

Introduction

This document is the final Responsiveness Summary to comments/questions received on the draft General Permit for Biosolids Management during the public comment period that ran from March 2, 2005 through April 8, 2005. Several comments/questions were received during this period, and all comments received were considered. Rather than summarizing comments/questions received then organizing them by topic or by section/subsection of the permit as is often done, we have simply listed all the comments/questions received by the commenter(s) and then responded to each of these. The comments/questions are presented exactly as submitted by the commenter(s) with the exception of a few minor editing changes such as for misspelled words or obvious punctuation errors. Table 1, below, lists the commenter(s) alphabetically by last name and the topic(s) of their comment(s)/question(s) or the section/subsection where a particular section/subsection was cited; these are listed in the order submitted by the commenter(s). Table 2, below, provides a very brief summary of changes resulting from the comments/questions received. Following that, the actual comments/questions are listed followed by the Ecology response; these are arranged alphabetically by commenter(s) last name.

Table 1

<u>Commenter(s) (Organization)</u>	<u>Topic/Section-Subsection Cited</u>
Bates, Amy (Citizens for a Healthy Bay)	Subsection 5.5.1.2, Subsection 5.5.2.2, Subsection 7.1), Subsection 8.2, Subsection 9.8, Subsection 9.12, Subsection 9.20.4, Subsection 10.2
Bosch, Dave (Tacoma-Pierce County Health Department)	Equation 13.1 in Subsection 13.6, Class II septage, Subsection 13.5.1, Subsection 9.9, Table 8.4, Subsection 8.3
Fleming, Jim (Northwest Biosolids Management Association)	Subsection 4.2, Subsection 5.5.2.4, Subsection 6.1.1.3, Subsection 8.2.4, Section 9, Subsection 9.8.1, Equation 13.1 in Subsection 13.6, Subsection 16.1
Hetherington, Dick (US Environmental Protection Agency, Region 10)	Public notice, Interested parties list
Knapp, Marla (Neighbor of a Land Application Site)	“Webb Hill facility in Shelton, WA”
Leonard, Peggy (King County Wastewater Treatment)	Subsection 9.8.1, Subsection 6.1.1.3, Subsection 5.5.2.4
Merchant, John (City of Port Townsend)	Applicability of WAC 173-308 vs. WAC 173-350 for biosolids composting facilities
Smith, Al & Leaf, Duane (Cowlitz Water Pollution Control)	Section 13, Subsections 9.1-9.10
Thompson, Daniel C. (City of Tacoma)	Subsection 4.2, Subsection 5.5.2.4, Subsection 6.1.1.3, Subsection 8.2.4, Section 9, Subsection 9.8.1, Equation 13.1 in Subsection 13.6, Subsection 16.1
Trim, Heather (People for Puget Sound)	Emerging chemicals

Table 2

BRIEF SUMMARY OF CHANGES RESULTING FROM COMMENTS/QUESTIONS RECEIVED DURING THE PUBLIC COMMENT PERIOD

- Added a definition of “accredited laboratory” to Section 2. Rationale: necessary for clarification purposes.
- Added language in Subsection 4.2 regarding a requirement for facilities who export their biosolids outside the jurisdiction of the state to provide some documentation that the importing facility is in compliance with their applicable local, state, or federal requirements. The requirement now applies to biosolids exported to facilities located out-of-state, out-of-country, or tribal lands. Rationale: necessary for clarification purposes.
- Added language in Subsection 5.5.2.2 stipulating that copies of public notice announcements must be sent to persons on the “interested parties” at the time of or before the public comment period commences. Rationale: necessary for clarification purposes.
- Deleted Subsection 5.5.2.4 that required a facility make a “reasonable” effort to contact all “adjacent” property owners for sites where application of Class B biosolids is proposed for application. Rationale: a) site- and facility-specific conditions should dictate the specific means of public notice; b) the state biosolids rule and SEPA rules already provide several means by which public notice can be conducted; and c) the department already maintains an option to require public notice be conducted in a certain manner under Subsection 5.5.2.1(2).
- Added language in Subsection 8.2.4 regarding options for allowing a reduction in sampling after 2 years. The new language states that this allowance exists even if the requirement is an “additional and more stringent requirement” issued as part of final coverage unless the condition specifically states that there will be no reduction allowed. Rationale: necessary for clarification purposes.
- Added language in Subsection 8.3 regarding requirements for using an accredited laboratory for required biosolids analyses. The new language clarifies the requirement by stating that the use of an Ecology-accredited laboratory is only required for required analyses and only for such analyses when an accreditation program exists. Rationale: necessary for clarification purposes.
- Removed “exceptional quality” from the title for Table 8.4. Rationale: necessary for clarification purposes.
- Changed language in Subsection 9.8(2) to require that the department be notified of any spills of biosolids during transportation as soon as possible, but not more than three days after the spill occurs. Rationale: necessary for improved reporting of spills that occur.
- Changed the timeframe for reporting noncompliance from a maximum of 30 days to a maximum of 5 days in Subsection 9.19.4. Rationale: necessary to ensure prompt reporting of noncompliance by permittees.
- Changed Section 13 (septage management) to require that the same site access and site management restrictions apply to septage managed as such regardless of whether it is alkaline-stabilized prior to application or directly applied without alkaline-stabilization. Rationale: deemed necessary to protect public health.
- Changed language in Subsection 13.5.1 (now Subsection 13.6), Bullet #2 clarifying the requirements for testing pH for alkaline-stabilized septage. The new language makes it clear that a pH of 12 or greater must be verified prior to the commencement of the minimum 30-minute stabilization period during which the pH must remain at a pH of 12 or greater. Rationale: necessary for clarification purposes.
- Clarified language in Subsection 13.6 (now Subsection 13.11) about the applicability of Equation 13.1 to state that it applies to all septage managed as such and that a derivative of Equation 13.1 can be used to back-calculate the application rate when applying a dewatered septage product. Provided a reference for guidance on performing the derivative equation. Rationale: necessary for clarification purposes and to provide additional guidance.
- Inserted language in Subsection 16.1 providing for the establishment of a maximum permit fee of \$500.00 for biosolids incineration facilities. Rationale: biosolids incinerations facilities should pay a permit fee, but this fee should be limited.

Commenter(s): Amy Bates, Commencement Baykeeper

Organization: Citizens for a Healthy Bay

Comment(s) or Question(s):

5.5 Public Notice Required in the Permit Application Process –
Section 5.5.1.2 (*Applying for Renewal of Coverage*) states:

... You must issue public notice within each county where your biosolids will be treated and where your non-exceptional quality biosolids will be applied to the land **only** when you propose a significant change in biosolids management practices.

Comment – The word “significant” is vague, and dependent upon interpretation, may negate the public comment process. The public values the opportunity to comment on environmental issues. We understand that certain changes may received less public comment than others; however it must be demonstrated that public involvement is both encouraged and solicited in most cases.

ECOLOGY RESPONSE

Partially concur. No change.

