



Recycling Development Center Advisory Board Meeting

December 14, 2022 | 9am - 12pm (Pacific time)



Agenda

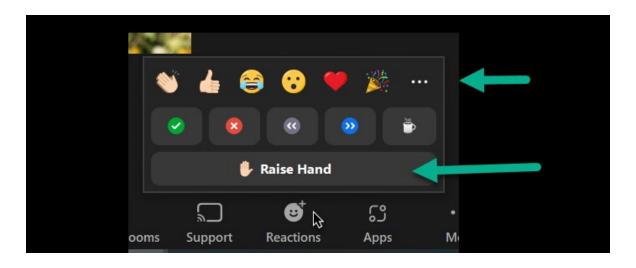


9:00 am	Welcome & review meeting goals
9:10 am	Board and Agency Updates
9:35 am	Presentations and Discussion
10:30 am	Break
10:40 am	Center Strategic Planning
11:30 am	Wrap-up



Participating in this meeting:

Board members and presenters may unmute themselves.

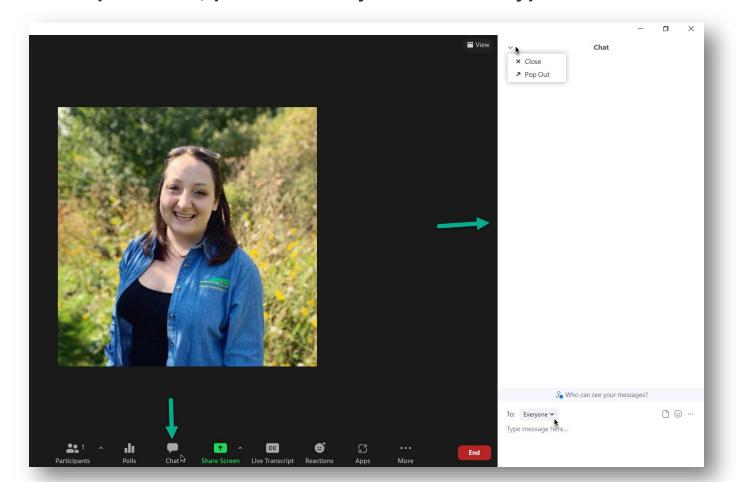


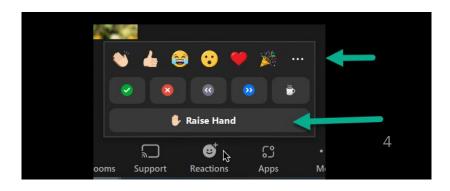


Participating in this meeting:

Participants may use reactions throughout.

For questions, please raise your hand or type them in the chat box.







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Center updates

Board member roundtable Ecology update

Commerce update

NextCycle







Board roundtable:

Natalie Caulkins



Sam Dart



Corinne Drennan



Karl Englund



Kyla Fisher



Nina Goodrich



Allen Langdon



Kris Major



Scott Morgan



Chris Piercy



Mike Range



Tim Shestek



Jay Simmons



Heather Trim





Thank you and welcome

Nina Goodrich – Sustainable Packaging Coalition





Jon Smieja - GreenBiz



Agency Updates



Kara Steward



Rob Duff





NextCycle Washington

There are two ways to participate in NextCycle Washington:



Circular Accelerator

The 2022 application period is now closed.

Stay tuned for 2023 Circular Accelerator details

Competitive challenges designed to support promising circular businesses and projects



Renew Seed Grants

The 2022 application period is now closed.

Stay tuned for 2023 Renew Seed Grants details

A great starting point for funding new innovative businesses and projects

NextCycle Washington is an initiative of:











Startup funding for NextCycle Washington is provided by King County's Solid Waste Division. Other funding partners will be confirmed soon. Re+ grant funding is provided for King County based organizations.

NextCycle Washington is powered by:











NextCycle Accelerator







Creating an insect-based pet food that is circular in nature.

Okapi Reusables

Operating a reusable cup network at cafes and coffee shops.



GeerGarage

An online company that facilitates the peer-topeer rental of outdoor gear by matching renters with available products.



