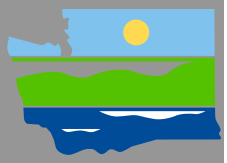

DEPARTMENT OF
ECOLOGY
State of Washington

Response to Comments

Chapter 173-350 WAC

Second Preliminary Draft

December 2016

November 2017

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Introduction

The discussion that follows pertains to the second *draft* of the *Solid Waste Handling Standards* – Chapter 173-350 WAC, released for public review in December of 2016. Ecology released a previous *draft* in mid-2016, and subsequently responded to stakeholder comments on that version. A *draft* rule is not a formal rule proposal. When an agency files a rule with the Washington State Office of the Code Reviser, it becomes a *proposed* rule. The *adopted* rule is the rule that is currently in effect – what is currently, legally required. Ecology plans to propose revisions to the rule in November 2017.

The summary that follows addresses significant changes to the December 2016 draft, and responds to comments Ecology received. This response does not capture all comments or changes, and stakeholders cannot rely on this document alone to determine all of the changes that may eventually be part of a formally proposed rule. We discuss some changes apart from specific questions and comments. Those are preceded by, "Ecology remark." We edited or restated some submittals, and did not identify the specific source(s). For brevity, where multiple parties shared similar concerns we included only a single example of the comment or question. The comments as submitted along with their source remain a part of Ecology's rulemaking record. The discussion follows the order of rule sections

Comments and Responses

Comment: The proposed informal draft rule would require significant increases in record keeping and reporting for facilities that are exempt from requiring a permit. Why would exempt materials need to be tracked? This would appear to be a paperwork burden with no benefits; and would result in a management cost to local governments.

Response: In general, record keeping and reporting are required elements to maintain a permit exemption. This helps mitigate any possible environmental harm and incentivizes owners/operators to move material or face the possibility of getting a permit. As a point of clarification, specific solid wastes are not exempt, but certain methods of handling solid wastes are exempt from permitting.

010 – Purpose.

There are no substantive edits to this section from the adopted rule.

020 - Applicability.

Ecology remark: We added an exclusion under 020(2)(y) for contaminated soil (defined in WAC 173-350-100) placed at or near the location of generation within a project site.

021 - Determination of solid waste

Ecology remark: The goal of this section is to provide a tool to increase clarity and uniformity across the state to define what is a solid waste. The tool clarifies the types of materials that are solid waste and those that are not. In addition, it allows processed waste materials to become

legitimate, valuable commodities or products no longer subject to solid waste regulatory oversight.

Ecology remark: It is not the intent of statute to exclude recyclable materials from regulatory oversight. The statutory definition of recyclable materials makes them a subset of solid waste. Mismanagement of recyclable solid waste historically has caused environmental and human health impacts.

Ecology remark: Comments on the second draft resulted in changes to the draft language of the definition of recycling and the *determination of solid waste* section. These changes reflect a consensus from those who commented. The draft definition of recycling now reads, "Recycling" *means transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. Recycling includes processing waste materials to produce tangible commodities.*

Ecology remark: The main themes that generated comments and did not result in changes to draft language are the concepts of tying recycling to "well-established markets" and "positive market value." You must considered both aspects when determining that a waste material has value, is a commodity and a product, and is no longer solid waste. Some stakeholders requested that we remove these terms to broaden the types of materials that would no longer be considered solid waste and therefore remove regulatory oversight of the management of those materials. Other stakeholders wanted us to impose additional restrictions on these terms to tighten any loopholes in the system and keep more materials under regulatory oversight. There is a general interest from the recycling industry to exclude as many materials as possible from regulation, while conversely, solid waste management companies and some local jurisdictional health departments want to retain authority to regulate recyclable materials. After analysis, Ecology concluded these concepts are vital to prevent sham recycling in the state and to prevent pollution from improper waste handling, and that the draft rule language should not be expanded to include more materials.

Comment: We are concerned with language in the previous response to comments. When discussing the determination of waste test, the response states that "Many commenters expressed concerns on how the rule might be used by other entities to interpret and seek enforcement." The concerns related to the implications of a material being labelled as solid waste or solid waste handling activity. The currently effective rule is more restrictive than the draft rule. This response is surprising and not well explained. The new determination of waste test was intended as a tool to provide for better clarity and enforcement in solid waste. The test is also somewhat restrictive by design with its "any/all" dichotomy to qualify as a waste/escape solid waste regulation. We urge the department to provide clarity regarding this statement in any future drafts or other documents issued and note the intent of the test as a tool to promote regulation, enforcement, clarity, and uniformity.

Response: Noted.

025- Owner responsibilities. There are no substantive edits to this section from the adopted rule.

030 - Effective dates. At the time we prepared this response, Ecology was continuing to evaluate effective dates for revised aspects of the rule.

040 - Performance standards. We condensed the language in this section. This section is, but the effect is substantively unchanged,

100 - Definitions. There were changes to original definitions *and* to draft definitions, we added new definitions, and deleted some others. A *partial* list of impacted definitions follows. We encourage stakeholders to review carefully any definitions pertaining to their specific area(s) of interest, as it is difficult to convey changes precisely. Discussion for many of these changes is included in the relevant topical section:

- Revised *beneficial use*
- Deleted *capacity*
- Added *clean dredged material*
- Added *clean soil*
- Deleted *clean soil and clean sediment (separated into two terms)*
- Added c*ollection event*
- Added *contaminated dredged material*
- Added *contaminated soil*
- Revised *cured concrete*
- Added *dredged material*
- Deleted *due diligence*
- Deleted *ecologically sensitive properties*
- Revised *glass*
- Deleted *groundwater sensitive properties*
- Deleted *impacted soil and impacted sediment*
- Added *indoor storage*
- Deleted *law enforcement agency*
- Deleted *limited access properties*
- Revised *limited purpose landfill*
- Revised *manufactured topsoil*
- Revised *manure and bedding*
- Revised *mobile systems and collection events (separated into two terms)*
- Added *pharmaceutical collection program*
- Revised *point of compliance*
- Revised *post-closure care*
- Deleted *practical quantitation limit*
- Added *processing capacity*
- Revised *recycling*
- Deleted *representative sampling*
- Restored *representative sample (in adopted rule)*
- Deleted *residential, agricultural, high frequency contact properties*

- Deleted *representative sampling*
- Deleted *residential, agricultural, high frequency contact properties*
- Deleted *sediment (replaced by dredged material)*
- Added *site capacity*
- Revised *solid waste*
- Revised *surface impoundment*
- Revised *tank*
- Deleted *throughput*
- Modified *wood waste*

200 - Beneficial use determinations

Question: How will language in 1(d) impact the use of ground roofing, as a component of base fill below asphalt roadway that is believed to be a previously approved use by Ecology?

(1)(d) Use of a solid waste as a component of fill unless a demonstration shows that the material meets specific engineering needs and specifications other than occupying space. Any proposal made under this section to use solid waste as a component of fill must be certified by an individual licensed to practice engineering in the state of Washington, in an engineering discipline appropriate for the proposed activity.

Response: *Acceptable Uses for Recycled Asphalt Roofing in Washington State* (WDOE Publication 09-07-074) establishes that, "The use of recycled asphalt roofing in loose form may present risks. Humans may inhale, ingest, or absorb asphalt roofing particles and its contaminants. Wind or precipitation may carry the material into water sources. As a result, Ecology expects a recycler of asphalt roofing to obtain either a solid waste permit or a Beneficial Use Determination (BUD) before distributing it for uses in loose form. To obtain a permit or BUD, a recycler will need to show that any proposed use will prevent exposure to contaminants in the material."

This is not a new element. Inclusion of this language distinguishes uses of solid waste in legitimate applications from use as simple fill. The latter is landfilling as defined in regulation. The same referenced document also establishes that bound uses such as asphalt pavement, hot mix, and cold patch are acceptable, and not expected to go through an approval process under solid waste regulations.

Question: How will this language impact the use of ground wood used within engineered plastic/wood since the wood component technically only occupies space where plastics alone will suffice? Why must the benefit be "other than occupying space?" Previously, the understanding was that the material only needed to replace a natural material and not cause environmental harm.

Response: The limited changes to the terms and conditions of beneficial use determinations under section 200 clarify the regulation based on experience implementing the rule. In this context, "occupying space" pertains to landfilling activities, and not product manufacturing. Producing a material like engineered wood using solid waste would likely be subject to the

recycling standards of section 210, or might qualify for a beneficial use determination under section 200. Generally, when a proposal fits this situation and there is not a concern with "tag-along" contaminants, we have not required a beneficial use determination or referred the matter for a solid waste permit.

Comment: Based upon the limited number of efforts to acquire a beneficial use determination statewide over the years, it appears to be an underutilized process towards sustainability and movement away from landfilling (waste to resources). Ecology should give consideration to reduce the burdensome requirements of this program in an effort to encourage entrepreneurs to use the process to develop innovated uses of waste materials.