Ecology recognizes the importance of public review. To a certain extent, the term “significant” will always be a vague term subject to interpretation. However, Ecology has attempted to reduce the level of interpretation required by providing a definition of “significant change in biosolids management practices” in Section 2 of the general permit. Specifically, the definition of “significant change in biosolids management practices currently reads, “...means a change in the quality of biosolids that are applied to the land, either from class A to class B for pathogens, or from Table 3 to Table 1 of WAC 173-308-160 for pollutant limits; the addition of a new area to which biosolids will be applied, which was not previously disclosed during a required public notice process; for class B biosolids only, a change from nonfood crops to food crops, a change from crops where the harvestable portions do not contact the biosolids/soil mixture to crops where the harvestable portion contacts the biosolids/soil mixture, or a change in site classification from land with a low potential for public exposure to land with a high potential for public exposure; or any change or deletion of a requirement established in an approved land application plan or established as a condition of coverage under a permit that would result in a decrease in buffer size, site monitoring, or facility reporting requirements, which was not otherwise provided for in the permit or plan approval process.” The purpose of the language in Subsection 5.5.1.2 was to streamline the permitting process for facilities that are both in compliance with their permit coverage and the state biosolids rule and that are not proposing any significant changes. If any of the changes cited in the definition above are being considered, or if similar “significant” changes are being considered, then new and full public notice will be required.

Section 5.5.2.2 (*Interested Parties List*) states:

... You must mail a copy of the public notice to any person or group that has notified you in writing of an interest in your biosolids management activities.

Comment – The language used here should reflect the urgency of the public comment process by insisting that requested materials be forwarded in a timely manner. This is crucial to an unobstructed public comment period, where the public has a limited amount of time to respond.

ECOLOGY RESPONSE

Concur. Change.

The intent of the sentence the commenter cites is to state the requirement that the proponent must provide persons on an *Interested Parties List* with a copy of the public notice during the public comment period. Language has been added to clarify this requirement in the final general permit. The cited sentence in Subsection 5.5.2.2 now reads, “At or before the commencement of the public comment period, you must mail a copy of the public notice to any person or group that has notified you in writing of an interest in your biosolids management activities.”

7. Record Keeping Requirements –

The opening lines state:

10. You must keep certain records and certification statements described in this section of this permit if you do either or both of the following:

- Prepare biosolids
- Apply bulk biosolids to the land

Comment – The language here does not include recordkeeping requirements pertaining to the storage of bulk biosolids or the necessity for some documentation during the transportation process.

Too, recordkeeping is critical to determining the long-term impacts of land application. If the minimum monitoring requirements are used, records should be maintained for a period greater than 5 years. We suggest that in instances where monitoring is conducted once annually, that records be maintained for a greater period of time.

ECOLOGY RESPONSE

No change.

Records on biosolids stored are encompassed in the requirements for record keeping for both those who prepare biosolids and those who apply bulk biosolids to the land. A person who prepares biosolids is either a person (facility) that generates biosolids or a person (facility) that derives a material from biosolids. The person who applies biosolids can be either the person who prepares biosolids or an agent of the person who prepares biosolids. Both are required to keep certain records as described in the general permit. All biosolids subject to the general permit that are stored at any given time will be stored by either the preparer or applier of bulk biosolids. Thus, records on the stored biosolids are already required.

With respect to documentation during the transportation process, during the development of the state biosolids program it was determined that Ecology was not the proper authority on transportation issues. Thus, the state biosolids rule defers to the Washington State Utilities and Transportation Commission (UTC) for regulation of the transportation of biosolids. The UTC regulates transportation under the authority of Title 81 RCW. Ecology has issued a requirement in the new general permit that mandates a Spill Prevention/Response Plan. This will allow the department a greater role in examining the safeguards and response plans that a facility or its transporter has in place.

With respect to the maintenance of records, Ecology does require indefinite records on sites where biosolids exceeding the WAC 173-308-160 Table 3 pollutant concentrations (but are

still lower than the ceiling concentration) are applied. We have not required indefinite records maintenance in other instances. However, Ecology receives monitoring data and reports at least annually from all facilities engaged in biosolids sampling, and we do maintain the records indefinitely. Required monitoring data is entered into a database that currently contains tens-of-thousands of entries.

8. Biosolids Monitoring Requirements –

Section 8.2 states:

After the biosolids have been monitored for the two years at or above the frequency in table 8.1, the person who prepares the biosolids may request the department to reduce the frequency of monitoring for pollutant concentrations and for pathogen density requirements.

Comment – In general, annual monitoring presents numerous problems as some impacts may remain latent dependent upon climate conditions (excessive rain, drought, etc.). We suggest that monitoring requirements be more stringent, and that at minimum, quarterly monitoring be utilized.

ECOLOGY RESPONSE

Partially concur. No change.

While Ecology agrees that there can be problems with annual monitoring, Ecology does not believe that quarterly sampling is appropriate in all cases. Many facilities are located in small municipalities with very limited staffing and budgets. These facilities often produce and manage a very small mass of biosolids in a given year. Quarterly sampling requirements would likely be overly burdensome (both financially and in terms of staff time) for many such facilities. Table 8.1 of the general permit shows the increasing sampling requirements as the mass of biosolids managed increases. Monthly sampling is required for some facilities. Ecology does maintain the ability to increase the sampling requirements for any given facility (large or small) based on facility-specific considerations, and we have frequently done so. In addition, Ecology can direct a facility in how to conduct sampling. For example, for annual pathogen reduction testing using Class B-Alternative 1 and certain annual vector attraction reduction tests, we require these be conducted over a two-week period and generally during the worst time of the year climatically in order to get representative sampling in a worst-case scenario. Ecology believes that the abilities we now maintain and utilize to both increase sampling when appropriate and direct how sampling is undertaken are sufficient to overcome the potential problems associated with annual sampling.

9.8 Transporting Biosolids –

Number two states:

You must notify the department of any biosolids spills that occur during transportation.

Comment – We suggest that the language be changed to reflect the urgency of the reporting process. For example, “You must immediately notify the department of any biosolids spills that occur during transportation.”

ECOLOGY RESPONSE

Partially concur. Change.

The language in Subsection 9.8(2) has been changed in the final general permit to read, “You must notify the department of any biosolids spills that occur during transportation as soon as possible, but not more than three days after the spill occurs.” The use of the term “immediately” was considered, however, Ecology expects the most immediate activity

following any spill to be containment of the spill.

9.12. Mitigating Any Adverse Affects –

The opening paragraph states:

You must take all reasonable steps to minimize or prevent biosolids use or disposal that may adversely affect human health or the environment.

Comment – The criterion for “reasonable” is not stated. As this statement directly refers to the potential for adverse impacts upon human/environmental health, monitoring requirements must be heightened, and best available science employed to determine potential impacts.

ECOLOGY RESPONSE

No change.

