



M E M O R A N D U M

DATE: 3/27/2024

TO: City Council

FROM: Micah Bonkowski

**SUBJECT: Construction and Demolition Debris
Recycling and Reuse Ordinance Development
Summary**

Background

The adopted 2020 Environmental Sustainability Action Plan has set a goal of achieving a rate of 70% diversion of waste from the landfill by 2030. City of Redmond Solid Waste and Recycling staff conducted research and found that among California cities that report 70% or higher diversion rates, a large driver was the tracking and reporting of Construction and Demolition (C&D) waste as part of their diversion total. Of the policy options reviewed, C&D tracking returns the largest diversion benefit for the lowest amount of regulation compared to other policy options such as mandatory recycling, fines for recycling in garbage, mandatory organics collection, every-other-week garbage collection, and others. Among cities that track C&D, approximately 40% of their total waste comes from C&D tons. By building off existing King County rules and regulations about Construction and Demolition Debris in the landfills through a program that was to quantify the volume of C&D generated and diverted from the landfill, the City's overall diversion rate would meet or exceed those of California cities by simply focusing on C&D diversion while continuing our existing waste diversion and recycling programs.

Since January 1, 2016, King County has banned five major clean construction materials along with Construction & Demolition Debris (C&D) waste from King County Landfills. King County requires that C&D must go to designated C&D facilities.

The proposed City of Redmond ordinance would build off the King County Code and includes the following key elements:

1. Require projects generating C&D material to report their C&D tonnage to the City.
2. Encourage salvage and reuse of materials, and deconstruction of certain types of buildings.
3. Create a process for setting City-wide C&D diversion targets for covered projects for future code updates.

Benefits of an Ordinance

- Create a streamlined process for reporting C&D tonnage by developers and homeowners.
- Developers may use C&D diversion totals to meet LEED or other green building incentives.
- Capture of recycled C&D data from projects within Redmond is a key metric in meeting County and City diversion goals.

Impact to Homeowners

Demo Permit: Homeowners would have one more document added to the four documents currently required for a demo permit. Size thresholds to qualify a project are not changing. The permit would not be closed out until the C&D tonnage report and salvage assessment confirmation is received by the City. A salvage assessment is free, a certified salvage assessor completes an inspection to determine if there are materials of value before demo begins and makes a recommendation of the salvage potential along with potential cost savings. Homeowners are not required to do salvage in either case.

Building Permit: For projects meeting the size threshold, the homeowner would be required to submit C&D tonnage report to the City before the permit is closed out.

Impact to Developers

Demo Permit: Developers would have one more document added to the demo permit, requiring them to submit a final C&D tonnage report and confirmation of salvage assessment to the City. The demo permit would not be closed out until the report is submitted. In King County, projects are already required to take C&D to a designated C&D facility, so all projects should already be tracking tonnage. A salvage assessment is free, a certified salvage assessor completes an inspection to determine if there are materials of value before demo and makes a recommendation of the salvage potential along with potential cost savings. Developers are not required to do salvage in either case.

Building Permit: Developers would be required to submit C&D tonnage reports to the City before the permit is closed out.

Impact to City Staff

Public Works staff will provide review of tonnage reporting, and salvage assessments to support the Planning Department.

Summary of Work Completed

- 11 interviews have been completed with industry stakeholders including C&D processors, waste haulers, environmental advocacy groups and the development community. We have received constructive feedback from each sector that helped shape the ordinance language.
- Internal team meetings with City staff to clarify ordinance process and language.
- Collaboration with King County Solid Waste staff to ensure alignment with existing KC code language, and recommended Regional Code Collaboration language.
- Council updates
- Ordinance language drafted

Interviews and tailored questionnaires were used to solicit input from developers, builders, environmental organizations, C&D recyclers, deconstruction experts, and others regarding management and regulatory approaches for increasing C&D diversion, recycling, and salvage. This work helped identify key decision points about policy structure (e.g. fines vs. incentives) and helped refine definitions of program components, which were then leveraged to inform the initial drafting of a C&D ordinance.

Efforts were also made to align with King County's C&D regulatory structure, and to explore available technical systems (e.g. Green Halo) that can support data collection, diversion tracking, and policy enforcement. In addition, the Regional Code Collaboration released a C&D Policy template in 2023 that included recommended ordinance language.