NextCycle Seed Grants

- 66 applicants November 15th
- Governance review completed December 5th
- 41 projects chosen by January
- Funds used by June 30, 2023





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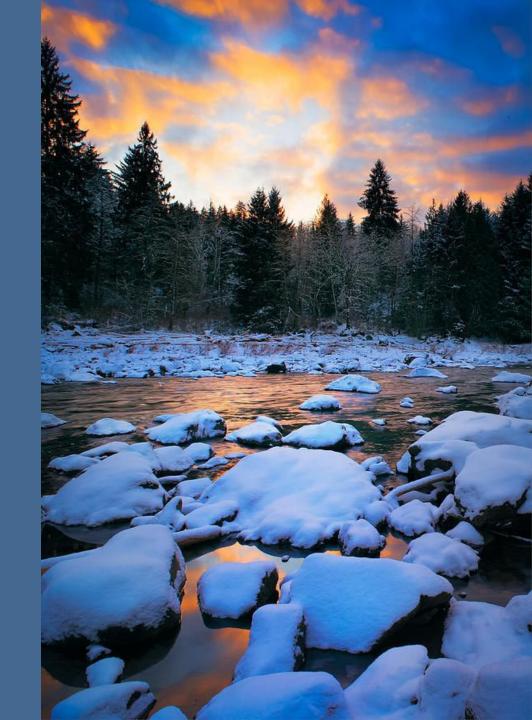
11:30 am Wrap-up



Presentations & Discussion

Kirk Esmond – Dept of Commerce Kari Mueller – Mura Technology Shari Jackson – American Chemistry Council



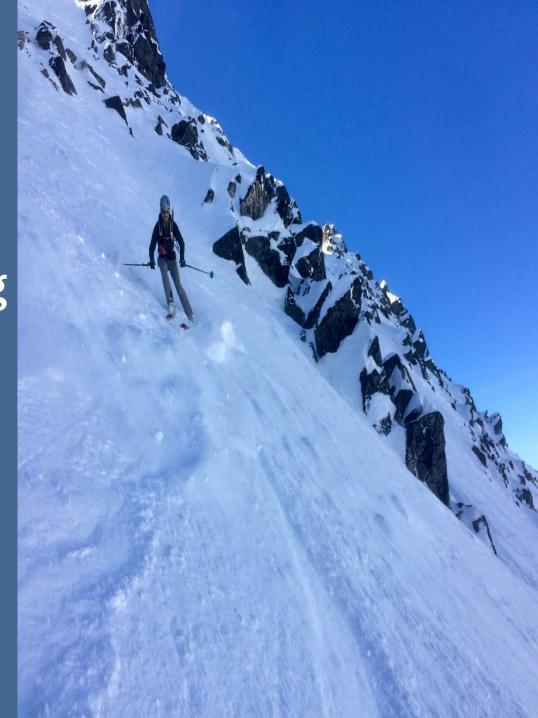




Department of Commerce Funding Opportunities

Kirk Esmond – Dept of Commerce





Funding Opportunities for Small Business

RECYCLING DEVELOPMENT CENTER (RDC) | ADVISORY BOARD MEETING



Kirk Esmond

Sustainable Business Development Manager Office of Economic Development & Competitiveness (OEDC)

December 14, 2022



Resources and Support

Highlights:

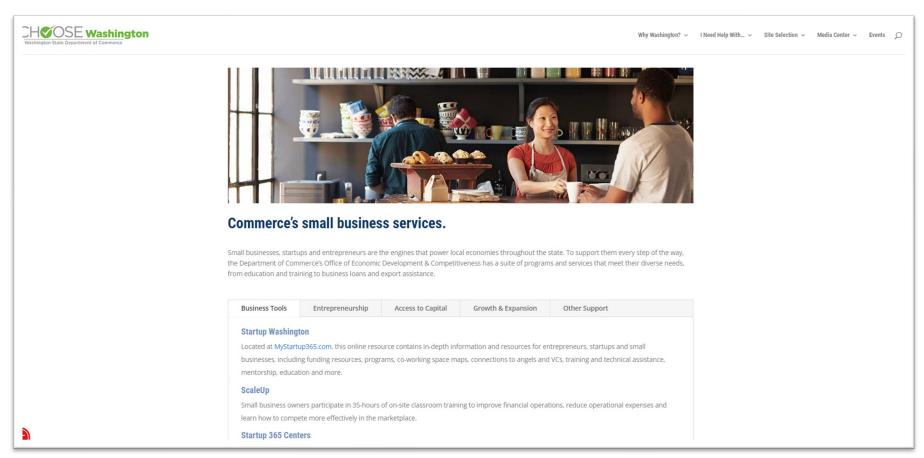
- Small Business Services portal
- <u>StartUp Washington</u>
- Small Business Flex Fund
- Industrial Symbiosis
- Impact Washington
- Washington Small Business Development Center
- Site Selection
 - Property search tool