The term “reasonable” is certainly a vague term, however, it would be impossible to fully define it. An alternative language for Subsection 9.12 could be, “You must minimize or prevent biosolids use or disposal that may adversely affect human health or the environment.” This would eliminate any reference to “reasonable”. However, that’s essentially what is being said already, and ultimately that is the intent of the entire biosolids regulatory structure (i.e. to minimize or prevent biosolids use or disposal that may adversely affect human health or the environment). The only difference is that by using the phrase “take all reasonable steps” Ecology is recognizing that unforeseen circumstances may occur that a “reasonable” person could not have anticipated.

9.20.4. Revoking and Reissuing Coverage Under this Permit

Section one states:

The department may determine whether cause for revoking and reissuing coverage under this permit exists upon receiving any information from sources including, but not limited to the following:

- Inspection of a facility
- Receipt of information you submit as required in the permit
- Receipt of a request for modification or revocation and reissuance
- Review of the permit file.

Comment - We suggest the addition of language reinforcing the importance of reporting, monitoring, and record keeping as listed in section 9.10.1 and 9.10.2. As monitoring provides the predominant method of determining impacts (human/environmental) the importance of monitoring compliance must be emphasized and punitively reinforced.

ECOLOGY RESPONSE

No change.

Ecology is not clear about the intent of this comment. The two subsections cited by the commenter refer to the ability of Ecology to issue penalties. We do not understand how restating this language would provide any additional weight to the need to report accurately, monitor correctly, and maintain records. That Ecology can revoke coverage under this general permit for failure to report, monitor, or keep records is implied in the bullets in Subsection 9.20.4. Three examples follow: “inspection of a facility” could include an inspection of records kept; “receipt of information you submit as required in the permit” would include monitoring data; “review of the permit file” would include a review of reports submitted (or not submitted). Failure to meet the requirements for any of these issues could result in not only the revocation of permit coverage but also a monetary penalty. Indeed, Ecology has in the past

issued both a substantial monetary penalty and modified and reissued coverage to a facility for the same violations of the permit conditions.

10.2 Pollutant Concentrations

Comment – Although the permit utilizes ceiling concentrations that are in accordance with WAC 173-308-160, we suggest that more stringent ceiling concentrations given the historical problems associated with many of the chemicals listed that are relevant to Washington State. Specifically, arsenic, copper, lead, and mercury levels should be reduced as many of these contaminants have been identified as being problematic in the Commencement Bay area and in other areas as well.

ECOLOGY RESPONSE

Partially concur. No change.

Ecology supports the goal of constantly improving the quality of biosolids in the state. The allowable concentrations are based on the best-available science and the risk-based approach used in the development of federal biosolids regulation (Title 40 CFR Part 503) upon which the state biosolids rule was based. The permit recognizes two levels of quality with respect to pollutant concentrations in Table 8.2 and Table 8.4 (Table 1 and Table 3 in WAC 173-308-160, respectively). Facilities in the state typically achieve the higher quality Table 8.4 standards. In 2003, the number of facilities reporting biosolids data was 126. Of this total, only 7 exceeded the higher quality Table 8.4 standards at any time during the year. In other words, >94% of the biosolids managed in the state in 2003 met the highest quality standards for the regulated pollutants. Partially due to the existence of pretreatment programs and an increasing scrutiny on biosolids quality, the quality of biosolids in the state is very high already (at least with respect to pollutant concentrations). Facilities whose biosolids exceed the Table 8.4 standards but still meet the Table 8.2 standards are required to track cumulative pollutant loading rates to ensure that pollutant concentrations do not exceed a risk-based allowable concentration in the soil.

Commenter(s): David Bosch

Organization: Tacoma-Pierce County Health Department

Comment(s) or Question(s):

Section 13.6 Application Rates - Is this equation appropriate for septage that is defined, or contains, Class II or Class III septage? It is my understanding that EPA developed this equation ($AAR=N/0.0026$) based on information and assumptions of 'stabilized' septage. EPA specifically concluded that this equation is not suitable for 'unstabilized' septage. Since Class II, and possibly some Class III septage, is primarily 'unstabilized material', how do we know that applying Class II (and III) septage using this equation is not significantly exceeding the agronomic rate for the crop? The General Permit should somehow address this environmental, and potential public health, concern.

ECOLOGY RESPONSE

Partially concur. No change.

With respect to Class III septage, it is expected that this material is the same quality as Class I septage because it's from the same source (human waste); the only real difference is that the former is from an industrial facility rather than a residence.

With respect to Class II septage, however, the commenter makes a good point. Class II septage is essentially unprocessed prior to removal and subsequent treatment (typically alkaline stabilization). The value of nitrogen in such material has the potential to be significantly higher than that in Class I or Class III septage. Thus, the application rate based on Equation 13.1 may be inappropriately high. In development of the standard septage application rate formula, the USEPA designed a rate that was generally considered to be “conservative” with respect to nutrient loadings. However, even if this is the case, the rate may not be “conservative” enough to account for the potentially higher nitrogen concentration in Class II septage. Class II septage must be either managed as “domestic septage managed as biosolids originating from municipal sewage sludge”, or it must be alkaline-stabilized prior to application. Under the former scenario, application rates will be required to be based on a nitrogen-need/nitrogen-supply basis similar to all other forms of biosolids. Under the alkaline-stabilization scenario, there is at least one reason to think that the nitrogen loading will be more conservative than that simply implied by the total nitrogen concentration. The initial impact of the alkaline-stabilization is that virtually all microorganisms are killed. These include both pathogenic-species as well as beneficial microorganisms such as those responsible for the mineralization of organic nitrogen. Thus, the release of nitrogen will at least temporarily be virtually eliminated—except for that already in plant-available forms. The problem is that we don’t know if this reduction in mineralization potential is temporary or permanent. Currently, there is Ecology-funded research being conducted examining this issue. Ecology expects to use the results of the research—in addition to other studies—in making future regulatory decisions.

Ecology intends to address the application rate issue raised by the commenter as well as numerous other septage management issues through rule changes. Until that can be accomplished, local health departments and Ecology regional offices are encouraged to permit septage management facilities. If deemed appropriate during the permitting process, it is possible to require management of Class II septage in a manner that better addresses the issues raised by the commenter. For example, a permit could require that Class II septage be managed as “domestic septage managed as biosolids originating from municipal sewage sludge”; this would then entail a more thorough approach to application rates in addition to a requirement that the material applied meet the pollutant standards, pathogen reduction standards, and vector attraction reduction standards required for all other biosolids products.

Section 13.6 Application Rates - This section of the General Permit should describe how or who should determine the amount of nitrogen needed by a crop or vegetation on an annual basis. Often times there is a large range to choose from when considering nitrogen uptake for a given crop. The higher the 'estimate' is, the greater the risk that there could be significant nutrient leaching into groundwater, especially when there are not required evaluations to determine how accurate the 'estimate' was (e.g., soil nitrate tests, etc.)

ECOLOGY RESPONSE

Partial concurrence. No change.

