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Innovative solutions for a sustainable future

October 30, 2026

Comments to Washington Department of Ecology | Draft Preliminary Needs Assessment (October 1, 2026)

Submitted by: EPS Industry Alliance (EPS-IA)

I. Introduction and principal concern

EPS Industry Alliance appreciates the opportunity to comment on the Department of Ecology's Draft Preliminary Needs Assessment. EPS-IA requests that Ecology examine the potential conflation of expanded polystyrene (EPS) packaging with other polymer foams in the material characterization data underlying the assessment. An incorrect polymer classification could overstate EPS packaging generation and distort the evaluation of collection systems, processing needs, responsible markets, and future material-specific program requirements.

II. Material conflation and validation of the EPS packaging estimate

Tables 13 and 14 of the draft report approximately 23,614 tons of EPS packaging generated in residential service-provider streams and 6,535 tons in residential self-hauled streams, or 30,149 tons combined. At an assumed population of 8 million, this equals approximately 7.54 pounds per resident annually.

From personal experience operating a recycling drop-off depot, 7.5 pounds of undensified EPS transport packaging would fill 2-3 large industrial trash bags. EPS transport packaging is typically received by residents with large electronics, furniture, plumbing and lighting fixtures, and appliances and not with fast moving consumer goods, consumables and other everyday packaging. The exception would be home delivered pharmaceuticals which some households receive with some regularity.

Also from personal experience, citizens frequently consider all foam packaging material to be EPS. This conflation includes expanded polyethylene (EPE), expanded polypropylene (EPP), polyurethanes (PU) and other polymer foams. These common packaging materials are not assessed in the historic or current Washington State waste characterization studies.

EPS-IA estimates annual North American production of EPS transport packaging at approximately 300 million pounds (150,000 short tons). Washington's estimated residential EPS packaging generation is equivalent to about 20.1% of that production figure. Although Washinton State represents about 2% of the US population, the Needs Assessment has Washington State residents responsible for about 20% of disposal of all EPS transport packaging produced in North America.

This is offered as a reasonableness screen and justification for examining the methodology and the possibility of a conflation problem.

The central concern is material conflation. Rigid molded EPS transport packaging is distinct from EPE, EPP, PU foams, extruded polystyrene (XPS), PS and foamed PS food service, and non-packaging EPS, XPS and polyisocyanurate insulation. Foam products can be visually similar and often lack legible resin markings.

Sorting based on appearance or application without polymer-specific safeguards may incorrectly assign non-EPS material to EPS packaging.

The concern is grounded in EPS-IA's review of California's 2025 Material Characterization Study. Page 20 of its Appendix 1 identifies category 24_P42P as PS (#6), Other Expanded/Foamed Forms, yet lists foam rolls, convoluted foam, foam netting, and foam tubing among its examples. These formats commonly describe flexible PE or PU foam. The California appendix demonstrates an inconsistency in classification guidance, not proof that Washington used the same guidance or misclassified materials.

Earlier Washington waste characterization studies reportedly produced EPS-related estimates near 30,000 tons. EPS-IA did not challenge those historical figures on polymer-foam conflation grounds at the time; this concern developed through subsequent technical review, particularly during California's SB 54 implementation. Repetition of a similar figure does not independently validate its accuracy if studies share assumptions or source data.

Requested corrections

- Identify original Washington waste characterization studies, sampling years, extrapolation factors, category definitions, and confidence or uncertainty intervals supporting Tables 13 and 14.
- Disclose sorting instructions, training images, polymer-identification procedures, and quality-control methods; explain how EPE, EPP, PU, XPS, insulation, and unidentified foams were handled.
- Indicate whether prior 30,000-ton estimates were independently sampled or carried forward from earlier studies.
- Reconcile the estimated EPS quantities with independent producer-reported quantities, available industry production estimates, and material-flow information, with clear treatment of imports, exports, and differing product scopes.
- Correct affected quantities if misclassification is established; where polymer identity cannot be reliably determined, report mixed or unidentified foam separately rather than presuming EPS.

III. Distinguish EPS from other polystyrene and other packaging applications

The draft distinguishes EPS from other PS in its generation tables but combines PS/EPS in the market discussion (including Table 27) and recovery reporting (including Table 28). EPS transport packaging is mechanically recyclable with established responsible end markets. Densified EPS ingots are used as feedstock by all North American resin producers to provide recycled content expandable PS resins to molders of EPS transport packaging in North America. The aggregation of PS and EPS prevents readers from following EPS specifically from generation through collection, processing, and responsible markets. Protective EPS packaging and PS have materially different contamination, handling, and recycling characteristics.

