WASHINGTON STATE POTATO COMMISSION

Draft WSPC Comments on Ecology Irrigation Efficiency and Consumptive Use Policies

Review details	
Date	October 23, 2026
Comment deadline	October 26, 2026, at 11:59 p.m. Pacific
Draft guidance	Determining Irrigation Efficiency and Consumptive Use Publication 26-11-017
Draft policy	Evaluation of Changes to Enable Irrigation of Additional Acreage or New Purposes of Use Publication 26-11-109

Recommended WSPC Position

WSPC should support Ecology's effort to modernize irrigation accounting only if the final guidance protects existing water rights, recognizes documented grower stewardship, and uses measured records appropriately. Before finalizing the drafts, Ecology should correct the material calculation and table errors, clarify when modeled values may replace measured records, publish the supporting calculation files, and provide a short supplemental comment period.

Requested Revisions

Issue	WSPC request
Technical corrections	Correct the worked examples, table inconsistencies, and Appendix A equations before final adoption and publish reproducible worksheets.
Evidence standard	Give reliable meter and operational records appropriate to weight, require written findings before rejecting them, and make model assumptions rebuttable.
Agricultural operations	Recognize crop rotation, deficit irrigation, site conditions, and documented management without imposing a one-size-fits-all crop-demand assumption.
Water accounting	Define the source-to-field boundary and separately account for conveyance, application losses, internal reuse, and external return flows.
Columbia Basin pathway	Expressly preserve RCW 90.03.380(1)(b) and POL-1300 before applying the ordinary ACQ pathway.
Implementation	Provide transition guidance, technical assistance, model version controls, and field validation before relying on the guidance in disputed matters.

Draft Public Comments

Washington State Department of Ecology

Water Resources Program

Submitted through the Ecology public comment process

Re: Draft GUID-1210 and Draft POL-1210

Dear Water Resources Program staff:

The Washington State Potato Commission appreciates Ecology's work to update its guidance on irrigation efficiency, consumptive use, and changes to water rights. Washington potato growers have invested heavily in center pivots, low-elevation application systems, soil-moisture monitoring, maintenance, and irrigation scheduling. WSPC supports a technically sound framework that protects existing rights and recognizes actual field conditions and documented conservation.

The proposed framework is directionally useful, but Ecology should not finalize or rely on it until it corrects the material errors identified below and clarifies the implementation standards. The guidance may be used in change applications, trust-water reviews, tentative determinations, waste evaluations, and adjudications. Its practical consequences therefore extend beyond the narrow wording of POL-1210.

Correct the Technical Record Before Final Adoption

Ecology should correct the public-review draft, publish the underlying worksheets, and provide a short supplemental comment period. At least four items require correction or explanation.

- Table 1 lists an average irrigation efficiency of 75 percent for microsprinklers even though the stated range is 80 to 90 percent. It lists 67 percent for solid-set sprinklers even though the stated range is 70 to 85 percent. Ecology should reconcile the ranges, averages, consumptive fractions, and return-flow fractions with the supporting WSU analysis.
- Example 2 omits August from the displayed annual crop-irrigation-requirement totals for both potato years. Including the monthly values shown in the draft yields 28.71 inches for Year 1 rather than 20.24 inches, and 25.86 inches for Year 4 rather than 19.43 inches. Under the draft's own factors, Years 1 and 4 become the two highest-use years, with average modeled consumptive use of approximately 270.55 acre-feet. The resulting implied diversions exceed the example's stated 250 acre-foot annual authorization. Because the displayed inputs do not support the published 214.2 acre-foot result, Ecology should rebuild the example using lawful, internally consistent data.
- Example 1 calculates a 78.5 percent efficiency for a traveling big-gun system, above Table 1's stated 50 to 70 percent range and then declares the result reasonable and non-wasteful. The example should explain how values outside a stated range are investigated and supported.
- Appendix A should show the effective-precipitation subtraction consistently. Crop evapotranspiration is not automatically the same as crop irrigation requirement. The flowchart should clearly distinguish ET, effective precipitation, CIR, total irrigation requirement, and total consumptive use.

These are not minor editorial points. The calculation error changes year selection and the relationship between modeled demand and the authorized quantity. Ecology should complete independent quality assurance before using the corrected methods to condition a water right or evaluate additional acreage.

Before finalizing Table 1, Ecology should obtain independent peer review of the efficiency and evaporation values and publish the scientific and statistical basis for each range and average. The explanation should identify whether a range represents expected performance, a distribution around a mean, or a regulatory benchmark. It should specifically address entries assigning zero evaporation and sprinkler-evaporation values greater than 15 percent. It should explain how site-specific evidence may support a value inside or outside a published range.