The commenter is correct that there is often a diversity of numbers that one may choose from. For example, a contracted agronomist may provide one number, a Cooperative Extension agent may provide another, and a fertilizer guideline may provide yet another. However, all may be correct in a sense because there is no precise answer in many instances. The nitrogen need is a

result of many considerations—including the vegetation-type, soil-type, precipitation patterns, production expectations, and historic, current, and future site management. It is expected that proposed nitrogen requirements or nitrogen fertilizer recommendations will be reviewed by the regulatory authority during a review of proposed application rates prior to the commencement of any applications. This allows the regulatory authority the ability to evaluate site- and operation-specific conditions when considering the proposed nutrient loadings rather than trying to dictate through the general permit how this must occur.

Section 13.6 Application Rates - The General Permit should also have an alternative to this 'standard' application rate. The alternative should be based on the actual nutrient content of the septage to be applied and all of the other factors used to determine an estimated agronomic rate for a given crop and site.

ECOLOGY RESPONSE

No change.

The alternative suggested by the commenter already exists. Any septage operation may seek to manage its product as “domestic septage managed as biosolids originating from municipal sewage sludge”. Or, alternatively, the regulatory authority can require septage be managed in this way when issuing coverage under the general permit to a septage management facility. Managing domestic septage as biosolids results in a requirement that application rates be determined as suggested by the commenter.

Section 13.5 Management Option 2- pH Adjustment (Alkaline Stabilization) Prior to Land Application The General Permit should incorporate the restrictions for Public Access and Requirements for Signs described in Section 13.4.3 of the General Permit verbatim. Although this is not required by rule (WAC 173-308 or 40 CFR 503), it was also not anticipated by EPA that septage would be applied to a site that could be frequented by the public, such as a public forest or a private forest that allows public access. EPA rationalized that public access restrictions would not be necessary because it was assumed that the septage generator/applier would have total "control" of the site. Well, in the example given above, this is simply not the case. It is obvious from the harvesting restrictions and restrictions to apply lime-stabilized septage to public contact sites that EPA concluded that there may be a potential for pathogens to be present in the lime-stabilized septage. Therefore, the General Permit should incorporate the restrictions for Public Access and Requirements for Signs for Option 2 Septage Management. This requirement is not overly burdensome to the regulated community, but, is necessary to protect the public visiting a forest that is being used as a septage application site.

ECOLOGY RESPONSE

Concur. Change.

Ecology concurs that the same site access restrictions should be in place on sites where alkaline-stabilized septage is applied. In addition, Ecology also believes that it is appropriate to impose the same site management restrictions for all septage managed as such. This does not seem to be an undue burden on the regulated community, and would provide a greater protection for public health. The final general permit has been altered such that alkaline-stabilized and non alkaline-stabilized septage must meet the same public access and site management restrictions. The effect of this change relative to the draft general permit is twofold: 1) now sites where alkaline-stabilized septage is applied must meet the site access restrictions required for sites where non alkaline-stabilized septage, and 2) where application

occurs to sites where domestic animal grazing may occur, a 30-day waiting period from application to harvest or grazing is now imposed. Ecology believes that these are relatively minor changes that are necessary to protection human and animal health.

The restrictions, of course, would not apply to septage that is being managed as “domestic septage managed as biosolids originating derived from municipal sewage sludge”. In cases where domestic septage is managed in this manner, the material will be required to be managed in the same manner required for the particular classification of biosolids into which the septage falls.

Section 13.5.1, item 1), bullet 2 - Second sentence suggestion for clarification: " Thus, testing must occur twice at a minimum: once after alkali addition and verification that pH 12 or higher is obtained without the addition of more alkali and, again, 30 minutes after (at a minimum) to assure that pH 12 or higher has been maintained." Or similar language to assure that a generator doesn't think he meets this minimum requirement when he adds alkali to a batch and obtains a reading of pH 10, for example, and takes another measurement 30 minutes later and records pH 12.

ECOLOGY RESPONSE

Concur. Change.

For the purposes of clarification, the language in sentence 2 of bullet 2 in Subsection 13.5.1 (now Subsection 13.6) has been changed in the final general permit to read, “Thus, testing must occur twice at a minimum: a) once after alkali addition and verification that a pH of 12 or higher has been achieved, and b) at least 30 minutes following the initial testing to assure that a pH of 12 or higher has been maintained without the addition of more alkali.”

Section 9.9 Storing Biosolids, item 3) - This section of the General Permit states, "Facilities storing liquid biosolids in surface impoundments or tanks must meet requirements of WAC 173-304-430 and other applicable sections of Chapter 173-304 WAC, Minimum Functional Standards for Solid Waste Handling, that apply to the design, construction, and operation of surface impoundments." WAC 173-304-430 does not address design, construction, and operation standards for "tanks" and, therefore, is not applicable. However, the new solid waste regulation (WAC 173-350), that has updated and nearly replaces WAC 173-304, does address requirements for surface impoundments and tanks, Chapter 173-350-330. The new General Permit should be updated to reflect the new solid waste regulatory requirements that pertain to surface impoundments and tanks and that are applicable to biosolids storage. For example, the new regulations state that all above ground storage tanks shall have secondary containment capabilities. I believe that for the purposes of biosolids handling that this requirement is unnecessary. However, requiring that underground storage tanks demonstrate that they are not leaking is reasonable and responsible and protects public health and the environment. I recommend that the General Permit cite the applicable requirements from WAC 173-350-330, rather than referencing this regulation, that pertain specifically to the storage of biosolids in tanks and surface impoundments.

ECOLOGY RESPONSE

Partially concur. No change.

During the development of the draft general permit, Ecology considered either referencing WAC 173-350-330 or writing the requirements directly into the general permit as suggested by

the commenter. However, it was determined that doing so would be tantamount to making a rule change without having gone through the rule changing process because the state biosolids rule specifically references WAC 173-304-430 and other application sections of Chapter 173-304 WAC. Thus, Ecology decided to leave this subsection as-is and to anticipate making the appropriate change to the biosolids rule through the proper rule-amendment procedures. At such time, Ecology intends to put in place either through reference or through direct language, the standards contained in WAC 173-350-330, as these were developed with the expectation that they would be applied to biosolids stored in surface impoundments and tanks. In the interim, the regulatory authority may work with a facility during the permitting process in order to help them develop a project that meets the WAC 173-350-330 standards for surface impoundments or tanks. Alternatively, when issuing final coverage under the general permit, the regulatory authority can issue an additional and more stringent permit condition that requires a facility meet the WAC 173-350-330 standards. Of course, in the latter case, the condition would be subject to appeal.

Table 8.4 Exceptional Quality Pollutant Concentrations - Since the title of this table is slightly modified from that in WAC 173-308, I suggest for clarity purposes that the ceiling concentration of Molybdenum (75 mg/kg) be included in this table.

ECOLOGY RESPONSE

Partially concur. Change.