Response: The number of beneficial use determinations listed on the registry is not reflective of the number of inquiries or outcomes. After consultation, we have often been able to conclude that a beneficial use determination is not necessary. For example, when a material is determined to be a recycled product instead of a waste, or similar enough to the material it replaces so that it can be viewed as a substitute feedstock without a concern for tag-along contaminants, a formal beneficial use determination has not always been necessary. There have also been some ill-conceived ideas and attempts to circumvent permitting or exemption conditions that the program is not intended to support.

Question: A beneficial use permit exemption requires an analysis of 12 constituents (including cobalt). The permit for land application requires an analysis of 11 constituents (does not include cobalt). Why is the analysis for cobalt required in in one and not the other?

Response: We removed the list of analytes in this section. We will rely on existing language from statute for soil amendments.

For background on the original question, cobalt is a constituent requiring testing under a beneficial use determination for soil amendments per RCW 70.95.205, which requires submittal of analytical data showing that waste-derived soil amendments meet standards established for metals in commercial fertilizers. The state Department of Agriculture publishes those standards under WAC 16-200. Cobalt is included for beneficial use determinations since it is part of the list of analytes for waste derived/commercial fertilizers. The land application section and Agriculture fertilizer standards are not linked in the same way. All other constituents are aligned.

210 – Recycling and material recovery facilities.

There were no substantive changes to section 210 from the previous draft, but see the clarifications below.

Comment: Ecology added provisions to the rule that now preclude sites from being considered recycling facilities if they accept materials that are not source separated. This illogical provision has little to no effect on the environment and will cause the re-classification of nearly all concrete, asphalt, steel and wood recycling facilities. For all of these industries, it is impracticable to completely separate waste materials at the point of origin. If a concrete and asphalt recycling facility receives a load of concrete from a jobsite with small amounts of asphalt intermixed, should the facility really have to reject the material or face penalties and fines for not

having proper permits? How would the separation of those materials at the source better protect the environment than the separation of the materials at the facility? Additionally, state standards allow small amounts of waste materials within products. For example, small amounts of asphalt and brick are allowed within recycled concrete products by WSDOT. The second draft has also expanded the design and documentation requirements, adding unpractical provisions such as paved and covered tipping floors and all weather surfaces for vehicular traffic. These provisions are highly costly, unnecessary at a large number of recycling facilities and overly burdensome to install. We respectfully request that Ecology remove the recycling provision from this section of the proposed rule.

Response: The draft rule never precluded sites that accept comingled materials from being *recycling* facilities. The previous draft only changed the standards for a permit exemption, and most recycling facilities accepting comingled materials are required to obtain a permit. We added an exemption in WAC 173-350-210 for comingled cured concrete, asphaltic materials, and brick. No tipping floor is required for the handling, storage, or recycling of the listed materials. The design requirements come from the existing standards for permitted material recovery facilities in the current rule, as we combined those two sections.

Ecology Remark: The requirement for a quality assurance plan for constructed elements of a proposal for permitted facilities is implicit in the current rule. The addition of a requirement for a Construction Quality Assurance plan just makes obvious what would already be required for engineering approval as required in WAC 173-350-715(2). Language requiring a CQA plan for permitted facilities already exists in these sections:

- 320 - Piles used for storage or treatment
- 330 - Surface impoundments and tanks
- 360 - Moderate risk waste handling
- 400 - Limited purpose landfills

The proposed language establishes a new requirement for a CQA plan for permitted facilities in these sections:

- 210 - Recycling and material recovery facilities
- 240 - Energy recovery and incineration facilities
- 310 - Transfer stations and drop box facilities
- 410 - Inert waste landfills.

220 – Composting facilities. There are some changes to improve clarity and consistency within the rule. We do not believe the changes substantially affect the interpretation or application of the rules in this section. We encourage facilities subject to this section to carefully review any changes and submit comments as appropriate.

225 – Other organic material handling activities. There are some changes to improve clarity and consistency within the rule. We do not believe the changes substantially affect the interpretation or application of the rules in this section. We encourage facilities subject to this section to carefully review any changes and submit comments as appropriate.

230 - Land application

Ecology Remark: We revised the definition of "manure and bedding" to include wash water from cleanup of manure and bedding.

Ecology Remark: In response to concerns about over application of manure, Ecology has not changed the current exclusion for land application of manure at an agronomic rate, nor has it changed the definition of agronomic rate, which is critical to protection of ground and surface waters. Over applying manure is solid waste disposal under the current rule and under proposed revisions, and would require adherence to applicable design, operating, environmental monitoring, and permitting standards.

Ecology Remark: Regarding the suggestion that exclusions in (1)(b) be tied to meeting Class A or exceptional quality biosolids standards, the list of excluded activities is meant to provide clarity that the land application section does not apply to certain materials or activities that are covered by other sections of the rule (or other rules). Those other areas specify quality standards that apply.

Comment: The exclusion in (1)(b)(iii) for solid waste used to improve the engineering characteristics of soil is unclear and contamination standards for its exclusion should be considered.

Response: The exclusion just establishes that the land application section of the rule is not the appropriate place to assess such uses for solid waste. Other sections of the rule establish quality standards that apply to such proposals.

Comment: A commenter expressed concern that pomace used for animal consumption is a solid waste because the term is included in some definitions, such as in "food processing waste."

Response: The draft rule includes an exclusion from in WAC 173-350-020 for "organic materials" used as animal feed. Pomace is an "organic material," and excluded when used for animal feed.

The commenters' concern has been addressed by the addition of subsection (aa) in WAC 173-350-020 where *organic materials used for animal feed or to create animal feed* are excluded from the rule. The definition of "organic material" includes food-processing waste, which in turn includes pomace. Pomace not intended for use as animal feed may still be subject to solid waste regulations.

240 - Energy recovery and incineration facilities

Ecology Remark: The requirement for a quality assurance plan for constructed elements of a proposal for permitted facilities is implicit in the current rule. The addition of a requirement for a Construction Quality Assurance plan just makes obvious what would already be required for

engineering approval as required in WAC 173-350-715(2). Language requiring a CQA plan for permitted facilities already exists in these sections:

- 320 - Piles used for storage or treatment
- 330 - Surface impoundments and tanks
- 360 - Moderate risk waste handling
- 400 - Limited purpose landfills

The proposed language establishes a new requirement for a CQA plan for permitted facilities in these sections:

- 210 - Recycling and material recovery facilities
- 240 - Energy recovery and incineration facilities
- 310 - Transfer stations and drop box facilities
- 410 - Inert waste landfills.

Question: Wood waste and wood derived fuel and pulp waste are identified as "waste materials" that may qualify for a permit exemption upon compliance with conditions (a) through (d) in Table 240. If these materials are properly prepared to specification prior to entering the facility, (such as a pulp mill), and the mill properly handles the material as a commodity, does proposed section 021, move this material out of solid waste realm therefore making the conditions set forth under the table irrelevant unless the material becomes a waste once again?

Response: The definition of "wood waste" in WAC 173-350-100 has been amended to remove the term "hogged fuel" to acknowledge that this material by its nature is a commodity and not a solid waste. Note that producers may be solid waste handlers (recyclers), but the hogged fuel produced is a marketable product. This should address the issue of Table 240 as related to "wood waste". Proposed section 021 will help determine whether other materials still listed as "wood waste" or "wood derived fuel" are solid waste. If processed (recycled) to specifications and managed as a valuable commodity, process materials would not likely be viewed as solid waste. Pulp waste (wastewater treatment sludge) remains solid waste for purposes of this section. Table 240 remains appropriate for combustion units burning material that is not suitably processed, and for wastewater treatment sludge.

250 - Anaerobic digesters. There are some changes to improve clarity and consistency within the rule. We do not believe the changes substantially affect the interpretation or application of the rules in this section. We encourage facilities subject to this section to carefully review any changes and submit comments as appropriate.

300 - On-site storage, collection, and transportation standards. There are no substantive edits to this section from the adopted rule.

310 - Transfer stations and drop box facilities

Ecology Remark: The requirement for a quality assurance plan for constructed elements of a proposal for permitted facilities is implicit in the current rule. The addition of a requirement for a Construction Quality Assurance plan just makes obvious what would already be required for engineering approval as required in WAC 173-350-715(2). Language requiring a CQA plan for permitted facilities already exists in these sections:

- 320 - Piles used for storage or treatment
- 330 - Surface impoundments and tanks
- 360 - Moderate risk waste handling
- 400 - Limited purpose landfills

The proposed language establishes a new requirement for a CQA plan for permitted facilities in these sections:

- 210 - Recycling and material recovery facilities
- 240 - Energy recovery and incineration facilities
- 310 - Transfer stations and drop box facilities
- 410 - Inert waste landfills.

Ecology remark: In (4)(a)(vii) regarding the conveyance of leachate from the tipping floor the draft rule was revised to allow other methods approved by the jurisdictional health department to prevent uncontrolled discharges;

Ecology remark: In (6)(b)(iv) the draft rule was revised to allow removal of waste materials from the tipping floor at a frequency approved by the jurisdictional health department.

