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**COMMUNITY PLANNING &  
ECONOMIC DEVELOPMENT DEPARTMENT**

Joshua Cummings, Director

*Creating Solutions for Our Future*

## MEMORANDUM

**TO:** Thurston County Planning Commission  
**FROM:** Maya Teeple, Senior Planner  
**DATE:** August 5, 2020  
**SUBJECT:** 2020-2021 Comprehensive Plan Docket Item CP-11:  
Recycled Asphalt Policy Amendment

### Current County Regulations

Asphalt recycling is allowed as an accessory use in some of the County's zoning designations. There is no broad prohibition on asphalt recycling within the rest of unincorporated Thurston County (outside the Nisqually Subarea).

The determination of whether asphalt recycling is allowed as an accessory use is made on a case-by-case basis through the evaluation of a land-use permit application for a specific parcel. The parcel's zoning, environmental features, current use, and other features are determining factors in whether asphalt recycling is allowed as an accessory use on an individual property.

Asphalt recycling could be permitted as an accessory use on a site where an asphalt plant exists. Asphalt recycling could also be permitted as a use at sites where an asphalt plant doesn't exist, such as a recycling processing center that accepts asphalt, a mineral extraction site that has an approved crusher on site, or other situations.

Policy E.5 within the Nisqually Subarea Plan is an overarching policy that has impact to the whole subarea. The Thurston County Code specifically states that (TCC 20.54.070(3.1)(c))<sup>1</sup>:

"The location of asphalt plants shall be consistent with the Thurston County Comprehensive Plan, which includes, but is not limited to, sub-area plans."

A new special use permit or an amendment to a special use permit to recycle asphalt is subject to current county regulations and may trigger any or all of the following: SEPA review, clean air agency permit, stormwater management plan, pollutant prevention and control plan, emergency

<sup>1</sup> Thurston County Code. Chapter 20.54 – Special Use\*.

[https://library.municode.com/wa/thurston\\_county/codes/code\\_of\\_ordinances?nodeId=TIT20ZO\\_CH20.54SPUS](https://library.municode.com/wa/thurston_county/codes/code_of_ordinances?nodeId=TIT20ZO_CH20.54SPUS) Accessed June 29, 2020.

clean-up plan, a site plan depicting where and how recycled asphalt will be processed and stored on the property, and a noise attenuation plan to demonstrate there is no public nuisance related to regulated noise decibels.

***Where is asphalt recycling currently allowed in Thurston County?***

The Zoning Ordinance (Title 20) contains requirements for special uses, such as asphalt production facilities and recycling facilities. The Special Use Permit Chapter (Chapter 20.54) determines in which zoning designations certain special uses – including asphalt plants – are permitted in. Asphalt recycling is not called out explicitly in a separate special use category.

There are four uses described within the Special Use Permit section of the Thurston County Zoning Code (TCC 20.54) that directly address asphalt in some capacity. Two of these uses are asphalt production inside a mine and asphalt production outside of a mine. The other two uses may not always include asphalt, but have the potential to: recycling processing centers, and solid waste disposal facilities (including solid waste disposal of asphalt). Currently within the Thurston County Zoning Ordinance, Table 1 in TCC 20.54<sup>2</sup> these uses are permitted in the following zones<sup>3</sup>:

- “Asphalt production (outside of a gravel mine)” is permitted in RRR 1/5, LI, RRI, or MR.
- “Asphalt production (with a permitted gravel mine)” is permitted in R 1/10, RRR 1/5, RR 1/5, LI, RRI, or MR.
  - Asphalt production includes hot mix or batch plants.
  - For operations that recycle asphalt, TCC 20.54.070(3.1)(j) requires that asphalt production operations that recycle asphalt must obtain and maintain a solid waste permit from Thurston County environmental health.
- “Recycling processing centers” is permitted in R 1/20, R 1/10, RRR 1/5, RR 1/5, and RRI.
  - These facilities collect, process, store and distribute recyclable materials, which could include asphalt.
  - For operations that recycle asphalt, TCC 20.54.070(32.5)(b)(viii) requires that recycling processing centers must obtain and maintain a solid waste permit from Thurston County environmental health.
- “Solid waste disposal facilities” which could include asphalt disposal is permitted in R 1/20, R 1/10, RRR 1/5, RR 1/5, RL 1/2, RL 1/1, RL 2/1, LI, and RRI.
  - These facilities include sanitary landfills, transfer stations, and construction and demolition waste disposal sites.