Small Business Services

Commerce programs and services that meet diverse needs, from education and training to business loans and export assistance.

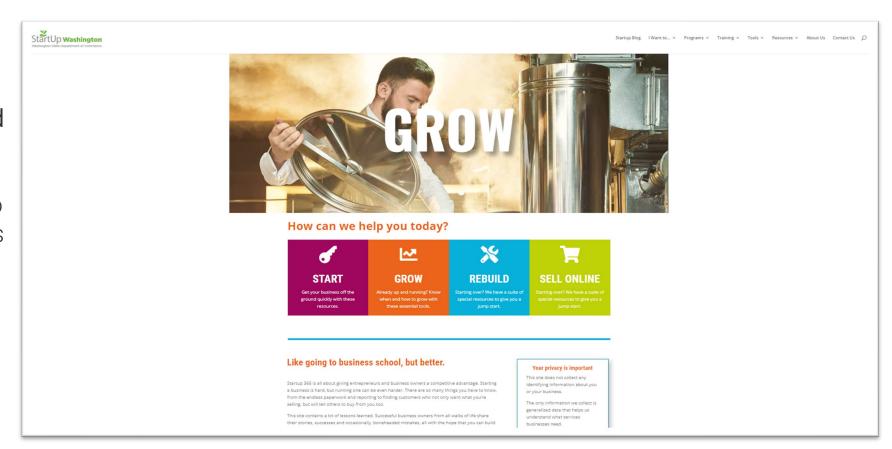
- Business tools
- Entrepreneurship
- Access to Capital
- Growth & Expansion
- [more]





StartUp Washington

Small business programs and resources, from our new Entrepreneur Academy and Financial Literacy modules to our small business resources that are specific to women and veteran-owned businesses.



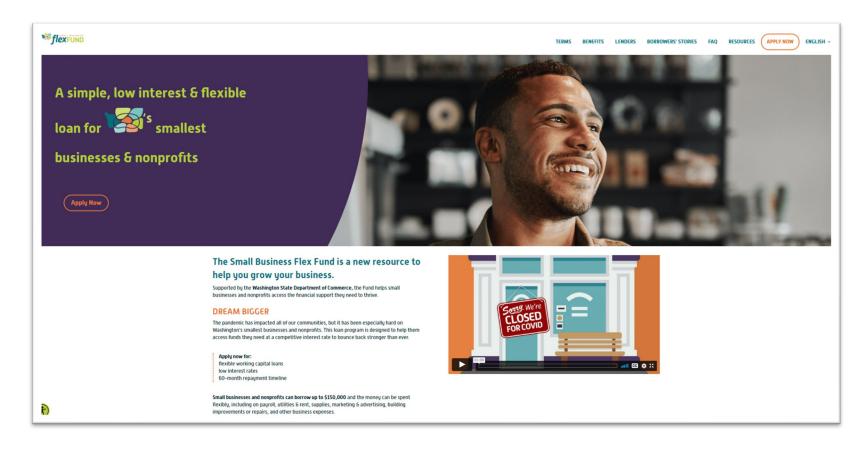


Small Business Flex Fund

Low-interest loans up to \$150,000 with 60 to 72-month payment terms.

No fees and interest-only payment for the first year.