There is currently no Table 3 value for molybdenum, as it is being re-evaluated by the USEPA. Until such time as a new Table 3 value is established, all biosolids must have a molybdenum concentration of less than the 75 mg/kg ceiling concentration. Meeting the “exceptional quality” (EQ) standards for biosolids means that the biosolids are Class A for pathogens, they have met one of the vector attraction reduction requirements prior to application, and they meet the Table 3 (Table 8.4 in the general permit) standards for pollutants. Acceptable molybdenum concentrations for proposals for EQ biosolids will be looked at on a case-by-case basis, but the absolute maximum allowable concentration will be 75 mg/kg. Putting a limit in Table 8.4 is not deemed appropriate at this time. Thus, the portion of the table title referring to “exceptional quality” has been removed in the final general permit, and the pollutant list and allowable concentrations are those of WAC 173-308-160, Table 3.

Section 8.3 Requirement for Analysis by an Accredited Lab - Is it Ecology's intent to only require analysis by an Accredited lab for pollutants in biosolids? Or would it also apply for pathogen density requirements and nitrogen content requirements? If it is intended to have the requirement of biosolids analysis by an accredited lab for all of these parameters, may be this accreditation requirement is better suited being placed in Section 8.1 of the General Permit. How does this requirement apply to generators that land apply lime-stabilized septage or lime-stabilized biosolids(achieve pathogen reduction and/or vector attraction reduction)? Typically, a calibrated pH meter is used to document compliance. Are pH strips allowed? How would the accreditation requirement apply in these circumstances?

ECOLOGY RESPONSE

No change.

The intention is to require that an Ecology-certified lab conduct all required biosolids analyses where an accreditation program exists in the “Solids and Chemical Materials” category; this includes analyses for pollutants, nitrogen, other nutrients, and microorganisms.

This subsection was called out specifically rather than placing it into Subsection 8.1 in order to emphasize this as a new requirement.

With respect to testing the pH in septage for the purposes of establishing compliance with alkaline-stabilization requirements, currently no accreditation program exists in the “Solids and Chemical Materials” category for pH analyses, thus use of an accredited lab cannot be required for this analysis. Furthermore, requiring accreditation for pH analyses by septage appliers would be impractical given the circumstances, and doing so would tend to discourage the use of alkaline stabilization of septage except where absolutely required; Ecology does not wish to discourage the use of alkaline stabilization of septage. The use of litmus paper is allowed, but the use of a standard pH meter is highly preferred.

Section 8.3 Requirement for Analysis by an Accredited Lab - I recommend explaining what 'accredited lab' is in this section, or better yet, add this definition to Section 2. Definitions of the General Permit. As I understand it, accreditation is given to laboratories for drinking water or water analyses only. There currently is not accreditation given to laboratories for solid analyses. The definition should explain why the accreditation of a laboratory for water analyses for specific parameters is similar to that for solid analyses (biosolids cake, biosolids compost, etc.) for specific parameters. I suggest elaborating on the explanation given in Ecology's "Brief Description of the 'Significant' Differences Between the 1998 General Permit for Biosolids Management and the 2005 Draft General Permit for Biosolids Management". I agree with the intent of this requirement which is to assure competent analysis by competent laboratory personnel using proper testing methods and with proper calibration and documentation of laboratory equipment.

ECOLOGY RESPONSE

Partially concur. Change.

A definition of “accredited laboratory” has been added to Section 2 of the final general permit. The new definition reads, “‘**Accredited laboratory**’ is a laboratory accredited under the provisions of WAC 173-50 for a specific analyte using a specific analytical method. To be valid for analysis of biosolids, accreditation must be in the ‘Solids and Chemical Materials’ category.” There is an accreditation program for solids analyses. Labs accredited for an analysis under the “Solids and Chemical Materials” category are accredited for biosolids analyses for that method. A searchable accredited lab website can be found at:

<http://www.ecy.wa.gov/apps/eap/acclabs/labquery.asp>

Section 8.3 Requirement for Analysis by an Accredited Lab - I agree with this requirement. However, I think clarification in the language is needed. I suggest that language be added to make it clear that "the specific parameters to be analyzed" (e.g., trace metals, microbiological, nutrients) must be done by an accredited lab. Just because a lab is competently capable of conducting microbiological analyses, they may not be capable (or accredited) of conducting trace metals or nutrient analyses.

ECOLOGY RESPONSE

Concur. Change.

Additional language has been added to Subsection 8.3 clarifying the requirement. In the final general permit, Subsection 8.3 now states, “Within 6 months of the effective date of this permit,

all required biosolids analyses must be performed by a laboratory which is accredited by the department for the respective analysis if an accreditation program exists for the respective analysis in the “Solids and Chemical Materials” category.”

Commenter(s): Jim Fleming

Organization: Northwest Biosolids Management Association

Comment(s) or Question(s):

We support Ecology’s approach to streamlining the permit renewal process for renewing facilities which have properly complied with permit process requirements and are not proposing any significant changes in biosolids management practices.

ECOLOGY RESPONSE

No change.

Ecology has maintained the provisions intended to streamline the renewal process for facilities that are in compliance and that are not proposing any significant changes.

The NBMA believes the provisions of 4.2 of the proposed permit should be amended to address all areas outside of the jurisdiction of the Washington State Department of Ecology. Specifically, this would then extend to Indian lands (at least), and not be limited to out of state transfer of biosolids.

ECOLOGY RESPONSE

Concur. Change.

Ecology agrees that the provisions in Subsection 4.2 need to be amended. This has occurred in the final general permit language. The language, “outside the state of Washington” has been changed to read, “outside the jurisdiction of the state of Washington”, and a sentence reading, “Facilities outside the jurisdiction of the state of Washington include those located on tribal lands, those located in other states, and those located in other nations” has been added.

The NBMA opposes changes in 5.5.2.4 of the proposed permit regarding reasonable attempts to notify adjacent landowners. The standard for reasonableness is vague and open for interpretation, thus inviting conflict. Both the state biosolids rule and SEPA have a clearly defined public notice process which can include newspaper notice, posting of proposed land application sites, and notice to an interested parties list. We believe this is a good process and that the proposed change will be a burden to permit applicants which cannot be successfully implemented.

ECOLOGY RESPONSE

Partially concur. Change.

The term “reasonable” is necessarily vague and will always be subject to interpretation and cannot be specifically defined. Ecology does not believe that this fact alone is sufficient to remove Subsection 5.5.2.4. However, consideration of other comments received during the public comment period have resulted in the deletion of Subsection 5.5.2.4 from the final general permit. Ecology has maintained Subsection 5.5.2.1(2) which requires a facility to issue public notice by any method required by the department. The original language in Subsection 5.5.2.4 should have used the term “adjoining” rather than “adjacent”. Ecology believes that ideally for every site where Class B biosolids is proposed to be applied, the proponent should make a

“reasonable” effort to contact the owners of all “adjoining” properties either by way of a phone call, letter, email, or direct contact. However, site- and facility-specific conditions should be used to determine the most appropriate method for conducting public notice.