Separately from above, crushing rock and gravel may also be considered an accessory use to Mineral Extraction (TCC 20.54.070(21)(a)(i)). The Special Use Permit Chapter states under

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<sup>2</sup> Thurston County Code. Chapter 20.54 – Special Use\*.

[https://library.municode.com/wa/thurston\\_county/codes/code\\_of\\_ordinances?nodeId=TIT20ZO\\_CH20.54SPUS](https://library.municode.com/wa/thurston_county/codes/code_of_ordinances?nodeId=TIT20ZO_CH20.54SPUS) Accessed June 29, 2020.

<sup>3</sup> R1/20 – Rural 1 Unit per 20 Acres; R1/10 – Rural 1 Unit per 10 Acres; RR1/5 – Rural Residential 1 Unit per 5 Acres; RRR1/5 – Rural Residential Resource 1 Unit per 5 Acres; RL1/2 – Residential LAMIRD 1 Unit per 2 Acres; RL1/1 – Residential LAMIRD 1 Unit per 1 Acres; RL2/1 – Residential LAMIRD 2 Units per 1 Acres; LI – Light Industrial; RRI – Rural Resource Industrial; MR – Military Reservation.

20.54.070(21)(a)(i) TCC that “the following accessory uses are allowed only when expressly permitted in a special use permit issued by the approval authority: washing, sorting or crushing of rock or gravel, concrete batching, storage or use of fuel, oil or other hazardous materials and equipment maintenance” and under 20.54.070(21)(a)(ii) TCC that “Accessory uses are permitted only in conjunction with an existing mineral extraction operation. The permit for the accessory use expires when the SUP for the mineral extraction expires, is revoked, or when significant mineral extraction activity as defined in Section 17.20.150 ceases. Recycling of concrete is permitted as an accessory use only in conjunction with a permitted crusher and in accordance with any health department requirements.” This section of the code does not explicitly state anything about recycling asphalt.

***Where could asphalt recycling occur in the Nisqually Subarea if Policy E.5 were revised?***

For the purposes of this analysis, allowable zones are listed as if asphalt recycling was permitted as an accessory use to asphalt production. Asphalt recycling as an accessory use to other principal uses may have different allowable zones (see above section).

**TABLE 1. Zones where Asphalt Production is Permitted as a Special Use with a Gravel Mine under 20.54 TCC – Table 1 Special Uses**

	<b>R 1/10</b>	<b>RRR 1/5</b>	<b>RR 1/5</b>	<b>LI</b>	<b>RRI</b>	<b>MR</b>
(3.1) Asphalt Production (with a gravel mine)	X	X	X	X	X	X

If Policy E.5 were revised, for asphalt recycling to be permitted as an accessory use to asphalt production, the site would need to fall within one of the zones of the principal use (see Table 1, above). Only three of these zones exist within the Nisqually Subarea: Military Reservation (MR), Rural Residential Resource One Unit per Five Acres (RRR 1/5), and Rural Residential One Unit per Five Acres (RR 1/5). Existing properties in the Nisqually Subarea with these designations are as follows (the small parcel zoned MR is currently owned by the Nisqually Indian Tribe and therefore is not included below):

- RRR 1/5 – roughly 250 acres are fully or partially zoned RRR 1/5 within the Nisqually Subarea.
- RR 1/5 - roughly 4,450 acres are fully or partially zoned RR 1/5 within the Nisqually Subarea.

The Nisqually Subarea Plan currently limits accessory activities to occur within the mined-out portion of a gravel pit, so if Policy E.5 were revised to allow asphalt recycling, asphalt production would still be limited to the mined-out portion of a gravel mine based on policy E.5. Currently, there are two active mine pits: Holroyd (330 acres) at 1048 Old Pacific Hwy SE, Olympia WA 98513, and Gilliard (80 acres) at 3845 Reservation Road, Olympia WA 98513. These operations may have other limiting factors, such as critical areas, that would be evaluated through the permitting process.