320 - Piles used for storage or treatment.

Comment: In Table 320-A(5) the storage example talks about cured concrete and (5) is about asphalt.

Response: We combined the exemptions for cured concrete and asphaltic materials under one exemption because the requirements for both were the same. The example is now consistent with the exemption.

Comment: In Table 320-A(6) the requirement to be permit exempt is 90 days of storage. With no notification or at a minimum documentation requirements, storage time on site would be nearly impossible to know.

Response: We discussed this with work group members, but opted for no change. The ninety-day clock can begin when the health department becomes aware of the pile if no other information is available.

Question: Does Table 320-A include all mills and boilers using wood waste as fuel, since they are not exempted in the applicability section?

Response: We anticipate that wood waste recycled into hogged fuel will fall out of the rule under new section 021. Storage of wood waste prior to conversion into hog fuel is subject to the piles section.

Comment: Closure notifications in the rule reflect different amounts of time, and should be consistent.
Response: There are reasons for differing amounts of time based on the type of facility. Ecology did not make any changes.

Comment: Recommend requiring notification under Table 320-A for agricultural piles not managed pursuant to a Conservation District approved Farm Plan.

Response: The exemption for agricultural waste and on-farm vegetative wastes stored on farm is limited to the amount of waste that can be applied to the site in a one-year period. Ecology does not plan to revise this requirement.

Comment: Table 320-A does not solve the revolving pile problem. The calculation is an improvement over prior requirements, although the new formula allows facilities to gradually increase their carry-over from year-to-year. Recommend increasing the percentage requirements to perhaps 60% of material present on site at the beginning of each year and 50% of incoming material, or some combination to minimize the likelihood of increasing accumulations onsite.

Response: Ecology believes the added requirement in the draft rule is sufficient to measure processing capacity and require a permit if the requirements for exemption are not being met.

Comment: In Table 320-A(3) for wood waste we recommend quantity limits and/or maximum pile size and spacing requirements for fire safety.

Response: Ecology considered adding a requirement to meet international fire code as established by local authorities. The stakeholder advisory group did not think Ecology or local health authorities should be considering requirements for which we have no enforcement authority. We believe that local planning should capture these kinds of requirements.

Comment: 210(4)(e) references an impervious surface of concrete or asphalt, but 320(4)(b)(i) refers to asphaltic concrete. Sections should be consistent as to what is considered an "impervious surface."

Response: Different waste types may require different surfaces. The piles section gives some examples of what the impervious surface could be – concrete or asphaltic concrete. The impervious surface could be something else (engineered or chemically treated surfaces, etc.).

Comment: In 320(6)(a) it would be helpful to have examples of what is meant to be included in "safety and emergency plans," such as emergency safety equipment location site map,

evacuation site map, or incident protocols/reporting, similar to what is required in 240(4)(e)(IV). This comment applies to any subsequent subsections stating safety and emergency plans.

Response: Ecology did not want to be overly prescriptive in this area for piles, and wanted to give local health authorities some flexibility to ask for certain things specific to the conditions at the site.

Comment: In Table 320-A(1) the draft rule states that notification and reporting is not required for, "Non-putrescible solid wastes" up to 250 cubic yards. There is no storage time limit established for this category either. Recommend at a minimum that the table include a requirement to comply with the performance standards (section -040) of the rule.
Response: Ecology concurs. See 320 (2)(a)(i).

Comment. Ecology has expanded section 320 to include piles used for recycling and impacted soil. It is our understanding that this would include the recycling of inert materials such as concrete and asphalt. These types of recycling facilities handle significant volumes of materials that are constantly being processed. The piles by nature are very large and very difficult to move. By including these recycling activities in this provision, you are subjecting them to such standards as having to place all the piles on sealed surfaces. It is impracticable to completely deplete these piles and pave or seal the surfaces beneath them. Additionally, the cost of such sealing would be in the millions of dollars per site. These provisions would force the closure of numerous recycling facilities, deplete valuable landfill space, and reduce the State's total recycling tonnage by over 20%.

Response: The actual crushing of asphalt or concrete signifies the recycling activity. The piles section addresses the storage of these materials prior to and after recycling (crushing) takes place. There are exemptions under the piles section for asphaltic materials and cured concrete and brick that do not require sealed surfaces. We added an exemption with no upper volume limit for cured concrete, asphaltic materials and brick when the site is under coverage of a water quality sand and gravel permit or water quality construction storm water permit. Sealed surfaces are only required when a site needs to be permitted under the piles section. If a permit is needed, there are other options to meet the sealed surface requirement (see WAC 173-350-320 (4)(b)(i)(A&B)).

Comment: The explicit connection of impacted soil to the piles for storage provisions (WAC 173-350-320 Table 320A (6)) will make staging and handling of all construction fill soil more expensive and increase administrative requirements. Construction projects with a large earthwork component may last for 6 months to several years requiring soil and other materials to be staged. If impacted soil is included in staged materials, the proposed revision to WAC 173-350 would require that a piles solid waste facility permit (with supporting engineering, compliance, reporting, and closure) be obtained as well as other currently required construction permits.

Response: Ecology is not clear how allowing 90 days of storage time for contaminated soils and contaminated dredged material "will make staging and handling of all construction fill soil more expensive and increase administrative requirements." The adopted rule states that, "This section

is applicable to solid waste stored or treated in piles where putrescible waste piles that do not contain municipal solid waste are in place for more than three weeks, non-putrescible waste and …contaminated soils and dredged material piles are in place for more than 3 months…"

Therefore, if contaminated soils and dredged materials are in place for more than 90 days, a permit is required under the current rule, as it would be under the proposed rule.

Comment: Ecology added provisions to the rule that now preclude sites from being considered recycling facilities if they accept materials that are not source separated. This illogical provision has little to no effect on the environment and will cause the re-classification of nearly all concrete, asphalt, steel and wood recycling facilities. For all of these industries, it is impracticable to completely separate waste materials at the point of origin. If a concrete and asphalt recycling facility receives a load of concrete from a jobsite with small amounts of asphalt intermixed, should the facility really have to reject the material or face penalties and fines for not having proper permits? How would the separation of those materials at the source better protect the environment than the separation of the materials at the facility? Additionally, state standards allow small amounts of waste materials within products. For example, small amounts of asphalt and brick are allowed within recycled concrete products by WSDOT. The second draft has also expanded the design and documentation requirements, adding unpractical provisions such as paved and covered tipping floors and all weather surfaces for vehicular traffic. These provisions are highly costly, unnecessary at a large number of recycling facilities and overly burdensome to install. We respectfully request that Ecology remove the recycling provision from this section of the proposed rule.

Response: The draft rule never precluded sites that accept comingled materials from being *recycling* facilities. The previous draft only changed the standards for a permit exemption, and most recycling facilities accepting comingled materials are required to obtain a permit. We added an exemption in WAC 173-350-210 for comingled cured concrete, asphaltic materials, and brick. No tipping floor is required for the handling, storage, or recycling of the listed materials. The design requirements come from the existing standards for permitted material recovery facilities in the current rule, as we combined those two sections.

Comment: The language in 320 (iii) [(4)(a)(iii)] regarding control of vectors implies that facilities must be enclosed indoors, which could be an additional, burdensome cost. Please clarify.

Response: The current language surrounding vectors is consistent throughput the rule and does not require facilities to be indoors. This language gives facilities flexibility in how they will control the type of vectors at each individual site.

Comment: The second sentence in 320 (vi) [(5)(a)(vi)] is the first mention of an annual report. Please provide reporting and inspection requirements at the beginning of section WAC 173-350-320.

Response: Placement of reporting and inspection requirements are consistent throughout the rule. Ecology did not see a benefit in moving these requirements, and we generally tried to organize the sections as consistently as possible.

Comment: Regarding the throughput calculation for asphalt/concrete in Table 320-A, it may not be possible to use 50 percent of asphalt received during a year plus what was stockpiled. As evidenced by the recent market crash, asphalt was not being used since building was not taking place and the transportation agencies did not have any money. This could be a similar concern for concrete use.

Response: We removed the capacity requirement (50% removed during a year) for cured concrete, asphaltic materials, and brick when located at a site under a water quality sand and gravel permit or water quality construction stormwater permit.

Comment: Is the reference to non-putrescible solid wastes in Table 320-A (1) meant to refer to outdoor, uncovered piles?

Response: We revised Table 320-A(1) to cover wood waste, wood derived fuel, non-ferrous metals, brick, cured concrete, and asphaltic materials. We revised the applicability portion to clarify that the piles section applies only to outdoor storage or treatment. We also revised the applicability section so that it points to other sections where indoor storage in piles is covered.

Comment: Table 320-A (7) applies to piles of non-putrescible waste stored in enclosed buildings provided no liquids or liquid waste are added to the pile. There could be fire hazards associated with indoor piles of non-putrescible dry municipal solid waste that have no volume or time limit. Reference should be made to compliance with local zoning and permitting regulations. Allowance of health department inspections should also be stated as one of the provisions for keeping a permit exemption status.