Several themes emerged from the research, interviews, and ordinance drafting. The content of these themes were addressed by and incorporated into the C&D ordinance crafted by the City.

- Compliance should be incentivized. This can be accomplished through a penalty, reward, or deposit incentive structures. Various options exist for either approach. Any such drivers should be clearly communicated through the ordinance and associated program guidance. Enforcement should be driven by the incentive structure, and should avoid large staffing demands on the City.
- Demolition and new construction permitting should not be separated.
- The City's C&D ordinance should be aligned with existing County requirements and processing infrastructure, for example, by mirroring the list of covered materials currently prohibited from disposal, emphasizing salvage, and requiring use of County-designated C&D facilities.
- Market development for C&D materials should be supported through the ordinance if possible, such as through municipal purchasing requirements for public works and capital projects.
- The definition of recycling should incentivize the highest and best resource use and avoid fuel markets. Salvage and reuse should be prioritized in program materials and guidance, even if not required by ordinance.
- Data collection, tracking, and reporting should be integrated into the City's permit system and aligned with the scale systems used at County-designated C&D processing facilities. The City should coordinate with regional efforts to standardize C&D data collection and reporting through utilizing software platforms such as Green Halo. Selected metrics should support the City's tracking of and compliance with goals outlined in its Environmental Sustainability Action Plan.

List of Stakeholders Engaged

The following table provides an overview of local stakeholder engagement.

Category	Organization	Individual	Title
City of Redmond	Multiple City staff and departments	Cathy Beam Micah Bonkowski Jenny Lybeck Elizabeth Myers Aaron Moldver Aaron Noble Travis Salley	Principal Planner Solid Waste Lead Sustainability Manager Permit Technician Env. Prog. Supervisor Construction Div. PM Planning Manager
Government	City of Seattle, Public Utilities	Katie Kennedy	Waste Diversion Lead
Government	King County Solid Waste	Kinley Deller	C&D Program Manager
Builder/Developer	Murray Franklyn	Gina Estep Todd Levitt Tom Stegman Glen	Entitlement Manager Land Acquisition
Member Associations	Built Green	Sonja O'Claire Nina Oliver	Program Manager; Program Coordinator
Member Associations	Construction & Demolition Recycling Association/Recycling Certification Institute	Bill Turley Stephen Bantillo	Executive Director Recycling Certification Institute ED
Member Associations	National Association of Minority Contractors	Vicky Santorelli	Executive Director
Member Associations	Master Builders Association	Gina Clark	Governmental Affairs Lobbyist
Policy and Advocacy	Zero Waste Washington	Heather Trim	Executive Director
Recyclers	DTG Recycle	Ryan Jackman John Martin Mike Sheldon Tom Vaughan	Chief Growth Officer General Counsel Chief Compliance Officer CEO
Recyclers	United	Seth Kaulfuss Brian Moody	Operations Manager General Manager
Salvage and Reuse	Reuse Consulting	David Bennink	Owner, Second Use
Salvage and Reuse	NW Building Salvage Network/ 2nd Use	Dirk Wassink	President, 2nd Use
Salvage and Reuse	Sledge	Ben Pearson	Operations Manager

General Industry	Green Halo	Manny Mendoza	Account Manager
General Industry	Silliker & Associates	Jared Silliker	President

C&D Council Touches

- Solid Waste Program Update to Study Session – 9/14/2021
- Consultant Contract Approval for C&D Ordinance Drafting and Implementation – 10/5/2021
- C&D Update to Parks and Environmental Sustainability Committee of the Whole – 6/28/2022

ADDITIONAL BACKGROUND

Regional and City Plans that Drive C&D Implementation

2012 King County-Cities Joint Climate Commitments (K4C)

In June 2012, the City Council adopted by resolution the King County-Cities Joint Climate Commitments (K4C). Among other things the K4C includes:

- Voluntary regional commitments
- Policy goal
 - Achieve a 70% recycling rate countywide: by 2030,
 - Achieve zero waste of resources for materials that have economic value for reuse, resale, and recycling.
 - Related actions: Develop a regional strategy through the adopted 2019 Comprehensive Solid Waste Management Plan to reach zero waste of resources by 2030 through a combination of education, incentives, and regulatory tools aimed at single-family, multi-family residents, businesses, and construction projects in King County.