### ***Critical Areas Regulations***

Although the Thurston County's critical areas regulations (Title 24 TCC) do not explicitly address the recycling of asphalt, asphalt production is prohibited within some types of designated critical areas under Title 24 of the Thurston County Code. Accessory uses are generally treated the same as the principal or special uses in terms of Critical Areas Ordinance conformance and permitting process. When dealing with a use that is pre-existing, the non-conforming chapter (24.50 TCC) may also be applicable.

Critical Aquifer Recharge Area (CARA), Category 1 areas are where the risks of pollution filtering down to the aquifer(s) beneath is the highest. The Nisqually Subarea contains just over 7,000 acres of land (roughly 81% of the subarea) designated as Category 1, CARAs.

Thurston County code ([TCC Title 24.10](#)) prohibits asphalt plants/cement and concrete plants within Category 1 CARAs as follows:

**Table 2. Abbreviated Version of Table 24.10-1. of the Thurston County Code Chapter 24.10.  
 Prohibited and Restricted Uses and Activities Within Critical Aquifer Recharge Areas**

RESTRICTED USES AND ACTIVITIES	AQUIFER RECHARGE AREA CATEGORY				
	I			II	III
	Wellhead Protection Areas		Other CARA I		
	1-year time of travel zone	5- and 10-year time of travel zones			
Asphalt plants/cement and concrete plants (TCC <a href="#">24.10.070</a> )	X	X	X	P	P

**Legend:** X= Prohibited P=Permitted, subject critical areas permit and requirements of this title

Frequently flooded areas are another critical area regulated under Title 24 of the Thurston County Code. Asphalt Plants are not permitted within certain flood and channel migration hazard areas.

**Table 3. Abbreviated Version of Table 24.20-1. of the Thurston County Code Chapter 24.10. Allowable Uses and Activities in Flood and Channel Migration Hazard Areas**

Uses and Activities	Floodways	Frequently Flooded Areas (except floodways and high groundwater hazard areas)	Channel Migration Hazard Areas	High Ground Water Hazard Areas/RDZ	Coastal Flood Hazard Areas
Asphalt plants	X	X	X	X	X

**Legend:** X= Prohibited

P=Allowed, subject to applicable standards and Critical Areas Review Permit

### ***Noise and Habitat Considerations***

Both noise and habitat are considered at the site-level, when a permit application is submitted. Regulations regarding noise levels are in the Thurston County Code, Chapter 17.20, and operations must also comply with Washington State law, WAC 173-60, which sets allowable decibel limits.

One habitat of concern within the Nisqually Subarea that has been expressed in public comment is potential impacts of recycling asphalt to salmon, including the impact of PAHs to fish health and substrate fines to habitat. The Nisqually River is a salmon bearing stream to Fall Chinook, Coho, Winter Chum, Winter Steelhead, Sockeye, Pink Salmon & Bull Trout.<sup>4</sup> Puget Sound Chinook Salmon and Steelhead are threatened on the federal Endangered Species List. Temperature, sedimentation, and PAHs can impact salmon health and may impact embryo survival, reduce immune function, and may increase susceptibility to disease.<sup>5</sup> Other habitat concerns may also exist in the subarea, and any project specific application must comply with all Thurston County regulations, including the critical areas regulations and the State Environmental Policy Act.

### ***Thurston County's Mineral Extraction Code***

Chapter 17.20<sup>6</sup> of the Thurston County Code is the 'Mineral Extraction and Asphalt Production' code. This chapter applies to special use permits for mineral extraction, asphalt plants, and their accessory uses.

<sup>4</sup> WDFW, SalmonScape. Accessed June 24, 2020 from: <https://apps.wdfw.wa.gov/salmonscape/map.html>

<sup>5</sup> Pierce County. "The Effects of Polycyclic Aromatic Hydrocarbons in Fish from Puget Sound, Washington." Accessed June 25, 2020 from: [https://www.co.pierce.wa.us/DocumentCenter/View/31952/Toxicology\\_of\\_fish\\_Chapter\\_22?bidId=](https://www.co.pierce.wa.us/DocumentCenter/View/31952/Toxicology_of_fish_Chapter_22?bidId=)

<sup>6</sup> Thurston County Code. Chapter 17.20 – Mineral Extraction and Asphalt Production Code. [https://library.municode.com/wa/thurston\\_county/codes/code\\_of\\_ordinances?nodeId=TIT17EN\\_CH17.20MIEXASPR](https://library.municode.com/wa/thurston_county/codes/code_of_ordinances?nodeId=TIT17EN_CH17.20MIEXASPR) Accessed June 29, 2020.