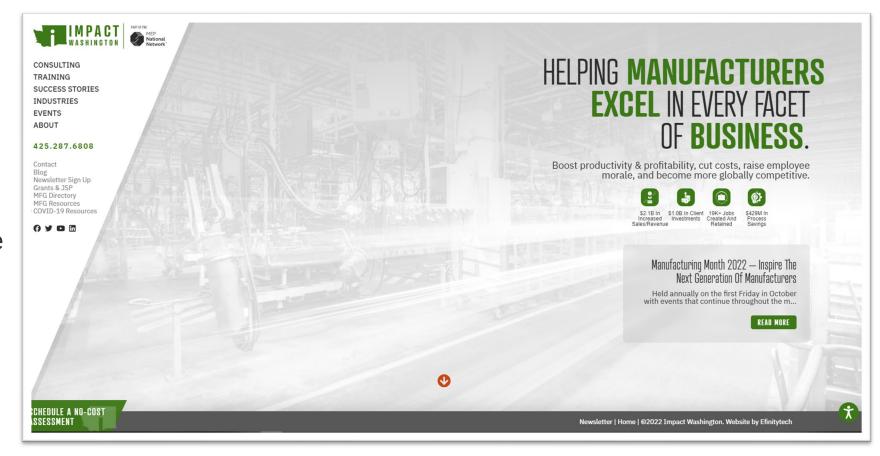
Funds can be used for payroll, utilities, rent, marketing and advertising, supplies, building improvements or repairs or other qualifying business expenses.





Impact Washington

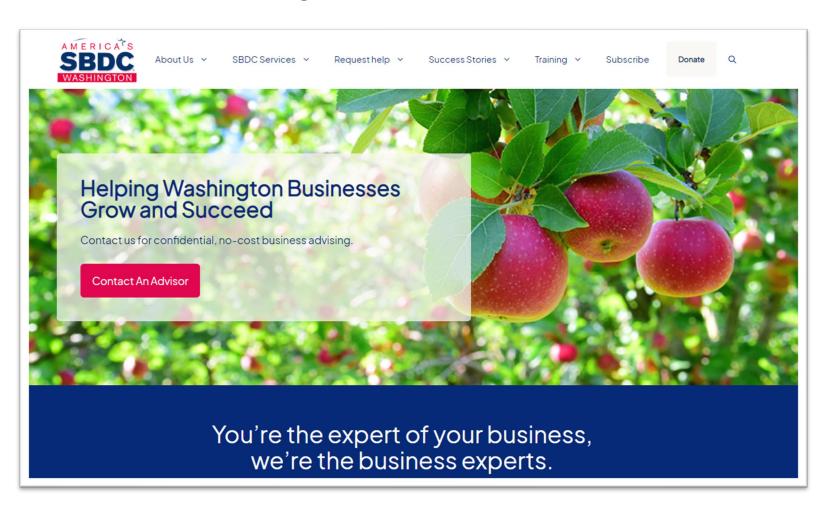
A nonprofit organization, affiliated with the U.S.
Commerce Department's National Institute of Standards and Technology (NIST), working to improve the competitiveness of manufacturing for small and medium-sized companies.





WA Small Business Development Center

A cooperative between Washington State University and the U.S. Small Business Administration (SBA).

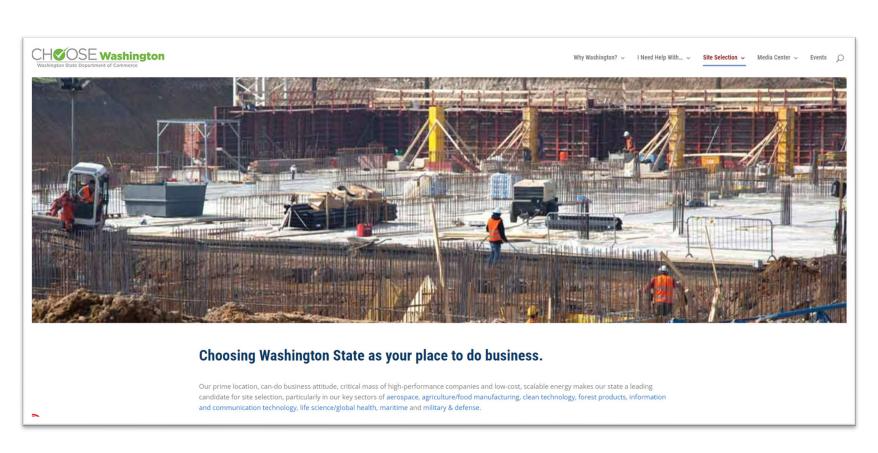




Site Selection

Comprehensive information related to selecting a site for your business.