2019 King County Comprehensive Solid Waste Management Plan

On 7/2/2019, The City Council adopted by resolution the King County 2019 Comprehensive Solid Waste Management Plan. The Comprehensive Solid Waste Management Plan is required by RCW 70.95, Approved by the Department of Ecology, and adopted by the County Council, and City Councils that are part of the County solid waste system. The Plan includes a variety of goals and actions that target increased diversion.

- Plan Policy Goal: Achieve Zero Waste of Resources – to eliminate the disposal of materials with economic value – by 2030, with an interim goal of 70% recycling through a combination of efforts in the following order of priority:
 - Waste Prevention and Reuse
 - Product stewardship
 - Recycling and composting
 - Beneficial use
- Plan Recommended Actions, Construction and Demolition Materials Recycling:

- Action 26-s, Work collaboratively with cities to implement building codes that require compliance with construction and demolition debris recycling and handling requirements contained in county code.
- Action 27-s, Continue to explore options to increase the diversion of construction and demolition debris from disposal in the landfill, particularly for wood, metal, cardboard, asphalt shingles, carpet, and gypsum wallboard.
- Action 28-s, Increase regional recycling of construction and demolition materials through education and enforcement of construction and demolition debris recycling requirements.

2020 City of Redmond Environmental Sustainability Action Plan (ESAP)

In September of 2020, The City of Redmond City Council adopted the Environmental Sustainability Action Plan (ESAP). The ESAP includes goals, strategies and actions that target increased diversion and specifically C&D waste.

- Plan Policy Goal: 70% waste diversion rate by 2030, Zero Waste of Resources (80%) by 2050
- Plan Recommended Strategies and Actions:
 - Strategy M1: Increase diversion of community waste while reducing cross-contamination within waste streams
 - Strategy M4: Address construction and demolition (C&D) waste.
 - Action M4.1: Contractor outreach
 - Action M4.2: C&D diversion requirements
 - Action M4.3: C&D recycling service
 - Action M4.4: C&D reuse partnerships

2021 City of Redmond Community Strategic Plan

The City of Redmond Community Strategic Plan was adopted by Council in October 2019 and revised November 2021. The Plan includes an Environmental Sustainability objective to achieve carbon neutrality by 2050 with specific strategies, measures, and actions related to waste generation.

- Strategy #1 – Reduce Redmond’s greenhouse gas emissions and waste generation.
 - Measure – Percentage of waste diverted from the landfill.
 - Actions
 - Implement policies and programs to increase waste diversion
 - Develop policies and other programs to promote green building and environmentally sustainable practices in the Redmond Community.

2021 City of Redmond Utilities Strategic Plan

In March of 2021, The City of Redmond City Council adopted the Utilities Strategic Plan (USP) that includes 20 strategies to improve City-run utility services looking forward from 2021 through 2050. The USP includes Strategy 7 that aims to increase diversion from the landfill.

- Strategy 7: Reduce the amount of garbage Redmond residents, businesses, and city facilities send to the landfill each year.
- Plan Target; Achieve a 70% diversion rate city-wide by 2030

2022 City of Redmond Comprehensive Plan, Updated

NE-8 Reduce waste, reuse and recycle materials, and dispose of all wastes in a safe and responsible manner.

NE-10 Support sustainable development and strive towards becoming a sustainable community.

NE-12 Encourage environmentally friendly construction practices, such as LEED, King County Built Green, and low impact development

UT-51 Continue to coordinate with King County on regional hazardous and solid waste issues, such as product stewardship and the “wastemobile”, waste studies, and construction and demolition debris.

UT-56 If solid waste reduction and recycling goals are not met, consider implementing mandatory programs which would further sustainability goals by minimizing impact to the Cedar Hills landfill and preventing cost increases associated with securing alternative waste disposal sites.

2023-2024 Biennial Budget Offer

2023-2024 Budget above baseline offer, approved by Council

- Goal: develop a construction and demolition recycling program to address the largest unquantified waste stream in the City.

The following table summarizes, and provides links to, key requirements in the King County code that govern C&D management. The content can be used both to inform the development of Redmond’s code, and to ensure alignment between the City’s C&D code and the County’s regulations.