The purpose of this chapter is to increase protection of ground and surface water from the effects of mineral extraction and asphalt plants, to lessen conflict with nearby land uses, and to continue availability of mined materials and asphalt to citizens and commerce of the area. This Chapter contains information on spill prevention; fuel and hazardous materials; drainage and stormwater control; wash and other process water; domestic water supplies; roads; dust and smoke control; noise; hours of operation; fencing; lighting; rehabilitation and conservation requirements; registration of gravel mines; inspections; vehicle preparation; site access; contact; hydrogeological report; groundwater monitoring; well separation; setbacks; landscaping; stockpiles; control of vibration; parking; and violations and enforcement.

### ***Thurston County Environmental Health Code***

The Thurston County Code requires that facilities that recycle asphalt obtain a Solid Waste Permit from Environmental Health. The Thurston County Environmental Health Code, Article V on ‘Solid Waste Handling’ includes information on recycling of solid waste. Section 13 on Recycling states<sup>7</sup> that “All solid waste recycling shall be conducted in accordance with WAC 173-350-210, ‘Recycling’ and this Article”, and that recycling of solid waste is exempt from solid waste handling permitting, except for recycling of asphalt and concrete, which are subject to the requirements under subsection 13.2.

Section 13.2 states:

“The permit exemption provisions in WAC 173-350-210 shall not apply to recycling of asphalt or concrete. No recycling of asphalt or concrete shall be maintained, established, substantially altered, expanded or improved without a permit obtained pursuant to Section 8 of this Article and shall be subject to the provisions of Chapter 173-350 WAC that are applicable to facilities required to obtain a permit.”

To apply for a solid waste permit (Article V, Section 8) operators must submit two copies of the application signed by owner and applicant, file an environmental checklist required under the SEPA rules, and pay all applicable review fees to the health officer. Facilities must include a plan of operation licensed by a civil or sanitary engineer. Additional information may be required, per Article V Section 8. Permits must be renewed on an annual basis according to section 8.4.1 of Article V.

### **Washington State Department of Ecology**

Washington State Department of Ecology issues a stormwater general permit to limit the amount of pollution that drains into lakes, rivers, and marine waters. These permits are guided by both

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<sup>7</sup> Thurston County Environmental Health Code. Article V. [https://www.co.thurston.wa.us/health/ehadm/pdf/Article\\_V.pdf](https://www.co.thurston.wa.us/health/ehadm/pdf/Article_V.pdf)  
Accessed June 29, 2020. Pp. 5-21

the federal water pollution permit program and state laws.<sup>8,9</sup> Asphalt recycling falls under a sand and gravel general permit.<sup>10</sup> Water quality-based limits are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (40 CFR 131.36). The more stringent of these two limits must be chosen for each of the parameters of concern.<sup>11</sup>

### **What current facilities exist in the County?**

Information provided from the Thurston County Environmental Health on July 6, 2020 indicates there are currently 7 facilities that actively handle recycled asphalt. Those facilities include:

- Black Lake Resources – Littlerock
- Black Lake Resources – Rochester
- Concrete Recyclers
- Deschutes Aggregate and Recycle
- Gilliardi Logging and Construction
- Granite Construction Company
- Liberty 1 Resources

The Gilliardi Logging and Construction facility is located in the Nisqually Subarea. It was approved in 1986, prior to the adoption of the Nisqually Subarea Plan in 1992. The data provided also indicates there are two asphalt production facilities located in Thurston County:

- Granite Construction Company (also actively handles RAP)
- Lakeside Industries

### **Current Policy**

#### ***Thurston County's Nisqually Subarea Plan***

Currently, the Nisqually Subarea Plan Policy E.5 specifically prohibits the recycling of asphalt. Several other goals and policies within the Nisqually Subarea Plan<sup>12</sup> are indirectly related to this policy consideration. Below are other policies in the Plan that relate to this policy consideration:

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<sup>8</sup> Washington Dept. of Ecology. "Stormwater General Permits". <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits> Accessed June 29, 2020.

