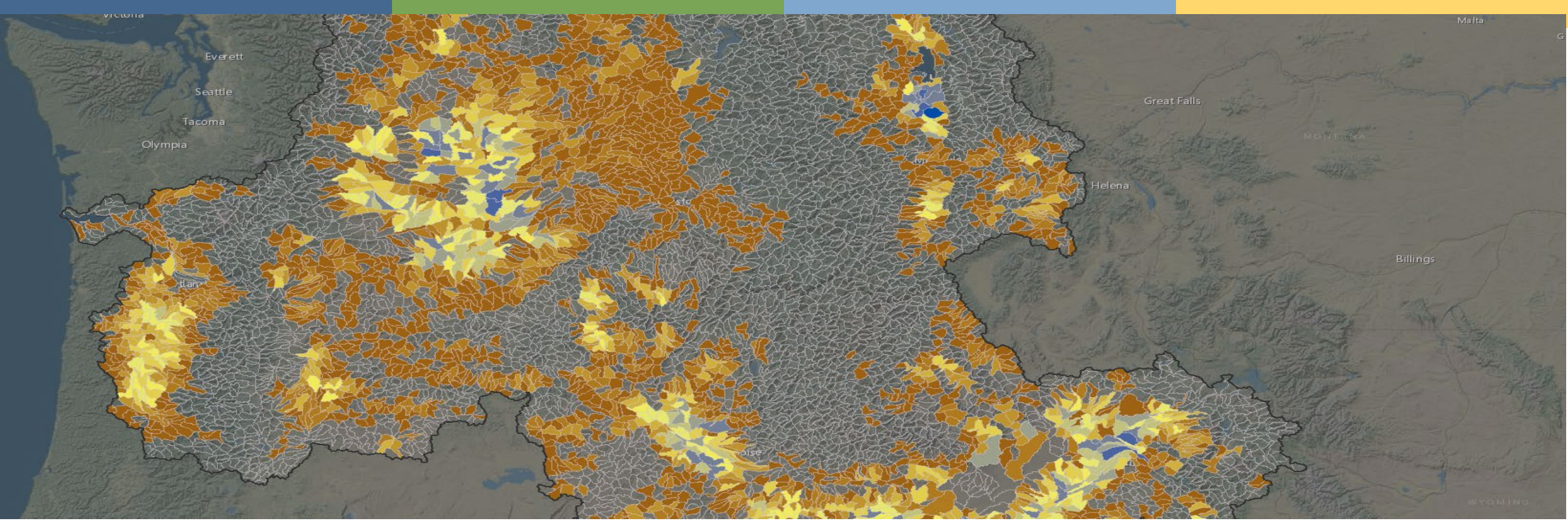


DEPARTMENT OF ECOLOGY
State of Washington

Better Understanding of Water Use Through OpenET
Columbia River Policy Advisory Group

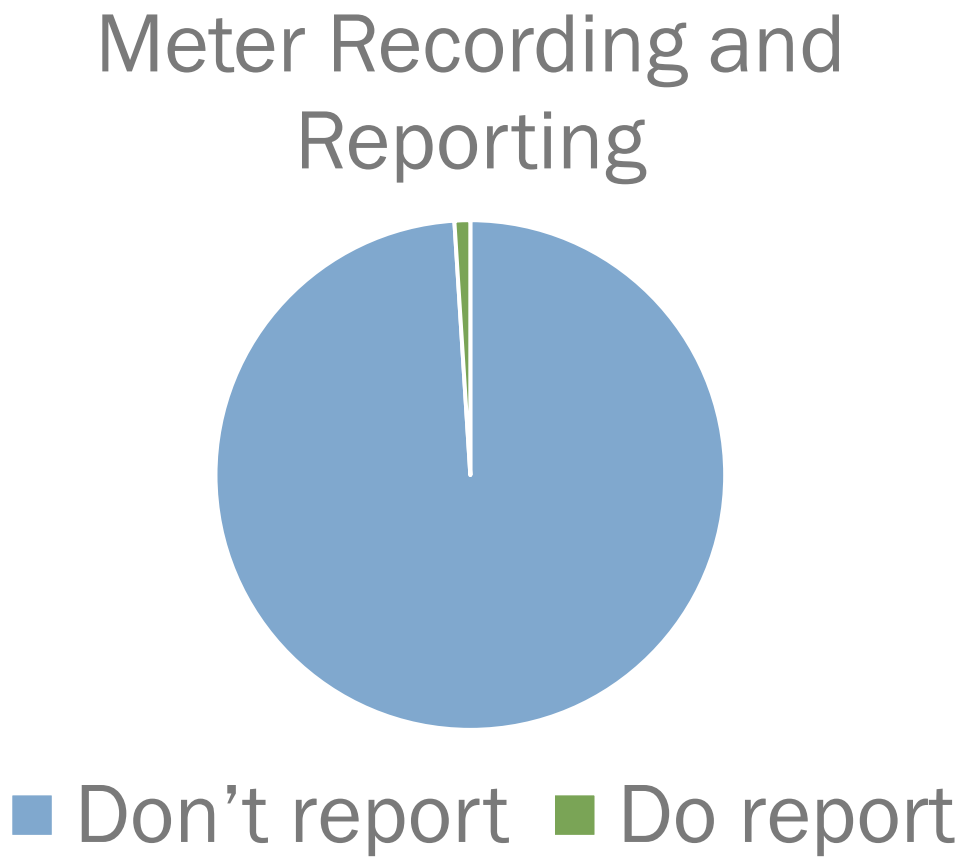
Andrea Lauden and Jeff Marti

November 3, 2022

In Washington….