Response: Zoning is always a requirement that must be met and is covered whenever the performance standards of WAC 173-350-040 are referenced as they are here – See WAC 173-350-320 (2)(a)(i). We removed the exemption in Table 320-A (7) as the piles section is now only applicable to piles stored or treated outdoors. We also revised the applicability section so that it points to other sections where indoor storage in piles is covered. WAC 173-350-320(2)(a)(iii) allows the department or jurisdictional health departments to inspect the site at reasonable times.

Comment: Regarding section 320, a general comment on the last response to comments. Factual basis or logical justification should be provided for statements in the response to comments and outreach materials. For example the response to comments states that "the current effective rule is more restrictive then the currently proposed rule" (pg. 3), however the piles fact sheet states, "Due to the changes with the applicability and conditional exemptions, Ecology would anticipate an increased workload for local health departments because more permits may need to be issued" and that the regulated community would have increased costs due to currently exempt facility upgrades to meet the requirements of a permitted facility." (pg.2). Why would more permits be issued for a rule that Ecology feels is less restrictive?

Response: The statement was not clear, but was a general observation directed to the new section of WAC 173-350-021, determination of solid waste. With this new section, some solid wastes in the current effective rule would not be subject to the solid waste rule in the currently proposed draft.

Comment: Please clarify if the definition of "pile" in section 100 applies to impacted soil and sediment, or soil and sediment with no due diligence determination.

Response: Due diligence has been removed from the definitions and is no longer applicable to soils or sediments (now called contaminated soils and contaminated dredged material). The piles section is applicable to these wastes.

Comment: In Table 320-A (3) and (6), no lower limit for record keeping is provided for wood waste or impacted soils and sediment. Please confirm that no record keeping is required for these materials as it is unclear with other sections of the preliminary draft rule.

Response: No reporting is required for contaminated soils or dredged materials [see Table 320-A. (5)]. Reporting is required for wood waste [see Table 320-A (3)].

Comment: The enhanced permitting requirements for piles in the previous draft was a model that other sections should adopt. This version appears to back off from the straightforward approach of the previous version in favor of material specific categories and requirements for permit exemption.

Response: Correct, this version provides for specific material exemptions. If facilities do not meet the terms and conditions of an exemption, a permit is required. All exemptions include the provision to allow the jurisdictional health department or Ecology to inspect at reasonable times.

Comment: It is our understanding that exempt facilities under 210 cannot store materials outside in piles and remain exempt under the new rules. Both the piles section and exempt facilities section should make this more evident to operators and perhaps include the requirement in each section's respective tables which will likely become the "go to" sections of the respective rules. The piles section should also specify that a structure must be fully enclosed. From our understanding, this is the intent of the chapter, but is not fully spelled out in the draft rule. The piles section should clearly state structures must be fully enclosed, a mere covering, be it a tarp or free standing roof will not suffice.

Response: We revised the applicability portion to clarify that the piles section applies only to outdoor storage or treatment of solid waste in piles. We also revised the applicability section so that it points to other sections where indoor storage in piles is covered. The rule defines indoor storage as "a structure with a roof and walls that protect solid waste from precipitation." The definition does not say "completely enclosed" but does prohibit the idea of just a tarp or freestanding roof as sufficing for meeting this requirement.

Comment: For sections 320, 410, and 990 the current draft rule maintains the higher threshold for exemption adopted in the previous draft, at 2,000 cubic yards, up from 250 in the current rule. In reality 2,000 cy is a large volume of material. Considering an average dump truck somewhere in the range of 10-14 cy capacity, the new rule anticipates up to 200 truckloads of material before a permit is required. This expansion is ill advised given Washington's history with exempt facilities and clean-up sites.

Response: The 2,000 cubic yard limit exists for wood waste, wood derived fuel, and non-ferrous metals. Capacity requirements must be met to remain exempt from permitting for these materials. There is no upper limit for contaminated soils and contaminated dredged material, but a permit will be required if stored for longer than 90 days. There is no upper volume limit for agricultural waste and on-farm vegetative wastes stored on farms, but a permit will be required if more waste gets stored then can be applied to the site during a one year period. There is no upper limit for cured concrete, asphaltic materials, and brick at a facility with a water quality sand and gravel permit or water quality construction stormwater permit. If over 250 cubic yards, cured concrete, asphaltic materials, and brick sites would be required to get a permit if the sites do not have a water quality sand and gravel permit or water quality construction stormwater permit. These water quality permits will address any water quality concerns and will remain in effect until all materials are removed, preventing the development of a cleanup site.

Ecology Remark: We removed "other permits" from the design section [WAC 173-350-320(4)(b)(i)(B)] because we revised table 320 A to provide an exemption for cured concrete, asphaltic materials, and brick, where a water quality sand and gravel or construction stormwater general permit is in effect,

Comment: Despite the objections, Ecology has expanded this section to include piles that are used for recycling and impacted soil and would include the recycling of inert materials such as concrete and asphalt. It is unreasonable to presume a one size fits all approach to material storage and pile management. These types of recycling facilities and operations are an affiliated, legal, and customary use at sand and gravel facilities and handle significant volumes of materials. Many of these sites have been established for decades and over several acres. It is unreasonable and impractical for the arbitrary movement and handling of these tons of materials to accommodate a new requirement of an impervious surface, especially when these recycled piles may have established an impervious layer over time. The nature of recycling aggregate, asphalt and concrete products is a dynamic process in small and large facilities and can move large volumes of materials in short periods of time pending construction activities or economic downturns, or may be dormant for a period of time. It is impracticable to completely displace these piles move onto another location or off site to accommodate this requirement. We recommend these existing piles and or recycling facilities be grandfathered and exempt from this provision or this requirement be deleted to exempt these priority based recycling materials.

Response: There is a specific exemption with no upper volume limits for cured concrete, asphaltic materials, and brick for sites permitted under a water quality sand and gravel or construction stormwater permit. An impervious surface is not required under this exemption. If

a permit is needed, there are other options to meet the impervious surface requirement (see WAC 173-350-320 (4)(b)(i)(A&B)).

Comment: 320 – Construction documentation. The added requirement for submitting engineering documents for permitting various waste facilities for recycling waste piles, various landfills and require extensive engineering reports, plans, specifications, and construction quality assurance plans and drawings is incompatible with usual, customary or even regulatory construction practices. These expensive and consultation based reporting documents apply not only to the pile itself, but for the surfaces below the pile inclusive of sampling all weather surfaces, etc. This will greatly serve to increase engineering, administrative documentation, and exposure to needless third party liability.

Response: The requirements for submittal, review, and approval of engineering documents in Sections 320, 400, and 410 are not new. The adopted rule language already includes functionally similar requirements. See WAC 173-350-320(3)(a), WAC 173-350-320(8)(b), WAC 173-350-320(9), WAC 173-350-330(3)(a), WAC 173-350-330(3)(b), WAC 173-350-330(8)(a), WAC 173-350-330(9), WAC 173-350-410(3), and WAC 173-350-410(8)(a). Section 360 has similar requirements for submittal of engineering documents. We adopted similar submittal requirements in Sections 220 and 250 during a previous update of the Solid Waste Handling Standards.

330 - Surface impoundments and tanks

Comment: Non-MSW (MRF and recycling facilities) or very small-msw transfer/drop box stations may have tanks and associated piping for collection of water that does not present a significant risk to human health or the environment (but may impact surface water), and should not be held to the same standards as a large MSW facility for tightness testing requirements. The small tanks are frequently 1,500 gallons or less of typical septic tank design used to control sediment or potential track-out. Sealing for tightness testing may not possible/practical due to lid design.

Response: For the scenario presented in the comment, a hydrostatic test using only the pressure exerted by the liquid in the tank when filled to capacity, will suffice (plug or valve-off all inlets and outlets submerged when the tank is full).

Question: The draft appears to exempt tanks and piping per NPDES and State Waste Discharge Permits and Construction and Industrial Stormwater Permits that frequently include detention vaults and/or oil/water separators and associated piping are associated with these permits. However, these permits do not have similar requirements for tightness testing that is being proposed. Therefore, do we assume these would not be exempt?

Response: Section 330 is applicable to impoundments, tanks and associated piping that are directly involved in collecting, conveying or containing liquids generated in the course of solid waste handling activities and being managed with the boundaries of the solid waste facility, such as leachate or contact stormwater.

Other wastewaters that are not directly generated in the course of solid waste handling activities, such as stormwater that does not come in contact with solid waste, or domestic sewage from the facility support buildings, would typically be subject to NPDES or State Waste Discharge Permits. Applicable permits for those wastewaters would establish appropriate operational standards.

Question: What about the use of rented Baker tanks? Fulltime? Temporary?

Response: Neither the adopted nor the draft rule distinguishes between tanks being used in temporary or permanent service, or between tanks which are fixed in place or portable. The adopted rule defines a tank as a "stationary device"; this may contribute to the ambiguity alluded to in the comment about portable or temporary tanks from commercial vendors such as Baker. In the most recent version of the draft rule, Ecology has revised the definition of "tank" to remove the concept of a stationary structure. Ecology believes that with the language of the current draft, the standards of this section are applicable to all tanks in uses as described in subsection (1).