<sup>9</sup> Governor's Office for Regulatory Innovation and Assistance. "Sand & Gravel General Permit for Portable Facilities". <https://apps.oria.wa.gov/permithandbook/permitdetail/113> Accessed June 29, 2020

<sup>10</sup> Dept. of Ecology. (2016). Sand and Gravel General Permit. Accessed June 29, 2020 from <https://ecology.wa.gov/DOE/files/42/42f629f5-c24f-4dfc-86c9-5a11d70a06d9.pdf>

<sup>11</sup> NPDES Permit Fact Sheet. Sand & Gravel Permit. September 2015. p. 13

<sup>12</sup> Nisqually Subarea Plan, November 1992. <https://www.thurstoncountywa.gov/planning/planningdocuments/nisqually-sub-area-plan-1992.pdf>



- A.1. Adopt rural densities and land uses which provide long-term protection of resource lands (e.g. agricultural lands, forest lands and mineral resources) and wildlife habitat. (p. 17)
- B.2. Restrict development by limiting densities and land uses to those which would not adversely impact the regionally significant groundwater resources at McAllister and Abbott Springs of the local groundwater aquifer. (p. 18)
- E.1 Minimize the addition of new commercial activities within the planning area by prohibiting commercial expansion of properties not currently zoned beyond the existing lot and use, promote the relocation of existing commercial uses to zoned areas and prohibit the use of mined out gravel pits for commercial or industrial use. (p. 20)
- E.3. Recognize existing mineral extraction operations, require any new operations to be visually buffered from adjacent properties and roads, and prohibit any activities along the McAllister Bluff. (p. 21)
- E.4. Condition any mineral extraction operation north of the railroad to maintain a wooded hillside along Old Pacific Highway to provide a 100-foot vegetative buffer from the east of the right-of-way, except at an entrance. Where the native ground cover does not conceal the mining activities from the road, supplemental vegetation shall be provided. (p. 21)
- E.6. Evaluate all the allowable and special uses within the 1/5 zone to determine if they would be compatible with the “Agricultural/Pastoral Character” of the Nisqually Valley. (p. 21)

Policies within the Nisqually Subarea Plan aim to preserve water quality and agricultural/pastoral character, but also recognize existing resource uses within the subarea.

### ***Thurston County’s Comprehensive Plan***

The Thurston County Comprehensive Plan<sup>13</sup> guides growth for the unincorporated county out to 2040. The Plan is guided by the Growth Management Act and County Wide Planning Policies. The following goals within the plan indirectly relate to asphalt recycling in the County:

- Chapter 2, Goal 1 (p. 2-39) – “Maintain a sustainable balance between human uses and the natural environment in order to protect rural character; maintain the land and water environments required by natural resource-based economic activities, fish and wildlife habitats, rural lifestyles, outdoor recreation, and other open space; and develop at low levels of intensity so that demands will not be created for urban levels of public services and facilities.”

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<sup>13</sup> Thurston County Comprehensive Plan. (November 2019).

<https://www.thurstoncountywa.gov/planning/Pages/comp-plan-current.aspx> Accessed June 30, 2020.



- Obj. A, Policy 8 (p. 2-40) – “New industrial uses in rural areas (other than small scale home-based industries) should generally be those appropriate to the lower densities and land uses of rural areas, such as: (a) industries related to and dependent on natural resources of agriculture, aquaculture, timber, and minerals and (b) industries that are functionally and visually compatible with the character of the rural area and dependent upon a rural setting.”
- Obj. A, Policy 14 (p. 2-41) – “Special uses that may be permitted in the rural area should be constrained in size and scale so as to maintain rural character. The primary purpose of special uses should be to serve the rural area residents of Thurston County.”
- Chapter 2, Goal 3 (p. 2-48) – “Land Use Planning and decision making should ensure the highest degree of public health, safety, and general welfare within a quality living environment without unduly jeopardizing the rights of the individual.”
- Chapter 7, Goal 2, Policy 3 (p. 7-16) – “The county should promote an integrated solid waste management strategy that places priority on waste reduction, reuse, and recycling of solid waste above resource recovery, incineration, and disposal in landfills.”
- Chapter 8, Goal 1 (p. 8-28) – “Support sustainable business and industrial development which (1) strengthens and diversifies the economic base; (2) creates jobs and economic opportunities for all citizens; and (3) develops and operates in a manner that maintains a high-quality of life and environment.”
  - Obj. D, Policy 8 (8-31) – “The county should ensure that commercial and industrial areas are located where there is a low risk of potential adverse impacts to environmental quality. For example, commercial and industrial areas should be sited where aquifer protection can be assured. Also, the county should analyze the lands designated for commercial and industrial uses to determine which, if any, pose hazards to aquifers such that aquifer protection is jeopardized.”
- Chapter 9, Goal 2 (p. 9-17) – “Protect groundwater quality and quantity.”
- Chapter 9, Goal 3 (p. 9-19) – “Protect and improve the water quality and biological health of lakes, wetlands, rivers, streams, and Puget Sound.”