Ecology should distinguish ET, effective precipitation, crop irrigation requirement, total irrigation requirement, application evaporation, and other irrigation-related requirements in the definitions and Appendix A.

Appendix B should address total irrigation requirement above annual authorization, deliberate deficit irrigation, discrepancies within expected uncertainty, and site-specific efficiency outside published ranges. Each example should identify the evidence and legal test.

Use a Transparent and Rebuttable Evidence Standard

The draft properly recognizes that no estimation method is completely accurate and that site-specific information may be submitted. The final guidance should translate those principles into a clear decision process.

Reliable meter records should remain the primary evidence of the amount diverted. A model is useful as a cross-check, but a discrepancy alone does not establish that the meter is wrong. Before substituting a modeled estimate, Ecology should evaluate the meter's location, installation, calibration, record period, irrigated acreage and crops, weather-station selection, soil-water carryover, effective precipitation, and the model's assumptions. If Ecology rejects measured records or chooses one model over another, the file should contain written findings explaining why.

POL-1210 Section 3 item 4(c) should define a material discrepancy and require a written request that identifies the issue, the information needed, and the basis for that request. Ecology should consolidate requests for additional information where practicable and provide the applicant a reasonable opportunity to respond. Applicants should be able to use qualified site assessments, field records, crop data, and peer-reviewed studies to rebut statewide defaults.

The final package should also require preservation of the raw data, model version, weather station, crop coefficients, calculation date, and all adjustments used in a decision. Report sensitivity ranges when uncertainty could affect approval, acreage, or operating conditions. A metering accuracy standard should not be mistaken for a complete uncertainty estimate for consumptive use.

Data used in a regulatory decision should be reasonably accessible to applicants, conservancy boards, consultants, and Ecology reviewers. Ecology should maintain or require archived datasets, model-version identifiers, retrieval dates, weather-station records, and a public change log for material revisions. An application should not be materially altered by an unexplained model or dataset change occurring during review. If a source is fee-restricted or cannot be independently reproduced, Ecology should provide an accessible alternative or identify the documentation needed to verify the result.

The final guidance should identify the expected accuracy and principal sources of uncertainty for each accepted method. A difference that falls within the documented uncertainty of the measurement and modeling methods should not, without corroborating evidence, support a finding of relinquishment, waste, noncompliance, or invalidity. Ecology should define a material-discrepancy threshold and explain how it will consider cumulative uncertainty before a modeled value displaces reliable, measured records.

Reflect Actual Potato Production and Conservation Practices

Potatoes are grown in rotation with other crops, often under highly managed irrigation systems. Historical ACQ calculations should use the actual year-specific crop mix, acreage, weather, and operating records for the applicable period. Proposed-use reviews should allow a realistic rotation and operating plan rather than assume one crop, one reference demand, or full irrigation under ideal conditions every year.

Reference ET is a planning estimate, not a legal minimum water demand. A grower may use soil-moisture monitoring, variable scheduling, improved uniformity, a shorter crop season, or documented deficit irrigation while maintaining a viable crop. Ecology should evaluate whether the proposed operation can remain within the applicable water-right limits and protect other rights. It should not reject a proposal solely because it uses less water than a reference model predicts. Any alternative should be supported by a reproducible water budget and, where necessary, enforceable operating conditions that preserve reasonable crop flexibility.

Statewide defaults also require care in sandy soils, areas with shallow groundwater, fields with tailwater recovery, and systems that reuse drainage water. Effective precipitation and soil-water carryover can vary

materially across farms and seasons. The guidance should require site-specific review where those factors could change the result.

Ecology should distinguish crop irrigation requirements from other lawful and reasonable irrigation-related requirements, including germination, frost protection, sunburn protection, leaching, pre- and post-irrigation, chemigation, fertigation, and wind-erosion control. Where applicable, these requirements should be documented separately in the water budget. Their presence may affect gross diversion and apparent application efficiency without representing waste.

An irrigation efficiency below the statewide average—or outside a generalized range—does not by itself establish waste. A waste determination must consider site conditions, reasonable operating constraints, system size and configuration, the benefits and costs of improvements, available public and private funding, and the other factors required by RCW 90.03.005 and applicable case law. Ecology should replace pejorative terms such as 'improper' or 'inadequate' when the evidence shows only below-average performance and reserve a waste finding for a supported legal and factual determination.

WSPC supports recognizing verified reductions in consumptive losses, including avoidable evaporation. At the same time, a reduction in gross diversion or delivery loss does not automatically create transferable water. The analysis must identify whether the saved water previously returned to the same source, was reused within the system, or produced a measurable reduction in basin depletion.