Comment: As written, the rule excludes leachate collection and contaminated storm water collection, conveyance, and treatment systems if permitted under a water quality permit with comparable standards. However, water quality permits may focus on the quality and quantity of discharge without explicitly incorporating collection, conveyance, and treatment systems. Presumably, these systems had to meet certain design standards at the time they were permitted and constructed, but those standards may not be comparable to those in 173-350-330.

Response: Water quality permits do not generally establish design requirements for collection, conveyance, and storage of wastewaters within a solid waste facility. Ecology recognizes that the design of some solid waste facility elements may be in accordance with engineering principles and standards commonly applied at the time of construction. We can evaluate the adequacy of those principles and standards during permit review, and if appropriate, address them through the variance process provided in the rule.

Comment: Comprehensive wastewater system design standards exist elsewhere in regulation. The August 2008 Criteria for Sewage Works Design, Section G3.5 Ponds and Aerated Lagoons provides much clearer design criteria. However, it does not explicitly allow use of electrical leak detection monitoring, which we currently employ. Rather than specify a limited set of standards in 173-350, we recommend incorporating existing standards by reference in this rule.

Response: Section 330 applies to several different types of solid waste handling activities described in the Solid Waste Handling Standards, as well as WAC 173-308, *Biosolids Management*. In consideration of the range of different activities that rely on this section of the rule, Ecology believes that the more specific standards of the *Criteria for Sewage Works Design* might limit regulatory flexibility that could be useful in permitting of some of those activities.

350 - Waste tire storage

Comment: WAC 173-350-350-Permit Requirements – Operating – 6(a)(iv)(J) – option to provide computer printed receipt tickets should be added.

Response: We revised the rule to clarify that computer printed receipts are acceptable records.

355 – Waste tire transportation. There were no substantive changes from the second draft.

360 – Moderate risk waste handling

Comment: Recommend including annual reporting requirements for product take-back centers. These facilities are also recycling facilities

Response: Ecology believes that requiring annual reports from product take-back centers would be a deterrent to retailers voluntarily collecting items via the product-take back provision. Without adding notification requirements for product take-back centers (that we also believe would be a deterrent to participation by retailers), an annual reporting requirement would be hard to enforce. Tracking down retailers who might need to submit an annual report would present a large workload for Ecology, with little additional environmental benefit. In addition, Ecology may already be capturing materials collected by retailers for recycling via other reporting mechanisms.

Comment: Clarify what it means to protect MRW from wind, rain, and snow.

Response: We revised the language to clarify that you must protect MRW from wind and precipitation, not just the handling areas. We further clarified that protection of MRW could be provided through operational procedures, not just structural design elements.

Question: The definition of Limited MRW in section 100 comprises only "waste batteries, waste oil, and waste antifreeze generated from households." Is that prescribed by law? Could the definition of "limited moderate risk waste" be modified to allow other types of MRW streams to be handled by a facility with approval by the jurisdictional health department and Ecology on a case-by-case basis? This could allow a transfer station to segregate MRW waste streams with low risk to workers (e.g., fluorescent light bulbs, propane tanks, others?), but provide significant benefits from being segregated from larger incoming waste streams (from an environmental, worker or facility safety perspective), without the need to obtain a solid waste permit meeting all of the standards in the MRW section of the rule? The transfer station in this example could update the facility's plan of operation to manage certain waste streams, with Ecology's and jurisdictional health department's approval.

Response: The definition of "limited MRW" is not from statute. Ecology explored the idea of expanding the definition of "limited MRW" with the MRW workgroup formed as part of this rule process. The idea did not receive support. A transfer station could segregate MRW as described by the commenter, if the material was stored for less than 10 days.

Comment: Add a requirement to identifying the waste type by adding the text, "by using hazard labels approved by DOT or Globally Harmonized System to Table 360-A(g), and in 360(6)(a)(IV)(E).

Response: The "Labels and Other Forms of Warning" section of Chapter 296-901 WAC, *Globally Harmonized System for Hazard Communication* (administered by Washington State Labor & Industries), does not require the use of GHS labels in an MRW facility setting, except for hazardous materials used in the operation by employees. While using DOT or GHS labels for MRW collected at a facility may make sense, they are not required on containers storing MRW. Ecology does not want to require specific labels when the standards for identifying the waste/hazards can be met in other ways.

Comment: Revise existing definition of Mobile System/Collection Event in section 100 to better capture collection events that are transitory, because either they move from one location to another, or they occur at the same location intermittently. The Auburn HHW collection site has been interpreted to be "permanent" by the jurisdictional health department although its hours of operation are only weekends throughout the year. As such, under the revised code language it would require full permitting as an MRW facility. Change title of "Mobile Systems and Collection Events" to "Transitory Systems and Collection Events" with the definition: means activities conducted at a temporary location or at a recurrent location on a discontinuous basis to collect moderate risk waste

Response: We divided the definition of "mobile system and collection event," and modified the definitions to provide clarity.

Comment: In 360(4)(a)(iii)(C), when a floor serves as secondary containment, the draft says it must be "sufficiently impervious" without specifying what would constitute sufficiency. Previous subsections such as WAC 173-350-320 (4)(b)(i) call out concrete or asphaltic. Sections should be consistent to state the type of surfaces considered impervious, and or another type of surface approved by JHD.

Response: Given the variety of hazards posed by various types of MRW, Ecology cannot specify a specific type of flooring that would provide "sufficiently impervious secondary containment." What is suitable for lead acid batteries may not be suitable for flammable liquids. Leaving the language as is, allows the local health authority to evaluate the appropriateness of the flooring given the facility operations, and allows for different types of flooring. Ecology has developed "*Guidance for Assessing Dangerous Waste Secondary Containment Systems*," that may be used to help determine what constitutes sufficiently impermeable secondary containment. It is available on the Ecology website at https://fortress.wa.gov/ecy/publications/summarypages/95420.html.

Question: In section 100, the definition of "product take back center" *means a retail outlet or distributor that accepts household hazardous waste of comparable types as the products offered for sale or distributed at that outlet.*

Some locations, such as reusable building materials/non-profits, may receive items that they do not sell, but are so related to items they do sell, that it is logical from the viewpoint of the public, that they take those items for take-back programs. Paint would be an example for some reusable building material businesses. As well, there are other locations that might serve as logical collection places for particular products: local, state and national parks that have camping for small propane camp stove tanks, fire stations for certain inflammables, fire extinguishers and smoke alarms etc. What can be done to provide an option for these opportunities to be included in the product take-back center or other definitions? Responsible convenient locations will be a greater need in the future as our population and traffic increases.

Response: Ecology is not proposing to expand exemptions for product take-back centers. We appreciate the suggestion, but we do not support offering a permit exemption to places like schools and non-profit organizations. Ecology believes that only those familiar with the products and potential hazards of management should be engaged in takeback, and then, only where appropriate safeguards are in place. We are expanding the requirements for product take-back centers to include common sense measures we believe collection sites should take to manage moderate risk waste safely. Ecology recognizes that under product stewardship programs, non-traditional collection infrastructure may be proposed. Rather than offering an exemption to all product stewardship programs, which may or may not yet exist, the applicability of these solid waste regulations can be determined on a case-by-case basis either through the legislative process or through rule.

Retail locations can also offer household consumers a replacement at the same location. The definition of product take-back center specifies, "household hazardous waste of comparable types as the products offered for sale or distributed at that outlet." The definition allows some subjectivity, but common sense should apply. For example, a paint store or auto-parts store should not accept pesticides.

Comment: Since minimum training requirements for employees were not dictated in the new regulations, please keep 360(6)(a)(ix), to allow the JHD to establish the minimum training requirements for MRW facility employees.

Response: Ecology does not propose removing WAC 173-350-360(6)(a)(ix). The requirement to address training in the plan of operation is retained in WAC 173-350-360(6)(a)(viii). Ecology has developed guidance on training requirements in Ecology publication: "Implementation of Chapter 173-350-360 WAC," (https://fortress.wa.gov/ecy/publications/summarypages/0307022.html) that will be updated when the current rule work is completed.

Comment: 173-350-360(5)(a)(ix) did not address grounding/bonding will bulking flammables. It was part of the design standard in 350, but not operating.

Response: A requirement to address grounding and bonding of containers during consolidation of flammables was added to the plan of operations section, WAC 173-350-360(6)(a).

400 - Limited purpose landfills

Comment: The rule should include a definition of "Construction Quality Assurance Plan."

Response: Language clarifying requirements for construction documentation, including requirements for a construction quality assurance (CQA) plan, was added in those sections of the proposed rule for activities that involve certain constructed elements of a solid waste facility (e.g., specific-purpose buildings, landfills, surface impoundments). We added similar language to Section 220 – Composting facilities and Section 250 – Anaerobic digesters when we revised the rule in 2013.