The NBMA supports the elimination of resubmitting land application plans in 6.1.1.3 of the general permit, when those plans have been previously approved and practices remain unchanged, or which remain subject to review but which comply with the basic requirements for the content of land application plans. This is an excellent approach to minimizing the burden of permitting without compromising the intended ends.

ECOLOGY RESPONSE

No Change.

The final general permit contains this allowance.

The NBMA requests that Ecology clarify the provision of 8.2.4 of the general permit regarding a reduction in the frequency of monitoring. The NBMA believes the ability to request such a reduction should remain available to permit holders, according to the agency’s good judgment, unless such future reduction is specifically eliminated as an additional or more stringent requirement during the approval of coverage process. The potential loss of this flexibility would not otherwise be immediately evident to permit applications, who might then subsequently forego an opportunity for appeal of the permit condition.

ECOLOGY RESPONSE

Concur. Change.

The commenter appears to be referring to a situation in which during the issuance of final coverage under the general permit Ecology includes an “additional and more stringent” condition that requires certain monitoring requirements. Ecology agrees that under such a situation, the allowance to request a reduction in monitoring in accordance with Subsection 8.2.4 (and WAC 173-308-150) should be maintained unless Ecology specifically states in the condition that no reduction is allowed. The following language has been added to Subsection 8.2.4 in the final general permit, “This provision applies to any monitoring requirement(s) included as an “additional and more stringent” condition issued by the department as part of final coverage under this permit unless the additional and more stringent condition specifically states that the monitoring requirement(s) may not be reduced.”

A subsection should be added to Section 9 of the general permit. Section 9.5 should require prompt reporting of any observed violations of state rule or permit requirements. Current Section 9.5 should be renumbered 9.6 and other following sections should be similarly renumbered.

ECOLOGY RESPONSE

Partial concurrence. Change.

Reporting of noncompliance is already required by the general permit. Subsection 9.19.4 states, “You must report all instances of noncompliance as soon as possible, but not more than 30 days after becoming aware of the noncompliance, unless as a condition of your permit coverage or other administrative action you are required to report sooner.” However, based upon other comments received during the public comment period, in the final general permit Ecology has changed “30 days” to “five days” in Subsection 9.19.4.

The NBMA supports the inclusion of a spill prevention/response plan under 9.8.1 of the renewing permit. We oppose the specific examples cited in the agency's summary of significant changes. We do not believe that tarping should be required, nor would it necessarily prevent spills. This should be considered on a case-by-case basis. We also think admonitions regarding speeding are beyond the authority of the agency, and in any event will not prevent spills where the improper actions of other motorists are involved. We support the proposal in the Small Business Economic Impact Statement prepared by Ecology, which recommends an agency template be developed to minimize costs to permit holders. We further recommend that this template not be required for agencies which do wish to develop custom plans of their own.

ECOLOGY RESPONSE

Partially concur. No change.

Some spills known to Ecology could, in fact, have been prevented by tarping. Regardless, while generally tarping is a good practice for transporting any materials in open beds, Ecology does not believe that tarping should always be required. Specific requirements can and should be based on material- and facility-specific conditions, and that's one of the purposes for requiring a Spill Prevention/Response Plan. Ecology, of course, recognizes that we cannot enforce speed limits. However, transporters of biosolids should recognize that one of the most visible aspects of biosolids management is often the transportation of the material. Numerous complaints have been received in the past regarding transportation of biosolids. Mistakes made during the transportation of biosolids can be very costly in terms of public support for a facility's biosolids management program in particular and the state biosolids program in general. Ecology intends to develop a plan template but does not intend to require adoption of it.

Regarding equation 13.1 under 13.6 of the proposed general permit, the NBMA requests that the agency clarify either in its responsiveness summary or in the proposed general permit, that the formula for land application of septage is the extent of agronomic rate determinations for septage applied to the land as such. That is, the more complex method of agronomic rate determinations found in Ecology's Biosolids Management Guidelines and similarly elsewhere is not required for simple, septage land application operations. We also ask that the agency cite federal guidance regarding the proper method of back-calculation of the application rate when septage is dewatered. The NBMA believes that the staff time and resources consumed by Ecology in implementing septage management portions of the state biosolids program are in significant disproportion to the revenues collected. We are concerned that education of the septage management community and compliance issues are a disproportionate drain on agency resources which hinders proper implementation of the program for other fee payers. We are also concerned that the current approach to septage management does not support good environmental stewardship. The NBMA requests that the agency seek equity in the fee system and use of fees. We recommend increasing the fees for septage management. One possible approach would be to change the basis for residential equivalent calculation from 1,250 gallons per RE, to the 250 gallons per RE which has been used in other cases. This would require further analysis by the agency and stakeholders and is just one possible course of action.

ECOLOGY RESPONSE

Concur. Change.

Section 13 has been altered substantially due to formatting and content changes based on comments received during the public comment period. The first statement of the altered section states the following: "Domestic septage applied to the land must either be managed in

accordance with the provisions described in this section, or it must be managed as biosolids originating from municipal sewage sludge. When domestic septage is managed as biosolids originating from municipal sewage sludge, the material must meet all the quality and site management requirements (including application rate determinations) applicable to the particular classification of biosolids into which it falls.” The remainder of the section applies only to septage managed as such. The language in Subsection 13.6 (now Subsection 13.11) has been amended in the final general permit to state, “The application rate for domestic septage must be determined by Equation 13.1, below. Equation 13.1 can be amended for facilities that manage a dewatered domestic septage product. In such cases, please review the approach for calculating the dewatered domestic septage application rate described in the guidance document, “*Domestic Septage Regulatory Guidance*”; this document is listed in Subsection 3.10(6).”

Ecology concurs with the comments regarding the disproportionate fee structure and the staff time associated with addressing septage management issues. The recommendation by the commenter regarding a possible approach to developing a more equitable fee structure is appreciated. Implementing the specific recommendation, however, would require changes to the current state biosolids rule. Later this year, the department intends to commence a process to develop a system that better addresses septage management issues. It is expected that this process will include amending the current state biosolids rule, especially with regards to septage management.

The NBMA opposes the removal of the reduced permit fee for incinerators in 16.1 of the proposed permit. We believe a reduced fee continues to be appropriate and that Ecology should implement the incinerator fee as originally intended.

ECOLOGY RESPONSE

Partially concur. Change.