- Property search
- County data
- Community comparison
- Industry/business data
- Permitting & regulations
- Utilities
- Incentives
- Transportation
- [more]



choosewashingtonstate.com/i-need-help-with/site-selection



New Legislation in Washington

SB-5345 – effective date 7/25/2021

Industrial waste coordination program (RCW 43.31.625)

- Inventory of current industrial waste innovation
- Material flow data collection system
- Guidance, best practices and metrics that must consider equity
- Identify access to capital
- Identify cluster initiatives in order to spur growth and innovation

Industrial symbiosis grant program (RCW 43.31.635)

Nearly unanimous support in legislature



Industrial Symbiosis

- Inland Empire Paper (Spokane), Qualterra (Pullman), and Washington State University are collaborating to improve soil health with biochar and fly ash as soil amendments to increase crop yields.
- Washington State University is testing biochar waste from the Kettle Falls
 Power Generating Station as a filter medium to remove odorants from
 municipal compost.
- The City of Pasco is exploring the beneficial reuse of food processing wastewater through an algae denitrification system that can reduce nitrate levels in wastewater while generating a value-added product.
- Myno Carbon (Bainbridge Island) will not only create biochar and capture the biogas, but also explore the capture of CO₂ using crushed basalt to create a liming agent beneficial to soil health.
- Impact Bioenergy (Vashon Island) will deliver renewable natural gas (RNG) to a local food manufacturing plant and capture waste heat from the facility to manufacture certified organic dry fertilizer.





Get Notified

Washington's Electronic Business Solution (WEBS) - Register to Receive Bid Notices

- Statewide contracting website for all companies doing business with the state
- Includes more than just notices of bids/grants but this is where to search and subscribe

Washington State Department of Commerce - Receive email updates (govdelivery.com)

- Commerce update subscription service
- All things Commerce including grant opportunities. You choose what to include in your updates....there is a lot.



www.commerce.wa.gov







Thank you.

Robert Duff

Sustainable Business Development Director, OEDC robert.duff@commerce.wa.gov 360-764-6511

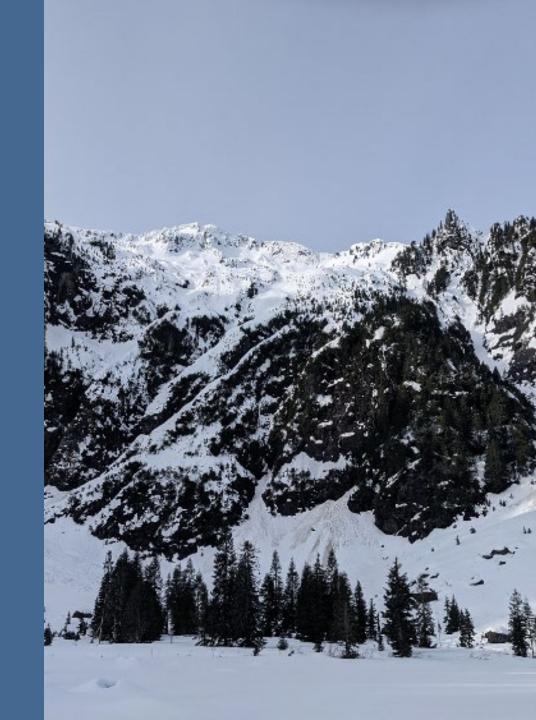
Kirk Esmond

Sustainable Business Development Manager, OEDC kirk.esmond@commerce.wa.gov 206-837-2622