The proposed language collects the submittal requirements for construction documentation (engineering reports, design drawings and specifications, CQA plans, as-built records and construction completion reports) in one location within each section, and identifies the process required for review and approval of those documents before beginning use of the constructed element.

Language requiring a CQA plan already exists in these sections:

- 320 - Piles used for storage or treatment
- 330 - Surface impoundments and tanks
- 360 - Moderate risk waste handling
- 400 - Limited purpose landfills

The proposed language establishes a new requirement for a CQA plan for permitted facilities in these sections:

- 210 - Recycling and material recovery facilities
- 240 - Energy recovery and incineration facilities
- 310 - Transfer stations and drop box facilities
- 410 - Inert waste landfills.

The added language on construction documentation replicates the following description in each of the sections where it appears:

"A construction quality assurance plan that describes monitoring, testing, and documentation procedures that will be performed during construction of the facility to ensure the facility is constructed in accordance with the approved design."

Comment: In the current version of WAC 173-350-990, glass identified as inert "includes but is not limited to" window glass, glass containers, glass fiber, glasses resistant to thermal shock, and glass-ceramics. In contrast, the draft rule eliminates the "includes but is not limited to" language, and instead states that glass "means" the listed glass types. Thus, the draft definition appears to be more limiting than the current rule. The basis for this change needs to be explained.

Response: Ecology has restructured the rule to clarify the materials that are eligible to be disposed in inert waste landfills. To support that change, we removed section 990 and its "designation by characteristics" approach from the draft rule. Instead, the rule relies on the list of types of solid wastes that statute authorizes inert waste landfills to receive (see RCW 70.95.065).

Question: What is meant by "significant concentrations" or "non-deminimis concentrations" in the definition of inert glass? E.g., if a "glass-like" material contains measurable, but low levels of lead, would it still be considered "glass," understanding that some of the listed glass types themselves contain measurable levels of lead or other toxic substances?

Response: We clarified this by adding definition for "de minimis" in the proposed rule language. The term "significant concentrations" remains in the definition of "glass", in Section 100. Determining what is significant in this context will be a judgment on the part of the solid waste permitting agency.

Question: What constitutes "foreign matter" in the definition of inert "glass?" Examples or a definition should be provided.

Response: We revised the definition of "glass," and eliminated the reference to "foreign matter."

Comment: In the definition of "Post-closure care," include language at the end of the sentence "…until the site becomes stabilized."

Response: We revised the definition. "Post-closure care" means those actions taken by an owner or operator of a limited purpose landfill after closure, and until the landfill is determined by the solid waste permitting authority to be functionally stable.

Question: From Ecology's perspective, is water draining from a "biofilter", consisting of wood chips and compost (such as from a compost facility), defined as "leachate" or as stormwater? Is rainwater flowing through a pile of wood waste (ground or unground) defined as "leachate" or as stormwater? If these waters are defined as leachate, does this definition need to be clarified?
Response: Ecology considers water draining from a biofilter to be leachate subject to management under WAC 173-350. Note that the current standards for composting facilities at WAC 173-350-220(3)(e) require that:

"Composting facilities must minimize the production of leachate and runoff by designing storm water management features such as run-on prevention systems, which may include covered areas (roofs), diversion swales, ditches, or other features designed to divert storm water from areas of feedstock preparation, active composting, and curing."

This language recognizes that stormwater at a compost facility is associated with areas of the facility where runoff is not affected by the activities of feedstock preparation, active composting and curing. A biofilter is an element of the active composting operation, so water draining from it is not stormwater.

In the case of rainwater flowing through a pile of wood waste, if the material is determined to be a solid waste under section 021 then the runoff from it is considered to be leachate.

Question: Should the rule have a definition of stormwater as it pertains to solid waste handling facilities managing water that should be handled as "leachate" versus water that should be handled as stormwater versus water that should be handled as unimpacted water?

Response: The rule establishes a definition of "leachate" as relates to solid waste handling activities. The Ecology Water Quality Program has its own regulatory definitions for stormwater, and solid waste facilities may require stormwater discharge permits. Establishing a separate definition of stormwater for solid waste facilities could contribute to conflict and confusion over the authorities of the solid waste permitting agency and Ecology's Water Quality Program.

Comment: Cured fiber-reinforced composite materials (FRCM) are an increasingly common material associated with aerospace and other specialized product manufacturing in Washington. If some portion of cured FRCM cannot be reused or processed to yield a useful product, it could safely be disposed of in an inert waste landfill (WAC 173-350-410), rather than taking up valuable space in a more highly engineered sanitary landfill. Since it is a relatively new material, it has not yet been defined in the Washington solid waste rules. Boeing offers the following new definition for inclusion in WAC 173-350-100:

"Cured fiber-reinforced composite material" means a composite material consisting of a polymer matrix (such as epoxy, polyurethane, phenolic, or polyamide) and a fiber reinforcement (such as fiberglass, aramid, or carbon/graphite fibers) which has hardened such that it has become a vitrified solid with a rigid, 3-dimensional structure, is thermally stable (does not chemically degrade) at temperatures less than 200 degrees Celsius (392 degrees Fahrenheit), and does not contain a significant amount of unreacted monomers."

Response: The draft rule identifies as suitable for disposal in inert waste landfills, only those things specifically cited in statute. Ecology's Hazardous Waste & Toxics Reduction and Water Quality Programs have expressed concerns regarding the possible effects of uncontained FRCM materials in the environment. Until those concerns are resolved, Ecology is not prepared to include FRCM in the category of materials eligible for disposal in inert waste landfills.

Comment: This proposed definition for "cured concrete" imposes standards that are completely devoid of science. The 28-day curing timeline has been arbitrarily selected by DOE and applied to what can be considered "cured concrete." This time period relates to the ASTM method for testing compressive strength, and has nothing to do with concrete's ability to be crushed and recycled, nor any impact(s) to the environment. The same is true with DOE's selection of 1200 psi. Concrete that has a compressive strength of less than 1200 psi fully cures and has a marketable value. The second draft includes a revision that partially resolves the concern for recycling off-spec concrete, but this requires a case-by-case determination by the "solid waste permitting agency." This provision is highly subjective and will likely lead to increased quantities of materials being sent to solid waste landfills. The draft also adds a provision that

concrete must be "formed into structural elements" in order to be considered cured. This too is highly ambiguous and unnecessary. Does a hardened pile of concrete fit the definition of "formed into structural elements," or does concrete literally have to be "formed" to be considered a cured material?

Response: The criteria in statute regarding materials acceptable for disposal in an inert waste landfill specify, "cured concrete." Consequently, a definition is required.
RCW 70.95.065(2) specifies in part that:

"The substances permitted for the inert waste landfills…must include the following types of solid waste if the waste has not been tainted, through exposure from chemical, physical, biological, or radiological substances, such that it presents a threat to human health or the environment greater than that inherent to the material:

(a) Cured concrete, including any embedded steel reinforcing and wood;

(b) Asphaltic materials, including road construction asphalt;…"

In the adopted rule, WAC 173-350-990 identifies "Cured concrete that has been used for structural and construction purposes, including embedded steel reinforcing and wood, that was produced from mixtures of Portland cement and sand, gravel or other similar materials" as a listed inert waste.

Ecology has restructured the rule's approach with an objective of providing a clear delineation of the materials that are eligible to be disposed in inert waste landfills. To support that delineation, we removed section 990 and its "designation by characteristics" approach from the draft rule. The list of wastes that are eligible to be disposed in inert waste landfills is now in Section 410. Where Ecology determined that a more detailed description of those waste types was merited (i.e., for cured concrete, asphaltic material, and glass), those descriptions are provided by their definitions in Section 100.

With regard to concrete, Ecology's challenge has been to distinguish between solidified concrete that "has been used for structural and construction purposes" and other lower-strength cementitious materials and cement/soil mixtures, such as jet grout or controlled density fill that may present issues in the environment due to their potential effects on water quality. The friability of these lower strength materials increases the potential for pH effects and turbidity in mass disposal situations. Ecology has included the minimum compressive strength criterion in the definition to provide greater confidence in the continued integrity of the material after disposal.

Some comments on the definition of cured concrete may not recognize that the compressive strength specification is based on the specified mixture design of the concrete, rather than the compressive strength actually achieved in concrete debris. Construction project specifications typically specify the minimum compressive strength that concrete must meet to be acceptable for use in a project. Ecology believes that most demolition projects that will be generating concrete

debris in volumes that will merit disposal in inert waste landfills will involve concrete that would have been specified to have a compressive strength of 1200psi or greater.

Regarding the relationship between a minimum compressive strength criterion and the crushability and recycling of concrete debris, and the marketable value of the processed debris, Ecology notes that the term "cured concrete" is used in the draft regulation in three locations. The first is in Section 100 that defines the term. The second is in Table 320A of Section 320, that identifies the terms and conditions under which a permit exemption can be established when cured concrete is handled in piles. The third is in Section 410, in identifying cured concrete as a material that may be disposed in an inert waste landfill. These instances do not determine whether concrete debris that does not meet the draft rule's criteria for cured concrete, can or cannot be crushed and recycled, or whether it has marketable value.