Ecology agrees that a reduced fee for facilities whose biosolids are incinerated is appropriate. However, Ecology does not agree that the fee structure in the original permit was appropriate. Under the previous fee structure, biosolids incinerators were charged no fee. For the following reasons Ecology believes that a fee should be charged to facilities whose biosolids are incinerated to help support the state biosolids program: 1) Ecology has to permit facilities whose biosolids are incinerated for the transfer of biosolids within the incineration facility, for the transfer of biosolids from the treatment plant to the incineration facility, for the transfer of biosolids from other treatment plants to the incineration facility, and for the disposal of biosolids in a municipal solid waste facility; 2) facilities whose biosolids are incinerated must submit annual reports to Ecology, and Ecology must review these reports and enter information from them; 3) Ecology must provide technical assistance to facilities whose biosolids are incinerated in instances when other management alternatives are sought (e.g. when the incinerator is out-of-commission; 4) charging no fee to facilities whose biosolids are incinerated (i.e. the biosolids are not managed for a beneficial purpose) appears to conflict with the state biosolids program goal of maximizing beneficial use. It should be noted that for facilities whose biosolids are incinerated the cost per residential equivalent (RE) determined under WAC 173-308-320(4)(e)(ii) is very low (e.g. it is <10% of the cost per RE for a facility whose biosolids are land applied for a beneficial purpose). The resulting full permit fees in 2005 resulting from the current cost per RE for the five municipal biosolids incineration facilities in the state would

have ranged from \$117.52-\$767.85. In the final general permit, Ecology has maintained the deletion of the subsection in the original general permit which allowed for a fee of \$0.00 but has reinserted the allowance for a fee of a maximum of \$500.00. The final general permit contains a new bullet under Subsection 16.1 stating, “The permit fee for municipalities that operate incinerators applicable under this permit is the amount calculated under WAC 173-308-320 or \$500.00 per year, whichever is less.” Thus, no facility whose biosolids are incinerated will pay a biosolids permit fee of greater than \$500.00.

The NBMA found the responsiveness summary format developed by the agency for the original rule and general permit to be extremely helpful in providing a clear understanding and durable record of the agency’s decisions regarding comments received. We ask that the agency use the same approach in drafting a responsiveness summary to the proposed permit.

ECOLOGY RESPONSE

No change.

This responsiveness summary is very similar to that used for the responsiveness summary for the original general permit.

Commenter(s): Dick Hetherington

Organization: USEPA Region 10

Comment(s) or Question(s):

To be consistent with the NPDES biosolids permits program, Washington should consult with the public/interested agencies every time the state re-issues coverage for a permitted activity. Every land application site and biosolids management plan must be up for public review and comment every permit cycle.

Every cycle the NPDES agency should ask the public and interested agencies 'should this permitted activity be continued unchanged', 'what do you think of the changes we have made in the permit for this activity', and 'what has been your experience with this activity'?

At the time a draft permit is prepared for issuance (or re-issuance), the permit agency consults with the public on all known activities. The permit agency is normally not allowed to postpone public notice on known sites and plans. The biosolids practice of post-permit public notice is limited to (1) unknown future sites and to (2) areas which are strictly limited and which have been discussed with the public before the permit is issued.

So we would normally expect the state to public notice with the draft permit all the plans and sites currently known to the state. As a start, you could put your list/database of the plans and sites covered under the prior permit up on the permit web site, or on another part of your program site.

You might be allowed to add a statement that the state intends to extend permit coverage to these same plans and sites. You may want to extend the time period for public comment based on the date you get this information on the site. For each site and plan we suggest listing at least the county affected.

Under the federal rules the state can operate a program with a 10-year permitting cycle. You might want to consider this for the future.

We particularly ask that you consider as "interested parties" the federal agencies responsible for endangered species, the tribes, and EPA. We also believe the USDA Natural Resources Conservation Service, the BLM, and the US Forest Service may be interested.

EPA does issue permits that are unchanged. But the public and interested agencies are still consulted every time.

Following such procedures, the NPDES program eventually built credibility for, and public confidence in, wastewater permitting. This took many permit cycles. Hopefully, biosolids permitting can someday do the same.

ECOLOGY RESPONSE

Partially concur. No change. Subscriber added.

Ecology appreciates the comments and suggestions regarding public notice. The state biosolids rule contains a provision that does not require reissuance of public notice when applying for coverage under a new general permit for facilities that have already gone through the full public notice process previously if such facilities remain in compliance with the state biosolids rule, the biosolids general permit, any additional and more stringent conditions issued as part of final coverage, and their own submitted plans and if they are not proposing or anticipating any "significant" changes. The intent of this provision was to streamline the process for reissuing coverage under a new general permit for those facilities that are both in compliance and not proposing any significant changes to their program. However, the state biosolids rule does allow Ecology to require full public notice if deemed appropriate even for such facilities.

Extensive public notice has taken place during the development of a new biosolids general permit. Ecology first issued notice in the state register, in newspapers across the state, and to an "interested parties" list back in December 2003. This notice provided a means of accessing the list of 324 facilities that have issued a notice of intent to reapply/obtain coverage under a new general permit. At that time, a link to the list was posted on the state's biosolids website and has remained posted there since. In April 2005, Ecology issued notice for the draft general permit by posting a thorough notice in the state register and in newspapers across the state and by issuing a news release. In addition, Ecology set-up a general permit website at this time and accepted comments on the draft permit for a 38-day period. Each time notice has been published, the notice has included information on the number of facilities that have issued a notice of intent to reapply/obtain coverage under a new general permit and information on how to access the list of such facilities; the biosolids general permit website has a link to this list also. An exhaustive list of the facilities and their specific sites was not cited in the notices due to space and information limitations. The intention of Ecology was that if any person had questions or concerns, they would contact either Ecology or the specific facility, and we (or the specific facility) would at that time provide them with specific information on the facility and any associated land application sites or other biosolids management activities in addition to placing the interested party on the facility's "interested parties" list to receive information about

future biosolids management activities. Ecology also held two public hearings (one for each side of the state) regarding the draft general permit during which any specific facility or site could be commented upon or discussed. Chapter 173-226 WAC (the state's general permit rule) is the rule governing the issuance of a new general permit. The process for public notice that Ecology has undertaken has actually gone well-beyond that required by this rule. This approach was deemed to be more than sufficient to provide the public with ample opportunity to access information and to make comments. Nevertheless, Ecology will consider amending the public notice requirements in the state biosolids rule in the future in order to make the requirements more clearly consistent with those described by the commenter for NPDES permits. USEPA Region 10 will be consulted and asked to participate in the process for amending the state biosolids rule when this occurs.

With respect to the potentially "interested parties" the commenter cites, each of the suggested agencies/services has numerous offices across the state with no clear contact for statewide issues. It would be impractical to place each office on the "interested parties" list. Moreover, the suggested agencies/services were allowed to request to be placed on the interested parties list but did not do so. If proposals surface that seek to apply biosolids to lands under the jurisdiction of any of the suggested agencies/services, the appropriate agency/service will be involved in the process for that site. Rather than adding all the suggested federal agencies/services to the list, Ecology has placed the US Environmental Protection Agency, Region 10 office on the "Biosolids General Permit Subscribers List". USEPA Region 10 (as well as others on the list) will receive a copy of the final permit, a copy of the final responsiveness summary, and information on the option to appeal the issuance of the final permit. If the USEPA Region 10 deems it appropriate, they are encouraged to forward the documents to any other federal agencies/services such as those suggested by the commenter.