Mura Tech Pacific Project Kari Mueller – Mura Technology









The Future of Sustainable

Mura and Project Cascade



HydroPRS™ Technology Overview

- Mura converts plastics that are unrecyclable today (film/flex) into recycled renewable feedstocks – not used to create fuel
- 100% replacement of fossil-derived petrochemicals
- Mura's customers exclusively make higher-value commodities, not fuels

HydroPRS™ Technology Development

- AU pilot plant operational for nearly 10 years
- First commercial plant commissioning in UK in Q1 2023

HydroPRS™ in Washington State

- Cascade will be Mura's largest facility, and it is our highest priority
- 60% of the plastic generated today is landfilled or incinerated
- 20% of the waste plastics generated in WA will be recycled by Project Cascade
- 70 permanent direct jobs, ~200 construction jobs

Project Cascade - Overview



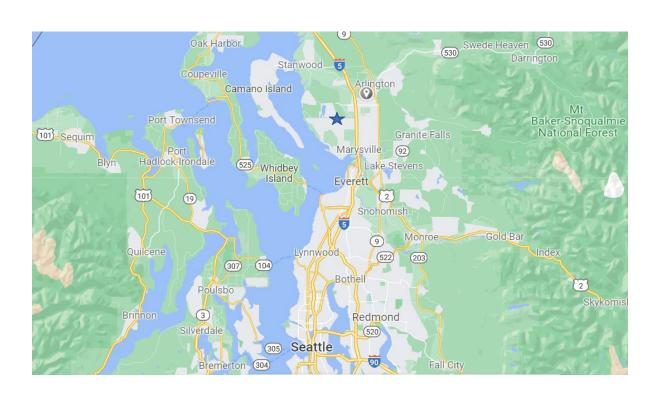
Mura's Cascade Facility will convert waste plastic into a recycled feedstock, diverting the plastic from landfill or incineration. This feedstock will be used to make new plastics and other valuable products.

Plant Statistics

- Construction: 18-month build process, 200 full-time crew
- Employment: 24x7 plant, 70 full-time employees
- Regional Impact: base load electricity, generating SNOPUD powersales of approximately \$700,000 annually
- Waste Intake: 135,000 tons of waste input = recycling almost 20% of the annual plastic waste produced in the State
- Recycled Product: reduces the need for conventional fossil fuels while simultaneously diverting plastic from incineration and landfill

Project Cascade - Site Location



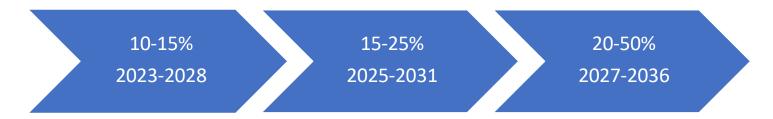


- Located inside of Gayteway Business Park in Arlington, WA as part of the Cascade Industrial Center (CIC)
- Leveraging the long-history and workforce of Snohomish County while introducing new clean technology innovation
- Proximity to waste offtakers for waste plastic (Boeing, Amazon, etc.)

Project Cascade – Washington Senate Bill 5022



SB 5022 specifies rolling increases in the percentage of post-consumer recycled plastic required in commercially sold and distributed plastics over the next 15 years. Threshold and timing based on plastic producer market (e.g., beverage, household, etc.)



Project Cascade State Impact

- Waste plastic feedstock fully contracted with local Bothell business partner, DTG Recycling
 - 20-year contract
 - 200% of plant needs
 - 100% of produced output can apply to SB 5022 goals
 - Diversion of almost 20% of the annual waste plastic produced in the State from land fill/incineration
- Project Cascade designed to be financially self-reliant