Comment: The term leachate should not be used to describe liquid that has merely been in contact with solid waste. As the name implies, leachate is defined by MW [Merriam-Webster] as "a solution or product obtained by leaching".

Response: The definition of leachate in the second preliminary draft is consistent with water quality regulations that govern the discharges from waste materials from industrial, commercial, and municipal operations into ground and surface waters of the state, and into municipal sewerage systems, as a wastewater.

Comment: For the purpose of determining the, "point of compliance," the draft language removes the health department as the department that makes the determination. The health department should maintain this responsibility using the guidance language proposed to be added as underlined.

Response: For solid waste facilities that are not subject to remedial action under the Model Toxics Control Act, the solid waste permitting authority determines the point of compliance. If a facility becomes subject to MTCA, then Ecology will also establish points of compliance for the remedial action in accordance with requirements of the MTCA.

Comment: In the definition of "Twenty-five year storm," please add back the "such" or replace with an "an".

Response: We revised the definition to read "…and of such an intensity…"

Comment: To help provide for accountability and enforcement, limited purpose landfills should be required to have a scale to meet the design requirements in WAC 173-350-400(4). Volume is too subjective for an effective unit of measurement and provides ambiguity for sham recyclers. Weight is more precise. The new draft requires "a description of how operators will maintain operating records" on the amount of waste received in WAC 173-350-400(4)(ix). This section should be reworded to specify that accurate and truthful record keeping is a permitting requirement and provide for enforcement, reporting, and auditing of these numbers to address consistent problems with this class of facilities.

Response: It is unclear from this comment how recording the quantity of waste received by volume fosters sham recycling, or how recording quantity by weight would suppress that activity. Accurate and truthful record keeping is and expectation under the rule.

410 - Inert waste landfills

Ecology Remark: The requirement for a quality assurance plan for constructed elements of a proposal for permitted facilities is implicit in the current rule. The addition of a requirement for a Construction Quality Assurance plan just makes obvious what would already be required for engineering approval as required in WAC 173-350-715(2). Language requiring a CQA plan for permitted facilities already exists in these sections:

- 320 - Piles used for storage or treatment
- 330 - Surface impoundments and tanks
- 360 - Moderate risk waste handling
- 400 - Limited purpose landfills

The proposed language establishes a new requirement for a CQA for permitted facilities plan in these sections:

- 210 - Recycling and material recovery facilities
- 240 - Energy recovery and incineration facilities
- 310 - Transfer stations and drop box facilities
- 410 - Inert waste landfills.

Question: There is no mention of impacted soils or sediments. Would unrestricted soils be acceptable at an inert waste landfill, but anything else would not be inert waste? Seems that the facility could, in compliance with 173-350-995 just use whatever soil would be compatible with the site and end use. This appears as if impacted soils and sediments are being classified on the same level as inert waste.

Response: Subsequent to the submittal of this comment, we restructured the draft rule's approach for determining when soils are solid waste. Consequently, the specific premise of this comment is no longer valid. Ecology wanted to acknowledge the comment, and use the opportunity to point out the change in approach. Soil that does not meet the definition of solid waste can be placed in an inert waste landfill.

Question: Would the 2000 cubic yard limit be per parcel or per facility?

Response: Ecology expects that health departments would evaluate the exemption volume limit on the same basis that they would issue permits for facilities if they were not exempt. Consequently, the limit would typically apply per facility.

Question: Recommend clarifying what the acceptable materials are for inert waste landfills in section (1)(a). For example – does cured concrete include material with rebar? Or, asphaltic materials include roofing material? And, what about inert wastes that are not named? Should a

test method or standard be included somewhere so that a new unanticipated waste stream can be addressed?

Response: Section 100 contains definitions of "cured concrete" and "asphaltic materials" that address specific questions regarding those materials. With regard to wastes not named in the rule, Ecology revised the rule with the objective of providing a clear delineation of the materials that are eligible to be disposed in inert waste landfills consistent with the list in RCW 70.95.065. Other wastes are not eligible for disposal in an inert waste landfill.

Comment: In Sections 320, 400, 410 the added requirement for submitting engineering documents for permitting various waste facilities for recycling, waste piles, various landfills and require extensive engineering reports, plans, specifications, and construction quality assurance plans and drawings is incompatible with usual, customary or even regulatory construction practices. These expensive and consultation based reporting documents apply not only to the pile itself, but for the surfaces below the pile inclusive of sampling all weather surfaces, etc. This will greatly serve to increase engineering, administrative, documentation, and exposures to needless third party liability.

Response: The requirements for submittal, review and approval of engineering documents in Sections 320, 400, and 410 are not new. The adopted rule language already includes functionally similar requirements. See WAC 173-350-320(3)(a), WAC 173-350-320(8)(b), WAC 173-350-320(9), WAC 173-350-330(3)(a), WAC 173-350-330(3)(b), WAC 173-350-330(8)(a), WAC 173-350-330(9), WAC 173-350-410(3), and WAC 173-350-410(8)(a). Section 360 has similar requirements for submittal of engineering documents. We adopted similar submittal requirements in Sections 220 and 250 during a previous update of the Solid Waste Handling Standards.

In the draft rule, Ecology is also adding the construction documentation requirements for other solid waste handling activities types described in the regulation that involve construction-related design standards.

Ecology's rationale for the insertion of the language of the preliminary draft rule are to:

- Collect the requirements related to construction documentation in one location within each subsection;
- Make the construction documentation requirements more visible in the rule;
- Clarify the scope of those requirements;
- Clearly establish a procedure for review and approval of construction documentation and of the constructed facility;
- Distinguish the procedures for construction documentation from the initial permit application process, to reflect the phased nature of development at many facilities.

The documentation language includes requirements to address construction quality assurance plans and construction completion reports. CQA plans and reports documenting construction are already by required in the adopted rule in these sections:

- 320 - Piles used for storage or treatment
- 330 - Surface impoundments and tanks
- 360 - Moderate risk waste handling
- 400 - Limited purpose landfills
- The proposed language establishes a new requirement for a CQA plan for permitted facilities in these sections:
- 210 - Recycling and material recovery facilities
- 240 - Energy recovery and incineration facilities
- 310 - Transfer stations and drop box facilities
- 410 - Inert waste landfills.

Comment: The current draft rule maintains the higher threshold for exemption adopted in the previous draft, at 2,000 cubic yards, up from 250 in the current rule. In reality, 2,000 cubic yards is a large volume of material. Considering an average dump truck somewhere in the range of 10-14 cubic yard capacity, the new rule anticipates up to 200 truckloads of material before a permit is required This expansion is ill advised given Washington's history with exempt facilities and clean-up sites.

Response: The 2,000 cubic yard threshold for permit exemption is a reversion to the limit in WAC 173-304 that previously governed solid waste handling. A review of existing permits for inert waste landfills found that the number of facilities that would no longer require a permit by increasing the volume limit for permit exclusions is very low. We recognize that more sites in the 250 – 2,000 cubic yard range may develop with this revision. We expect that some facilities accepting these volumes of materials will be engaged in some form of piling. There is an exemption in the piles section for sites that accumulate more than 250 cubic yards of brick, cured concrete, and asphaltic materials if they have a water quality sand and gravel or construction stormwater general permit. If they do not have a water quality permit, then a solid waste permit would be required.

490 - Other methods of solid waste handling.

There are no changes from the adopted rule.

500 – Groundwater monitoring

Ecology Remark: In section 100, we clarified the point of compliance for facilities undergoing site characterization or construction.

Comment: Modify constituent list to include dissolved form only. Dissolved form is more useful indicator of groundwater impacts from the impoundment by demonstrating the conditions of the water. Total analysis focuses more on the formation from which the sampled is taken.

Response: Groundwater samples from landfill areas must be analyzed for total metals in order to compare data with state groundwater standards (chapter 173-200 WAC) based on total metals. The regulation still requires analysis for the dissolved faction to enable comparison of the geochemistry of the groundwater near landfills with the geochemistry of uncontaminated,

background water. We revised the state regulation for municipal solid waste landfills in 2012, in a similar fashion in order to be consistent with federal requirements.

Comment: Under the testing parameters section, bicarbonate is redundant to alkalinity if pH is greater than 8.3.

Response: Leachate can have a pH over 8, but when it is mixed with groundwater it is usually below 8.3. It can be useful to know the bicarbonate concentration in order to understand the geochemistry of the groundwater.

Comment: Need to clarify that "selection of parameters undergoing statistical analysis" [350:500(5)(a)] are based on those identified in the solid waste permit.

Response: Ecology agrees and we revised the rule accordingly.

600 - Financial assurance requirements.

There were no substantive changes from the second draft.

700, 710, 715 – Permitting.