Requested action: retain distinct categories for EPS transport packaging, non-foamed PS, and non-PS foams. Publish crosswalks wherever categories must be aggregated. Describe the limits of the underlying data rather than attributing combined PS/EPS values solely to EPS.

IV. Reconcile generation, recycling, and recovery figures

Tables 13 and 14 reportedly assign approximately 3,997 and 536 tons of EPS packaging, respectively, to recycling (4,533 tons combined). Table 28 reportedly identifies approximately 2,043 tons of combined

PS/EPS recovery. These figures may cover different populations or different points in the recycling chain and distinctly different materials; they should not be labeled collectively without further documentation.

Requested action: provide a reconciliation that separately identifies generation, collected-for-recycling material, accepted processing inputs, residual losses, and material delivered to verified markets; specify inclusion of non-packaging PS and geographic or reporting-system limitations.

V. Existing EPS recycling infrastructure and historical industry information

EPS-IA previously documented Washington recycling activity. Its 2017 Washington EPS Recycling Estimate lists 2,151,849 pounds in annual activity, approximately 1,076 short tons by conversion, including quantities associated with Styro-Recycle, an appliance recycler, Dart Container, and Insulfoam Puyallup. It does not appear that these recycling streams and volumes were captured by the assessment.

In February 2020 comments on SB 6213, EPS-IA identified Styro-Recycle and Insulfoam Puyallup as relevant recycling infrastructure. EPS-IA also recalls supplying information to Cascadia in earlier work and believes some figures were incorporated or revised, but has not located the original correspondence.

Requested action: identify historical EPS-IA submissions and any corresponding changes in Cascadia or Ecology source datasets; invite updated facility-level evidence, and document operational capacity, material eligibility, collection sources, densification, and downstream markets without double counting.

VI. Alternative collection and processing pathways

The statute recognizes alternative collection alongside other collection modes (RCW 70A.208.090 and .100). The assessment should not equate poor compatibility with mixed curbside collection with inability to recycle through clean drop-off, dedicated collection, or densification. EPS's low bulk density makes collection logistics and volume relevant alongside weight.

Requested action: inventory existing Washington EPS drop-off and other collection programs, facility throughput, densification assets, contamination specifications, access, and transportation requirements. Evaluate alternative collection under applicable statutory convenience and performance requirements, rather than assuming curbside collection is the only feasible pathway.

VII. Responsible markets and material-specific capacity

The draft's Table 27 reportedly identifies two out-of-state markets for combined PS/EPS and lists capacity as unknown. Densified EPS enjoys a robust and competitive end market. North American resin manufactures are participant/buyers in this market. Information regarding source and other relevant metrics is valuable and confidential business information that will be difficult to obtain. The lack of reporting or availability of data must not be equated with the lack of activity.

Requested action: identify EPS-specific market acceptance specifications for densified EPS, available capacity, actual Washington-origin shipments where documented, processing yields, and end uses. Disclose the existence of markets with unknown capacity, outside the regulated community, or under no legal reporting obligation. (RCW 70A.208.020 and .110(3)(j)).

VIII. Recommended administrative procedures for subsequent implementation

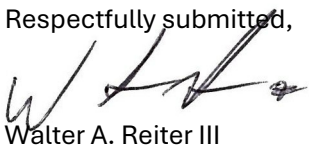
Subject to Ecology's statutory authority and applicable rulemaking procedures, EPS-IA requests consideration of the following requirements in future implementing rules or technical guidance:

- Material-specific data definitions that distinguish EPS from non-PS foam and identify transport packaging, food-service packaging, and non-packaging materials when feasible.
- Documented sampling, sorting, verification, quality assurance, and uncertainty disclosures for material-specific waste characterization estimates.
- A reconciliation protocol distinguishing producer-reported supply, generation, collection, processing, and verified recycling, with explanation of differences in scope.
- Evidence-based evaluation of alternative collection, processing capacity, and in-state or out-of-state responsible markets, without presuming curbside collection is the sole pathway.
- A transparent procedure to correct or update material-specific estimates when credible new evidence establishes classification errors.

Conclusion

EPS-IA requests that Ecology explicitly investigate potential polymer-foam conflation, publish the methodology supporting its EPS packaging estimates, reconcile historical and current material-flow data, and evaluate EPS collection and markets separately from other PS and foam materials. These steps would strengthen the factual foundation of the preliminary needs assessment and subsequent program decisions. EPS-IA welcomes technical dialogue and the opportunity to supply updated information.

Respectfully submitted,



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