### ***Thurston County’s Solid Waste Management Plan***

According to the Thurston County Solid Waste Management Plan (SWMP), construction and demolition is a large portion of total waste. Reducing it is an important part of Thurston County Solid Waste’s (TCSW) overall goal of reducing waste per capita and is identified as a priority.<sup>14</sup> The plan includes recommendations for reducing construction and demolition debris (p. 3-35):

WRR16) Promote the availability of existing facilities that accept used building materials for reuse and support the expansion of these services countywide.

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<sup>14</sup> Thurston County Solid Waste Management Plan. *Final Draft*. (2019). *Thurston County Public Works*. <https://www.co.thurston.wa.us/solidwaste/swac/SWMP.htm> Accessed June 29, 2020

WRR17) Promote the availability of existing construction and demolition (C&D) recycling facilities in the region and support the establishment of new facilities in Thurston County.

WRR18) Evaluate options to increase the recovery of C&D materials at the WARC.

WRR19) Collaborate with building and planning departments to explore options to increase the recovery of C&D materials.

Within the Thurston County Solid Waste Management Plan (Final Draft, 2019), asphalt paving is considered a special waste and is covered within Chapter 8 of the SWMP. Wastes covered in this chapter either (1) require special handling and disposal due to regulatory requirements, or (2) pose special issues or opportunities for recycling and other management methods.

According to the Plan (p. 8-3, Final Draft, 2019), markets for asphalt paving are currently diverting all or almost all of the asphalt paving generated in Thurston County. The plan lists 1 recycler in Thurston County (Concrete Recyclers) and two others near (Lakeside in Centralia, in Miles Resources in Lakewood) that accept asphalt paving include. Several other facilities in Pierce, Kitsap, and King Counties also take asphalt paving for recycling.

### ***State of Washington Solid and Hazardous Waste Plan***

According to the Washington State Solid and Hazardous Waste plan (2015)<sup>15</sup>, construction and demolition waste makes up roughly one-third of the solid waste generated in Washington. Goals in the plan directly address construction waste:

#### **GOAL SWM 4: Waste generation will be reduced throughout the system by both businesses and residents.**

- **Action SWM 4D:** Advance building salvage and building material reuse to reduce construction and demolition waste by promoting design for deconstruction principles, sharing model contract language that requires salvage, and other related efforts.

#### **GOAL SWM 6: The Northwest will have a stronger, more robust recycling infrastructure.**

- **Action SWM 6A:** Using the facilities database inventory, map recycling (including construction and demolition [C&D]) infrastructure, assess market options, and share information on recycling opportunities.

### **Other Considerations**

#### ***Economic Considerations***

Recycled asphalt can lower the cost of construction projects, in comparison to projects using raw materials. Using a portion of recycled asphalt to produce asphalt pavement requires fewer raw resources than to produce virgin asphalt. Specifically, asphalt contains bitumen which is

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<sup>15</sup> Washington Dept. of Ecology. "The State Solid and Hazardous Waste Plan". June 2015.

produced from an oil refining process. Oil prices can be volatile and greatly impact the cost of production, so reusing bitumen from recycled and reprocessed asphalt can be economically favorable.

