowed with those water rights as well as the number of areas of delineated irrigation and the corresponding likely beneficially used acres. The next step is to align these irrigated acres with a water right (s) which authorizes this use.



## **Trust Water and Pre-identified Water Rights**

At the direction of DOE, WWT was provided a list of 10 water right opportunities along with 15 water rights in temporary trust. WWT has conducted preliminary due diligence on the 10 water right opportunities, 3 of which have insufficient recent irrigation history, 1 meets recent irrigation history of 5 acres or great, 5 require further review and potential outreach to project contacts. Continued review is being conducted on the 15 water rights identified in temporary trust, one of which overlaps and is within the 10 water right opportunities as well. WWT will follow up with other water right holders as directed.

## **Recycled Water Source Substitute**

WWT was instructed to identify up to 10 properties within a 0.5 mile radius of the service line for Cascadia Wastewater Treatment plant. Cascadia WTP currently produces upwards of 300,000 gallons per day (336 AFY) to a Class B standard and is discharged into a drain field east of the plant. There is future potential to serve landscaping needs for adjacent subdivision. In addition there may be potential if plant is upgraded and sufficient output to produce Class A for agricultural properties to the west and adjacent to the Carbon River.

## **Next Steps**

- The irrigation analysis will be complete in the subbasins identified including those pending, prioritizing up to 20 water rights for consideration of further due diligence. Water rights and their corresponding places of use (POU) will be evaluated with water use.
- Water right opportunities which require further review will continue.
- Trust water right opportunities will be reviewed and initial letters of inquiry may be sent at the direction of watershed planner.

WWT will screen and provide a recommended prioritization of up to 10 water rights to pursue more substantial due diligence upon. At direction of DOE and WREC, WWT will proceed with this water right record review and develop project profiles of the 10 water rights which highlight opportunity, water rights and estimated consumptive use.