Ecology Remark: We revised the permit modification section slightly from the last draft. When considering whether a change constitutes a permit modification, evaluation will focus on specific standards of the rule, rather than on revisions with no regulatory compliance implication. Modifications may be managed in a less formal manner when they are not directly linked to a regulatory requirement. For example, modifications that benefit the operator by adding clarity or reflecting a new waste handling practice but have no implication for compliance can occur outside a formal permit modification process. Ecology would still need to be informed of the changes in order to keep records current.

900 - Remedial action:

There were no substantive changes from the second draft.

990 - Criteria for inert waste

– This section was deleted from the adopted rule with the first draft released to stakeholders. We duplicated some comments and response here in the event stakeholders look for them in the context of the original section.

Comment: Please update the definition of Inert Waste to clarify that the proposed version of -350's is to eliminate the referenced section of -990.

Response: It is appropriate to address this in the course of the public process supporting the rulemaking. Protocol for rule construction does not rely on adding language in the rule text about changes to other related sections of the rule.

Comment: In the current version of WAC 173-350-990, glass identified as inert "includes but is not limited to" window glass, glass containers, glass fiber, glasses resistant to thermal shock, and glass-ceramics. In contrast, the draft rule eliminates the "includes but is not limited to" language, and instead states that glass "means" the listed glass types. Thus, the draft definition

appears to be more limiting than the current rule. The basis for this change needs to be explained.

Response: Ecology has restructured the rule to clarify the materials that are eligible to be disposed in inert waste landfills. To support that change, we removed section 990 and its "designation by characteristics" approach from the draft rule. Instead, the rule relies on the list of types of solid wastes that statute authorizes inert waste landfills to receive (see RCW 70.95.065).

Question: What is meant by "significant concentrations" or "non-deminimis concentrations" in the definition of inert glass? E.g., if a "glass-like" material contains measurable, but low levels of lead, would it still be considered "glass," understanding that some of the listed glass types themselves contain measurable levels of lead or other toxic substances?

Response: We clarified this by adding definition for "de minimis" in the proposed rule language. The term "significant concentrations" remains in the definition of "glass", in Section 100. Determining what is significant in this context will be a judgment on the part of the solid waste permitting agency.

Question: What constitutes "foreign matter" in the definition of inert "glass?" Examples or a definition should be provided.

Response: We revised the definition of "glass," and eliminated the reference to "foreign matter".

995 – Soil and sediment and use criteria (*deleted from draft rule*)

Ecology Remark: Ecology received a substantial number of comments from multiple entities on draft language for management of "impacted soil and impacted sediment." The second informal draft included a new section, WAC 173-350-995, focused on the use of those materials. The draft rule set contaminant concentrations (soil/sediment screening levels or SSLs) based on land use at the disposal site. We based contaminant concentrations on state and federal cleanup levels, protection of groundwater under the state's groundwater quality and drinking water protection standards, and the most current natural background concentrations.

Commenters overwhelmingly found the draft too complex, subjective, and difficult to follow, and asserted it would lead to delays and increase costs for management of soil and sediment from project and construction sites. Many suggested Ecology reference cleanup levels in chapter 173-340 WAC- *Model Toxics Control Act* - Cleanup) for managing these materials. They believe that is the current practice for most in the industry.

Ecology simplified how the rule will apply to management of soil and sediment containing contaminants from a release. We removed draft section 995 and all cross references in other sections of the rule. Instead, we have clarified what is and is not solid waste through definitions for "clean" versus "contaminated" soil and sediment.

New definitions will allow placing soil or sediment containing contaminants at any location provided it would not exceed MTCA cleanup levels that would apply to that location. Since MTCA does not address pH, Ecology set a pH standard for soil or sediment where the pH has been altered. Uses that do not meet MTCA or pH standards are subject to solid waste regulation and permitting, such as the standards under sections of the rule for limited purpose landfills or treatment in piles.

New proposed language provides clarity to handlers of soil or sediment impacted by a release about where they can place materials. The language also provides authority to jurisdictional health departments to stop an entity from placing contaminated materials where they should not be placed.

Comment: Ecology's authority to adopt these standards lies in chapter 70.105 RCW, Hazardous waste management, rather than chapter 70.95 RCW, that directs Ecology to adopt rules for solid waste handling

Response: Chapter 70.105 RCW governs the management of hazardous/dangerous waste as described in that statute. Chapter 70.95 RCW governs the management of solid waste as described in that statute.

Chapter 173-303 WAC, Dangerous waste regulation, is the rule adopted under the authority of chapter 70.105 RCW. Any waste material with concentrations of hazardous substances at levels regulated under chapters 70.105 RCW and 173-303 WAC are subject to management under those codes and not chapters 70.95 RCW and 173-350 WAC. This is addressed in proposed revisions to WAC 173-350 in WAC 173-350-020(2)(m). As an example, a soil with contaminant concentrations at levels that make it a dangerous/hazardous waste would be subject to management under WAC 173-303 and not WAC 173-350. A soil with contaminant concentrations below dangerous/hazardous waste levels is subject to WAC 173-350.

Comment: It is improper to modify statutory definitions, such as that for "solid waste."

Response: Statutory language is subject to interpretation. The interpretations in the draft rule are consistent with the intent of the statute.

- The RCW 70.95.030(22) definition of "solid waste" list of waste types is non-exclusive, and its application outside of the listed categories depends in part on how one interprets the undefined word "waste." *Littleton v. Whatcom Cty*, 121 Wn. App. 108, 113 (2004) - resorting to a dictionary definition of the word "waste" to determine possible interpretations of the RCW 70.95.030 definition of solid waste.
- Similarly, *Hama Hama Co. v. Shorelines Hearings Bd.*, 85 Wn.2d 441, 448 (1975) - "At times, administrative interpretation of a statute may approach 'lawmaking,' but we have heretofore recognized that it is an appropriate function for administrative agencies to 'fill in the gaps' where necessary to the effectuation of a general statutory scheme."
- *See also, Chevron, U.S.A., Inc. v. Nat. Res. Def. Coun., Inc.*, 467 U.S. 837, 843 (1984) - "The power of an administrative agency to administer a [legislatively] created . . . program

necessarily requires the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by [the legislature]."

Given RCW 70.95's broad purpose is to establish a solid waste program that "…will prevent land, air, and water pollution…" and that the definition specifically does not limit solid waste to only the waste types listed, Ecology feels it appropriate to provide clarity on other waste types addressed by implementing rules.

Comment: The definition Ecology is attempting to institute for "impacted soil and impacted sediment" is analogous to that for "moderate risk waste."

Response: Though we have removed use of the term "impacted" in favor of the existing term "contaminated," the proposed rule has distinct definitions for both materials (contaminated soil and moderate risk waste). Ecology has not attempted to make them analogous. If a household or conditionally exempt small quantity generator generates a contaminated soil or sediment, or any other waste material, and the material has contaminant concentrations at levels that make it a dangerous/hazardous waste, the material would be moderate risk waste and require management as such. Contaminated soil or sediment with concentrations below dangerous/hazardous waste levels is not moderate risk waste and does not require management as such. Local governments have local hazardous waste plans to manage such materials. Several have built moderate risk waste collection facilities that typically collect wastes such as pesticides, solvents, antifreeze, batteries, paint, etc.

Ecology Remark*:* Replaced "adjacent to" as used in WAC 173-350-020(2)(h):

"The following activities regulated under section 404 or 401 of the Clean Waters Act (33 U.S.C. Sec. 1344 or 1341) or section 10 of the Rivers and Harbors Act (33 U.S.C. Sec. 403):

I. Management of dredged material, as defined in 40 C.F.R. Sec. 232.2, prior to placement into surface water or onto land; and

II. Placement of dredged material, as defined in 40 C.F.F. Sec. 232.2, into surface water or onto land ~~adjacent~~ where there will be runoff or return water to surface water."

Ecology Remark: Regarding requests to exclude from the rule emergency soil removal along public rights of way or during utility work, Ecology feels if there have been releases of contaminants to the removed material; it needs to be assessed to decide appropriate use or disposal options. Other sections of the rule (e.g. pile storage) allow temporary storage at an intermediate location under specific timeframes without invoking permitting or other standards. This allows time to test these soils to assess appropriate final placement.

Ecology Remark: There were questions about whether the state refuse tax applies to disposal of contaminated soil or contaminated dredged material, and if a UTC-certificate is required for hauling contaminated soil or contaminated dredged material. WAC 173-350 does not address the state refuse tax or the certification of solid waste haulers. Persons interested in those aspects should contact the Utilities and Transportation Commission or other agencies with jurisdiction.

Ecology Remark: Ecology did not revise wording that allows placement of contaminated soils to at or near the location of generation within a project site. We did move the exclusion to WAC 173-350-020 with the deletion of section 995. Ecology believes language makes it clear that excluded material must be placed in close proximity to where it was initially removed, and cannot be placed outside the project site from where it came. The language acknowledges the impossibility of putting material back in the exact location from which it was removed, but also makes clear that, particularly for large project sites or those covering multiple locations, it can't be moved to a new location.