According to survey data, the 2018 construction season recycled 82.2 million tons of RAP and 1 million tons of RAS to use in new pavements, saving taxpayers an estimated \$2.9 billion during the 2018 construction season compared to the use of all virgin materials. This is about \$626 million more savings than in 2017. Additionally, keeping reclaimed asphalt pavement out of landfills saved more than \$4.5 billion in gate fees for cost to dispose in landfills in 2018.<sup>16</sup>

Recycling asphalt may also improve commercial viability and additional sales by allowing a company to use the reprocessed asphalt materials in the process for producing new asphalt. In doing so, an asphalt producer could save on new asphalt production costs by using reprocessed asphalt in the production process. Furthermore, some jurisdictions and road construction projects require or encourage that a certain percentage of material be from reprocessed asphalt, and therefore recycling could open the number of bids available to an operator.

Staff contacted Thurston County Public Works on November 4, 2019 to ask about the current bid process. Currently there is not preferential guidance for bidding. However, state law does encourage the use of recycled materials, and if there is a tied bid then the contractor with the most recycled materials gets the award (ESHB 1695). This review also only considers County projects, and not private projects which may select asphalt pavement that uses RAP for cost-savings purposes.

### ***Best Management Practices (BMPs)***

One concern communicated from the community is that activities associated with recycling asphalt, such as material handling, storage and stockpiling, and industrial processing are exposed to stormwater. The stormwater runoff may discharge pollutants and enter waterways, aquifers, and storm sewer systems, thereby degrading water quality.

Leachate of pollutants and PAHs is not exclusive to recycling asphalt. Bitumen is found in asphalt of roadways and parking lots, in roofing shingles, and more. Other industrial activities such as production of aluminum, petrochemicals, rubber tires, and cement, wood preservation, commercial heat and power generation, and waste incineration can leach pollutants and PAHs. Additionally, pilings that contain creosote can leach PAHs throughout their lifetime. Other uses like automobile travel, gas stations, and parking lots may contribute other pollutants to stormwater runoff.

Stormwater runoff is monitored through an industrial general permit under the Department of Ecology. In some instances, stormwater can be mitigated through BMPs. Typically, a combination of BMPs are necessary to address stormwater runoff. The Thurston County Code, 17.20 TCC, currently requires BMPs in several areas related to mineral extraction, asphalt production and their accessory uses. Under Thurston County Code 17.20.040, spill prevention plans are required. Spill

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<sup>16</sup> NAPA. (2018). "Asphalt Pavement Industry on Recycled Materials and Warm-Mix Asphalt Usage." [https://www.asphaltpavement.org/PDFs/IS138/IS138-2018\\_RAP-RAS-WMA\\_Survey\\_Final.pdf](https://www.asphaltpavement.org/PDFs/IS138/IS138-2018_RAP-RAS-WMA_Survey_Final.pdf) Accessed July 8, 2020

prevention plans must include methods for prevention, detection, containment, and clean up. These are reviewed by the health officer. Other BMPs are already required in 17.20 TCC as well, such as lining recycling process water settling ponds (17.20.070 TCC), drainage and stormwater control (17.20.060 TCC), storage of fuel and hazardous materials (17.20.050 TCC) and more.

One best management practice that is not currently implemented in the Thurston County Code that may be pertinent to recycled asphalt is minimizing exposure of stockpiles (a potential pollutant source) to precipitation. According to NAPA, 2015, best management practices for exposure minimization include:

- Cover the stockpile with a shelter or building to prevent precipitation from getting to the RAP.
- Use conical stockpiles to naturally shed rain or snow.
- Place the stockpile on a paved and sloped surface to help water drain from the pile.
- Irregularly shaped piles may result in depressions that pond water.
- Minimize use of heavy equipment on top of RAP stockpiles to avoid compaction.
- RAP and millings stockpiles should be limited to 30 feet high to reduce the potential for self-consolidation in the stockpile.