King County Requirements for C&D Management	Source
<p><u>C&D materials banned from landfill disposal</u></p> <p>"Readily recyclable materials from construction and demolition projects are required to be recycled. The following materials are banned from landfill disposal:</p> <p>Clean wood (clean, untreated, unpainted) Cardboard Metal Gypsum scrap (new) Asphalt paving, bricks, and concrete"</p>	<p>King County C&D requirements web page (1)</p>

<p><u>Mixed C&D and non-recyclable C&D waste</u></p> <p>"All generators, handlers and collectors of mixed C&D waste or nonrecyclable C&D waste generated within the county's jurisdiction shall deliver, or ensure delivery to, a designated C&D receiving facility."</p>	<p>Ordinance 19347 (2)</p>
<p><u>Management of recyclable C&D materials</u></p> <p>"Recyclable C&D materials may be transported to any [designated] C&D recycling facility or to a recycling market in or outside of King County."</p>	<p>Ordinance 18166 (3)</p>
<p><u>Acceptance of small loads of C&D</u></p> <p>"Small loads of C&D (in vehicles not equipped with dumping mechanisms) are accepted at King County Solid Waste Division transfer stations."</p>	<p>King County C&D requirements web page (1)</p>
<p><u>Disposal of C&D at King County transfer facilities</u></p> <p>"A generator, handler or collector of C&D waste generated within the county's jurisdiction shall not deliver, or cause delivery of, a load of C&D waste to a C&D receiving facility that is a transfer facility unless:</p> <p>a. the generator, handler or collector ensures before delivery that the load contains no more than twenty percent of the recyclable C&D materials banned from landfill disposal under subsection G. of this section and that will be assessed through visual inspection by the transfer facility; or</p> <p>b. the generator, handler or collector confirms before or upon delivery that the transfer facility shall transfer the load to a C&D receiving facility that is a material recovery facility or shall otherwise manage the load to remove materials banned from landfill disposal under subsection G. of this section, and the transfer facility provides documentation to the generator, handler or collector delivering the load that the transfer facility will manage or has managed the load in a manner that complies with these requirements."</p>	<p>Ordinance 19347 (2)</p>
<p><u>Landfill fees for C&D waste</u></p> <p>"A fee as specified in section 6 of this ordinance, is imposed on C&D wastes generated in the county's jurisdiction and disposed by C&D receiving facilities at landfills for the purpose of funding division costs to manage the C&D recycling and disposal program."</p>	<p>Ordinance 18166 (3)</p>
<p><u>Onsite containers</u></p> <p>"Washington State regulations (WAC 173-345-040) require a separate collection container be provided for waste at jobsites that conduct recycling."</p>	<p>King County C&D requirements web page (1)</p>

<p><u>Use of intermodal containers</u></p> <p>"Bulk shipping containers cannot be used to transport C&D waste from jobsites to landfills except under certain conditions (4) (see next paragraph)."</p> <p>"A generator, handler or collector of nonrecyclable C&D waste from an eligible C&D demolition project may deliver directly to or ensure delivery directly to, a C&D receiving facility that is an intermodal facility or landfill only in accordance with a waste diversion plan that adheres to the requirements in subsection H. of this section and has been approved in writing by the division; and</p> <p>For each eligible C&D demolition project with an approved waste diversion plan, the generator must also submit a waste diversion report to the division within sixty days following completion of demolition activities. The waste diversion report shall verify compliance with the waste diversion plan and be accompanied by receipts from the intermodal facilities or landfills that received nonrecyclable C&D waste and, when included as a component of the approved plan, from the C&D recycling facilities that received the recyclable C&D materials or the C&D receiving facilities that received the mixed C&D waste."</p>	<p>King County C&D requirements web page (1)</p> <p>Ordinance 19347 (2)</p>
<p><u>Waste diversion plan</u></p> <p>"A waste diversion plan submitted under this section must adhere to the format approved by the division director, show that the disposition of waste is planned in a manner that maximizes recovery of the recyclable C&D materials banned from landfill disposal under subsection G. of this section, list the proposed intermodal facilities or landfills that will receive nonrecyclable C&D waste and list the proposed facilities to process mixed C&D waste and recyclable materials generated during the eligible C&D demolition project."</p>	<p>Ordinance 19347 (2)</p>

Links for Convenience:

- (1) <https://kingcounty.gov/en/legacy/depts/dnrp/solid-waste/programs/green-building/construction-demolition.aspx>
- (2) <https://mkcclegisearch.kingcounty.gov/View.ashx?M=F&ID=9933511&GUID=655CDD64-0E41-48C2-BD48-89FA72E47823>
- (3) <https://your.kingcounty.gov/dnrp/library/solid-waste/greentools/ordinance-18166-C-and-D-recycling.pdf>
- (4) <https://kingcounty.gov/en/legacy/depts/dnrp/solid-waste/programs/green-building/construction-demolition/direct-disposal.aspx>

The following table summarizes, and provides links to, existing C&D management requirements in the King County code that are tied to the Demolition Permit process. The content can be used to inform the development of Redmond's code, and to ensure alignment between the City's C&D code and the County's regulations.