Project Cascade - Summary

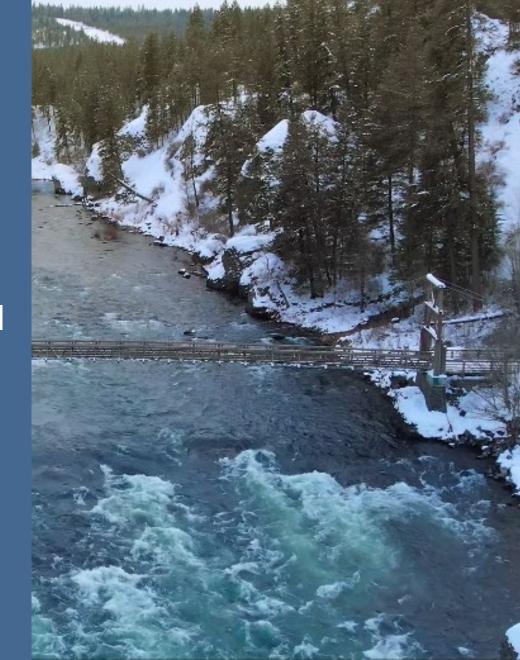


- ✓ Project Cascade is the single biggest initiative the state can undertake to recycle waste plastic and meet SB 5022 goals
- ✓ Project Cascade will be developed in two phases of equal size, ultimately removing up to 40% of Washington's waste plastic from landfill, incineration, and environmental leakage.
- ✓ Project Cascade will be the first of a long line of waste plastic recycling facilities in the US and beyond
- ✓ Located in the City of Arlington, Project Cascade is Mura's Flagship facility



King Co Plastic Film Project

Shari Jackson – American Chemistry Council







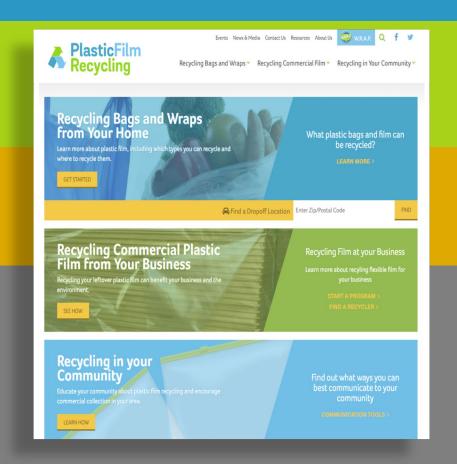
BACKGROUND & OVERVIEW





Consumer Outreach Tools & Resources

Free resources





WRAP 2.0 – Supporting Supply & Demand to Drive Circularity









RETAIL FILM COLLECTION CHALLENGES

- Retail collection is essential for film recycling
- Collection access diminishing:
 - Retail apathy
 - Plastic bag bans
 - Exacerbated by pandemic
- Collection programs lack standardization, public awareness necessary for optimization
- Solutions needed to maintain access for recycling film packaging for near term



Pilot Goals & Objectives

Key Goals:

- Deliver a proactive, industry-led solution to improve recycling infrastructure for PE film packaging.
- Test a program that identifies best practices for greater uniformity, increased consumer participation and quality post-use plastics supply.
- Establish an EPR compliance option for PE film packaging to support circularity.

Objectives:

Galvanize value chain support to pilot a voluntary stewardship program for PE film leveraging the existing retail takeback infrastructure.

Optimize consumer use of this infrastructure by standardizing and better supporting:

- Collection at retail locations
- Consumer participation and engagement
- Transportation and auditing of material collected
- Specifications and procurement of recycled-content PE film products





How It Worked

5-month campaign (January 15 – May 31, 2022) Partnered with 4 independent retailers providing 10 drop-off sites

ACC provided bins, signage. communications toolkit to retail partners

cwr collected material, sent to Seadrunar for preprocessing, then to Merlin Plastics for recycling King County conducted paid social media campaign to increase quantity of material collected

Merlin audited material for quality & to ensure it was recycled responsibly





ACHIEVING PROGRAM EFFICIENCIES

Leveraging Existing Retail
Collection Infrastructure

 Waste services vs. revenue arrangement

PILOT RESULTS & KEY FINDINGS

The results show good quality and quantity of post-use plastic film collected through retail takeback programs, demonstrating the value of this material and the viability of these programs to support plastics circularity.



Audits revealed contamination levels within the pilot's samples were consistent with 94% of each bale having useful plastic—an especially high success rate



Total amount of material collected equivalent to 30-35 bales - total weight of 50,000 lbs./25 tons



Analytics demonstrated strong consumer engagement resulting from King County's paid social media campaign



Overall consumer sentiment was positive - many expressed gratitude for this film recycling option and hope for a successful pilot

RECOMMENDATIONS FOR PROGRAM SUCCESS

Demonstrate Credibility

- Establish program standards/protocols to ensure transparency in data collection.
- Establish program targets & performance metrics.