Moisture content of asphalt can impact an asphalt plants production rate and drying costs. Minimizing moisture exposure may also be beneficial to the industry over the long-term by reducing costs related to drying.<sup>17</sup>

## Attachments

- Attachment A – Proposed Options for Nisqually Subarea Plan Policy E.5 in Bill Format
- Attachment B – Proposed Thurston County Code Amendment, Pairs with Option 3

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<sup>17</sup> NAPA. 2015. Best Management Practices for RAS and RAP. Retrieved June 2, 2020 from [https://www.asphaltpavement.org/PDFs/EngineeringPubs/QIP129\\_RAP\\_-\\_RAS\\_Best\\_Practices\\_Ir.pdf](https://www.asphaltpavement.org/PDFs/EngineeringPubs/QIP129_RAP_-_RAS_Best_Practices_Ir.pdf)

**Comprehensive Plan Amendments: 2020-2021 Docket Item 11  
NSAP Asphalt Recycling Policy Review Project (Policy E.5)**

**Current Text (Policy E.5, p.21):**

Allow accessory activities to be considered inside the mined out portion of the gravel pit through the site plan review process. Examples of allowable accessory uses would include concrete pipe and/or septic tank construction and the recycling of used concrete. The reprocessing of imported mineral materials shall not be the primary accessory use and the reprocessing of asphalt shall not be allowed due to water quality concerns. These activities shall be discontinued once reclamation of the pit is completed in accordance with the WDNR standards.

**Proposed Options:**

**Option 1:**

**Make no changes to the current policy E.5 of the Nisqually Subarea Plan. Continue to prohibit reprocessing of asphalt.**

No change from current text.

**Option 2:**

**Adopt the applicant's proposed amendment to Policy E.5 of the Nisqually Subarea Plan, thus removing the prohibition on asphalt recycling as an accessory use within the Nisqually Subarea.**

"Allow accessory activities to be considered inside the mined out portion of the gravel pit through the site plan review process. Examples of allowable accessory uses would include concrete pipe and/or septic tank construction and the recycling of used concrete and asphalt pavement. The reprocessing of imported mineral materials shall not be the primary accessory use, ~~and the reprocessing of asphalt shall not be allowed due to water quality concerns.~~ These activities shall be discontinued once reclamation of the pit is completed in accordance with the WDNR standards."

**Option 3:**

**Adopt the applicant's proposed amendment to Policy E.5 of the Nisqually Subarea Plan, with additional amendments. This option would remove the prohibition on asphalt recycling as an accessory use within the Nisqually Subarea, but add the requirement that Best Management Practices be employed (specifically for covering stockpiles). This option would also require text changes in the Thurston County Code.**

"Allow accessory activities to be considered inside the mined out portion of the gravel pit through the site plan review process. Examples of allowable accessory uses would include concrete pipe and/or septic tank construction and the recycling of used concrete and asphalt pavement. Operators shall employ best management practices for covered storage of recycled asphalt to ensure minimal environmental harm and impact due to leachate. Best management practices will be determined through the site-level permit review process, but may include tarping, storage sheds, or other methods. The reprocessing of imported mineral materials shall not be the primary accessory use, ~~and the reprocessing of asphalt shall not be allowed due to water quality concerns.~~ These activities shall be discontinued once reclamation of the pit is completed in accordance with the WDNR standards."

**Thurston County Community Planning and Economic Development  
Department**

**Community Planning Division**

**THURSTON COUNTY PLANNING  
COMMISSION DRAFT**

**Titles: 20.54**

August 5<sup>th</sup>, 2020

**SPECIAL USE.**

**Chapter: 20.54 (attachment-A)  
(Amended)**

Deleted Text:	<del>Strikethrough</del>	Proposed Changes:	<u>Underlined</u>
Staff Comments:	<i>Italics</i>	Unaffected Omitted Text	...

*The below code changes are being reviewed in conjunction with the Recycled Asphalt Policy review, which is item number 11 on the 2020/2021 Official Comprehensive Plan Docket.*

*The proposed code changes below would complement Option 3.*

## Thurston County Zoning Ordinance, Special Use Permit (Title 20)

### Chapters:

Chapter 20.54 – SPECIAL USE

### Sections:

...

20.54.070 – Use – Specific Standards.

...

3.1 Asphalt Production. Asphalt plants (hot mix or batch plants) are subject to the following provisions:

...

1. For operations that process and store Recycled Asphalt Pavement (RAP) within the Nisqually Subarea, operators shall employ best management practices to mitigate leachate by providing covered storage of processed/recycled asphalt stockpiles. Specific practices will be determined through the site-level permit review process, but may include tarping, storage sheds, or other methods.

...