Define the Water Accounting Boundary and Return Flows

The final guidance should require each analysis to identify the point of measurement and the accounting boundary. A source meter may include canal, pipeline, or district delivery losses, while Table 1 primarily describes application at the field. Applying a field-level consumptive fraction to a source diversion can misstate consumption unless you separately reconcile intervening conveyance, reuse, and return flows.

A defensible water budget should distinguish source diversion, conveyance loss, farm delivery, crop use, application evaporation, runoff, deep percolation, internal reuse, and return flow leaving the project or property. Water reused by an irrigation district or another farm should not be counted twice. The draft's general assumption that 10 percent of field runoff is consumed should be rebuttable where runoff is captured and reused or promptly returns to the hydrologic system. Likewise, deep percolation should be evaluated for location and timing when those factors matter to impairment.

Annual ACQ is only one part of a water-right decision. Where an effect depends on season or location, Ecology must separately evaluate impairment. The final guidance should say so directly and avoid suggesting that a satisfactory annual calculation resolves every injury question.

The final guidance should distinguish the historical averaging required for annual consumptive quantity from the analysis of prospective crop demand, impairment, and the public-interest test. For proposed use, Ecology should allow a reproducible water budget that accounts for crop rotation, local drought frequency, changing climate, and enforceable operating limits. For impairment, Ecology should evaluate the season, location, and magnitude of effects rather than assume that an annual average resolves the question. The guidance should also clarify when consumptive use is considered as one factor in a public-interest review, including groundwater changes, rather than as an independent prohibition on increased consumptive use.

Preserve the Columbia Basin Project Pathway

The applicability section should expressly cross-reference RCW 90.03.380(1)(b) and Ecology's POL-1300 for water rights held by the Bureau of Reclamation within the Columbia Basin Project. For a qualifying Reclamation acreage-change application, the ordinary ACQ restriction in RCW 90.03.380(1)(a) does not apply. Authorized instantaneous annual quantities, validity, no impairment, environmental review, federal authority, contract terms, and delivery capacity remain relevant.

The final documents should require an early legal-pathway screen before staff request an ordinary ACQ analysis. Technical estimates may inform the no-impairment and operational review for a Columbia Basin

Project proposal. Still, they should not be converted into the ordinary ACQ ceiling that the statute excludes. The record should identify the right holder, the water source, whether the proposal involves Initial Use Water, recaptured project water, artificially stored groundwater, or another supply, and the entity responsible for the required system data.

POL-1210 should also cite RCW 90.03.615 and explain selection of the historical period when the Trust Water Rights Program or an applicable relinquishment exception protects recent nonuse. The final policy should make clear that guidance does not amend an existing water right or establish waste solely because measured use differs from a model.

Provide a Practical Transition and Validation Program

Ecology should publish a transition protocol that identifies which version of the guidance applies to each pending application, how and when applicants will receive notice of a methodological change, and what opportunity they will have to supplement the record. Ecology should not change the governing technical method late in review without written notice and a reasonable response period. Metering and reporting conditions should be proportionate to the decision and should accept existing district or farm records when they provide equivalent information.

Where the guidance calls for an 'expert,' 'professional,' or 'qualified' assessment, Ecology should define the education, experience, licensure, certification, or demonstrated subject-matter competence expected for the task. Ecology should provide statewide training, standard worksheets, worked examples, and a designated technical-review contact so the guidance is applied consistently across regions and review pathways.

Before using the new defaults in disputed matters, Ecology should test the methods on representative eastern and western Washington farms and compare reliable meters, WSU reference-ET tools, OpenET, and site water balances. The pilot should include different crops, rotations, soils, irrigation systems, and delivery arrangements. Results, uncertainty, and calculation files should be public. Ecology should also provide worksheets, staff training, a technical-review contact, and reasonable assistance for smaller applicants.

WSPC would welcome continued technical engagement with Ecology, WSU, irrigation districts, growers, and other affected water users. A corrected, transparent framework can improve consistency while protecting lawful water use and recognizing the substantial conservation investments Washington agriculture has already made.

Sincerely,

Washington State Potato Commission

By: Geordy B. Greene, Director of Government Affairs

Sources Reviewed

Ecology Draft GUID-1210, Determining Irrigation Efficiency and Consumptive Use, Publication 26-11-017

Ecology Draft POL-1210, Evaluation of Changes to Enable Irrigation of Additional Acreage or New Purposes of Use, Publication 26-11-109

RCW 90.03.380, Water right changes and annual consumptive quantity

RCW 90.03.615, Historical period for annual consumptive quantity

Ecology POL-1300, Columbia Basin Project Water Rights

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