Enhance Implementation

- Provide a local resource to interface with stakeholders and troubleshoot issues arising in real time.
- Provide a centralized reporting system to hold data collected during the project.

Improve Economics

- Comingle plastic film with cardboard/paper recycling.
- Bale or compact at the grocery stores.
- Separate front and back of house film.

drivers at

and model

CCANS

Duty of the producers and/or agency Products covered

Stakeholder consultation Collection system

Management of products and environmental impacts

Consumer education and awareness

Performance management reporting

FILM RECYCLING STEWARDSHIP TEMPLATE: KEY ELEMENTS

NEXT STEPS



Identifying additional end markets



Expanding local stakeholder engagement: retailers, allied groups

American[®] Chemistry Council

QUESTIONS?











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Center Strategic Planning

Overview - Kara Steward

Matrix - Mya Keyzers







Center Prioritization

Goals and Priorities

- Ecology's strategic plan
- Commerce's strategic plan
- Center goals
- RCW 70A.245

Project ideas

- NextCycle
- Innovation challenges
- Mapping
- Grants
- Projects
- Studies
- Research

Priorities

- Evaluate new project ideas
- Focus where to spend our time and limited resources

New tool – A Decision Matrix



Background

This quasi-quantitative tool was developed to give the Center a way to rank project ideas against the legislative mandate, the Center work plan, Ecology's agency goals, board goals, and Commerce's goals.

This will give us place to start when new project ideas are introduced. It will facilitate discussion in the context of the goals and directives of the Center. This will also help with consistency through time and with staff changes.

Center Priority Decision Matrix draft Dec-2022.xlsx (live.com)

Decision Matrix



Example

	i	players involved, directly, indirectly with	tribes, institutions in	to support circular econmy growth	wa glass summit	textile pilot project	equalty assessme nt of	good business material market place support	wa		community cluster map	
1.0	Aligns with annual work plan (LM3a)	2	2	2	3	3	2	. 2	. 3	2	2	3
2.0	Reduces GHG emission (Ecy goal 2)	0	0	0	1	2	0	2	2	3	0	2
3.0	Support equitable economic growth (Ecy goal 1 & board goals 2)	1	1	2	3	0	3	0	3	0	0	2
4.0	Outreach, engage, communicate, partner, convene, facilitate to assist and improve market dev	3	3	3	3	3	1	. 2	. 3	3	3	3
5.0	Increase material for circualr end use (LM3c & BG Metrics1-4)	1	1	2	2	. 3	0	3	3	2	1	3
6.0	Increases knowledge through market, data, infrastructure, policy analysis (LM3d & BG B1-5)/Ob	2	2	1	3	1	. 3	2	. 2	2	3	3
7.0	Provide grants for recycling markets (LM3g & BGC1-5)	0	0	3	0	2	0	1	3	0	0	3
8.0	Support, promote, and identify research and development to stimulate new technologies and	1	1	3	2	. 3	3	1	3	2	2	3
9.0	Diverts material from landfill	0'	0	1	1	. 3	0	2	. 2	3	0	1
10.0	Community Concern (Ecy goal 1)	2	2	2	3	0	0	0	0	0	0	0
		1.20	1.20	1.90	2.10	2.00	1.20	1.50	2.40	1.70	1.10	2.30

legend of critieria
LM=legistlative mandate
Ecy= agency goals
BG=original board goals
CM=commerce goals

55

Decision Matrix



1.0 nextcycle wa n							
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	11.0		community cluster map	community cluster map	community cluster map		

WHAT'S NEXT?

What do you think?

What do you think of the criteria?

Anything missing?

What do you like?

Please test it out.

Share other ideas or tools that have a similar function.



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Meeting wrap-up





Wrap up

Next meeting:

- Wednesday, March 8th, 2023
- Location: Tacoma (tentative)
- Tour: to be determined

Tasks from today:

 Notes and slides from today will be posted to the EZ page next week.





See you all next year at the March 8th board meeting!