Of ~225,000 water rights and claims,

less than 1% of water users report metering data



Columbia River Basin Evapotranspiration Project

Towards Consistent, Accepted, and Readily Available Watershed Scale Summaries of Evapotranspiration and Irrigated Lands Data for Improved Water Management in the Columbia River Basin

Funded by NASA Western Water Applications Office

Columbia River Basin Evapotranspiration Mapping Tool

OREGON EXPLORER

OpenET for Irrigated Agriculture

Select Sub-Watershed (HU 12) Summaries

Specify your area of interest to filter the **Ensemble** Evapotranspiration (ET) sub-watershed summaries view on the map and view results in a table where you can download the results using the table settings.

OpenET provides ET data from multiple satellite-driven models, and also calculates a single "ensemble value" from those models.

Location

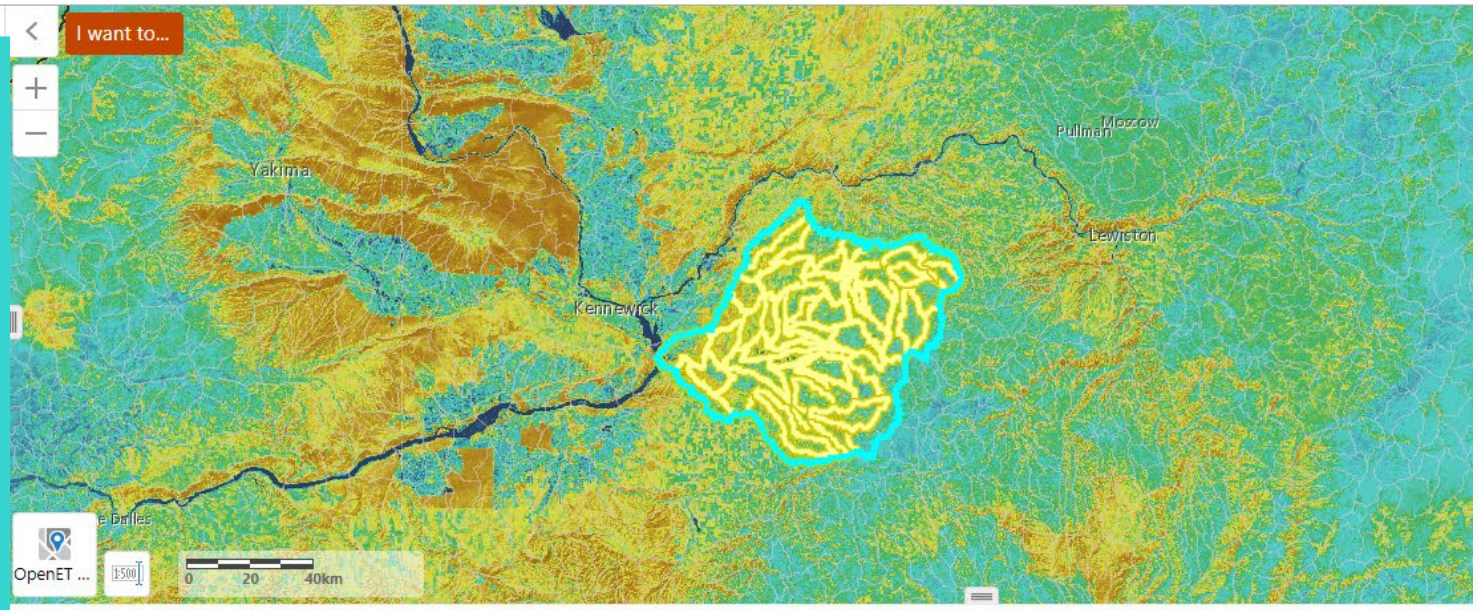
○ Use Map ○ Basin ◉ Sub-basin ○ Watershed

Select Sub-basin (HU8) Walla Walla (17070102)

Year 2021

2016 — 2021

Show Selected HUC 12 Summaries in Results Table



Resources and Definitions

ACRES_FTR_GEOM – Total area of irrigated field boundaries (geometry area, not pixel area) used to derive estimates of ET, PPT, and consumptive use from irrigation volumes.

EFF_PPT_{YR}_acre_ft – Total effective PPT (70% of gridMET PPT, Nov-Oct) volume in acre feet.

ETa_{MODEL}_GS{YR}_acre_ft – Total actual ET (growing season, Apr-Oct) volume in acre feet.

HUC12_Code – the HUC 12 code identifier

HUC12_Name – the HUC 12 name identifier

IRR_CU_{MODEL}_GS{YR}_acre_ft – Total consumptive use from irrigation (ET – Eff. PPT) volume in acre-ft.

HUC 12 Summaries

- Save Results — Save the list of results for future use
- Remove from Results — Remove this feature set from the current collection of results
- Export to CSV — Export results to CSV
- Export to XLSX — Export results to XLSX
- Export to Shapefile — Export results to Shapefile

Selected Huc 12 Summaries (44)

HUC12 Code	ETa ENSEMBLE GS 202021 acre ft	IRR CU ENSEMBLE GS 202021 acre ft
170701020902	6629.4683	4322.4271
170701020901	2170.2544	1250.0701
170701020104	118.5624	73.3259
170701020103	344.9647	196.6072
170701020105	2.2127	1.2778
170701020703	9896.0414	5729.1513
170701020106	403.2639	246.9837
170701020307	417.5776	175.004
170701020308	1045.6155	505.1127

Home Layers Select Sub-Waters...

WKID: 4326 Lat/Long ▲ Lat: 47.03518° N Lon: 115.08272° W

Adopting OpenET for Water Resources Management in Washington

- Incorporate OpenET into revised water right guidance for quantifying consumptive use.
- Seek funding for "flux" stations to support further validation of OpenET in the PNW.
- Evaluate applications for OpenET at the field and watershed level.

Thank you

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