Note, we were not able to identify any specific C&D management guidance in the King County Code that is explicitly tied to Construction Permitting.

	Key C&D Requirements Tied to Demolition Permits	Source
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Residential	<u>Inclusion with other permits</u> "When the residential demolition is being done in conjunction with the remodel of an existing or construction of a new single-family home, the demolition permit can be included as part of the remodel or new construction permit."	Residential demolition permits <u>(1)</u>
	<u>Disturbed soil</u> "All disturbed soil must be stabilized and must remain on site."	Residential demolition permits <u>(1)</u>
	<u>Demolition debris disposal</u> "Demolition debris must be removed from the site and delivered to a licensed landfill or recycling facility."	Residential demolition permits <u>(1)</u>
	<u>Provision of disposal receipts</u> "Be prepared to provide the Permitting inspector with disposal receipts verifying that all demolition debris has been disposed of properly."	Residential demolition permits <u>(1)</u>
Non-Residential	<u>Inclusion with other permits</u> "When the nonresidential demolition is being done in conjunction with the remodel of an existing structure or construction of a new structure, the demolition work can be included as part of the remodel or new construction permit."	Non-Residential demolition permits <u>(2)</u>
	<u>Asbestos testing and abatement</u> "Building owners are responsible for hiring a professional testing firm to perform a good faith survey to identify asbestos-containing materials in the building." "If ACMs are identified in a building, the Puget Sound Air Pollution Control Agency requires that building owners file a Notice of Intent to Remove Asbestos and pay a filing fee."	Non-Residential demolition permits <u>(2)</u>

	<p><u>Solid Waste Management Plan</u></p> <p>"A Solid Waste Management Plan (SWMP) may also be required. It should detail how the property owner intends to dispose of the waste materials. Property owners must consider recycling options to the extent possible, when compiling a demolition plan."</p>	<p>Non-Residential demolition permits (2)</p>
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Links for Convenience:

- (1) <https://kingcounty.gov/~media/depts/permitting-environmental-review/dper/documents/forms/Residential-Demolition-Permits.ashx?la=en#:~:text=Remove%20all%20floors%2C%20foundations%2C%20footing,licensed%20landfill%20or%20recycling%20facility.>
- (2) <https://kingcounty.gov/~media/depts/permitting-environmental-review/dper/documents/forms/Non-Residential-Demolition-Permits.ashx?la=en>

Note the King County Salvage Assessment form (located [here](#)) links to a salvage verifier list (located [here](#)). The table below draws from the Verifier list.

URL links for convenience:

- King County Salvage Assessment form
 - <https://your.kingcounty.gov/dnpr/library/solid-waste/greentools/RCC-deconstruction-salvage-assessment.pdf>
- Salvage Verifier List
 - <https://kingcounty.gov/en/legacy/depts/dnpr/solid-waste/programs/green-building/construction-demolition/demolition-alternatives.aspx>

Salvage Verifier	Company Contact	Notes
Ballard Reuse	206 297-9119	Not on the KC Verifier list, but worth including. More info. At https://ballardreuse.com/architectural-salvage-services/
Dedicated Deconstruction	206-853-7451	
Earthwise, Inc.	206-624-4510	
Resource Woodworks, Inc.	253-474-3757	On Google Maps, this appears to now be Earthwise in Tacoma.
The RE Store	206-297-9119	
Re-Use Consulting	360-201-6977	
Second Use Building Materials	206-763-6929	
Sledge Seattle	206-290-1773	

List of Regional Deconstruction Companies

Salvage and Deconstruction Company	Company Contact	Notes
Dedicated Deconstruction	206-853-7451	
The RE Store	206-297-9119	Performs salvage, and perhaps deconstruction (depending on definitions). They are not listed on the SPU site listing deconstruction firms.
Re-Use Consulting	360-201-6977	
Second Use Building Materials	206-763-6929	Performs salvage, but not deconstruction.
Sledge Seattle	206-290-1773	