Commenter(s): Marlene Knapp

Comment(s) or Question(s):

I cannot believe that this facility (Webb Hill Facility in Shelton, WA) has gone on so long, so near the canal. I moved here about 1 year ago and the more I find out about it the more I think there is something shady going on here. Sewage, some untreated, has been dumped here since 1988. It comes from the whole west side of the state. When we are outside we hear a steady stream of double tankers going there. All this is dumped on an area less than a mile square at about 3 ½ inches deep per year!! The trucks stink so bad when you get close to them that you have to hold your nose. I find it hard to believe that the federal DOE would allow this. What is their address?

ECOLOGY RESPONSE

No change.

The facility described by the commenter is a permitted facility that treats septage and biosolids from wastewater treatment plants in a manner that achieves a Class B biosolids product through alkaline stabilization over a period of 24 hours. The facility has an excellent compliance history. The facility and/or the local health department samples soils, groundwater, and surface water associated with the site. The extensive sampling conducted at the facility is used to ensure that the amount of nutrients applied are being matched with the nutrient uptake by the vegetation and that constituents of concern are not leaving the application site or the rooting

zone of the vegetation. The commenter appears to be referring to the USEPA when referencing “the federal DOE”. The USEPA does allow the land application of biosolids, including septage, in accordance with 40 CFR Part 503. Contact information for USEPA, Region 10 in Seattle is: Dick Hetherington, OW-130
EPA NPDES Permits Unit
1200 6th Avenue
Seattle, WA 98101
Office: 206/553-1941
Toll Free: 800/424-4EPA (4372)
Fax: 206/553-016
Email: hetherington.dick@epa.gov

The commenter is encouraged to address complaints about traffic or odors through the appropriate channels. The general permit does not address either of these issues.

Commenter(s): Peggy Leonard

Organization: King County Wastewater Treatment

Comment(s) or Question(s):

King County supports the addition of a spill prevention/response plan under 9.8.1 of the proposed permit. Biosolids hauling is often the most visible and most criticized aspect of a land application program. Haul trucks may be the only part of a biosolids project that the general public sees. Odors, leaks, and other problems with trucks send a message that biosolids are not being carefully managed.

ECOLOGY RESPONSE

No Change.

The final general permit contains this requirement.

We also support the elimination of resubmitting land application plans, section 6.1.1.3, when biosolids practices have not changed and the plans have been previously approved or comply with all Ecology requirements.

ECOLOGY RESPONSE

No Change.

The final general permit contains this allowance.

The proposed change in public notice, section 5.5.2.4, seems unnecessary and subject to interpretation as currently written. There are at least three elements that are unclear: (a) what is a "reasonable" attempt; (b) does "adjacent" specifically mean "adjoining" property owners or those within a certain distance; and (c) how is a "site" defined, especially for large blocked ownerships. The SEPA rules (WAC 197-11-510) already define six types of reasonable methods of public notice, including site posting and targeted mailings. The biosolids rule also specifies types of public notice, which have been working well for our sites. With very large land holdings, there will be uncertainty about the meaning of "adjacent" landowners. At such large sites, biosolids are often applied only in the interior of the ownership block, not adjacent to any other landowner. At these large blocks, there could be a perimeter of 75+ miles, with

many adjoining landowners, but very few landowners that would be nearby or that could actually be affected by the project. So we suggest that, for the general permit, the public notice requirements be left as they are specified in the biosolids rule. Any sites that require additional targeted public notice could be addressed in specific permit conditions.

ECOLOGY RESPONSE

Partially concur. Change.

Ecology recognizes the primary argument made by the commenter that site- and facility-specific conditions should dictate the appropriate method for conducting public notice. Subsection 5.5.2.4 has been deleted from the final general permit. However, Ecology has maintained Subsection 5.5.2.1(2) which requires a facility to issue public notice by any method required by the department. It should be recognized that it is not always correct that, “additional targeted public notice could be addressed in specific permit conditions”. “Specific permit conditions”—otherwise known as “additional and more stringent conditions”—are only issued during issuance of final coverage under the general permit, and this is done only after public notice has already been completed. Thus, any such conditions could only address public notice for future sites, not for those included in the original public notice. The original language in Subsection 5.5.2.4 should have used the term “adjoining” rather than “adjacent”. Ecology believes that ideally for every site where Class B biosolids is proposed to be applied, the proponent should make a “reasonable” effort to contact the owners of all “adjoining” properties either by way of a phone call, letter, email, or direct contact. However, site- and facility-specific conditions should be used to determine the most appropriate method for conducting public notice.

Commenter(s): John Merchant

Organization: City of Port Townsend

Comment(s) or Question(s):

Currently the City of Port Townsend has permits with the DOE (WWTF, NPDES) (Compost Facility, ST Discharge) and a (biosolids permit) and the Local Health Department (solid waste). If the City has a permit with the LHD and we are composting to produce an exceptional quality biosolids does the City have to apply for the Biosolids General Permit? If so, I am confused on what criteria is the city to comply with. Do we comply with WAC 173-308 or WAC 173-350? The City composts using the Aerated Static Pile Process using yard waste materials with our biosolids and septage solids. The City is paying permit fees for all these permits as well.

ECOLOGY RESPONSE

Ecology replied directly to the commenter stating the following. “All facilities meeting the definition of a treatment works treating domestic sewage must apply for coverage under the biosolids general permit. This, of course, would include the Port Townsend Wastewater Treatment Plant (WWTP). With respect to the biosolids/septage composting facility, we have previously determined that for facilities that are not part of ongoing wastewater treatment plant facility operations, permitting can be done either under a biosolids permit (WAC 173-308) issued by Ecology or a solid waste permit (WAC 173-350) issued by a LHD. Since the Port Townsend composting facility is separate from the WWTP operations, it can be permitted under -350. The requirements, if done under a -350 permit, are that: 1) Ecology and the local health department agree in writing that a -350 permit is adequate and 2) the permit conditions be at

least as stringent as they would have been under a -308 permit. It is my understanding that these conditions are in place and that the Port Townsend composting facility is permitted under -350. Given this, the answer to your question is that you need to be in compliance with your -350 permit for the composting facility, and doing so should ensure that you're also in compliance with -308. The WWTP will still need a -308 permit, however.

Commenter(s): Al Smith, Duane Leaf

Organization: Cowlitz Water Pollution Control

Comment(s) or Question(s):

General Comment #1: Cowlitz Water Pollution Control (CWPC) supports the approach of a general permit for biosolids management.

ECOLOGY RESPONSE

Comment acknowledged.

General Comment #2: CWPC agrees with and supports the comments generated by the Northwest Biosolids Management Association (NBMA).

ECOLOGY RESPONSE

Please see Ecology responses to the comments generated by the NBMA and submitted by Jim Fleming.

General Comment #3: CWPC emphasizes the comment of the NBMA concerning the issue of septage, and further encourages the WDOE to apply a more equitable fee structure as it pertains to septage so that time and expenses attributed to septage management are less subsidized by POTW biosolids permit fees.

ECOLOGY RESPONSE

Concur.

Please see Ecology responses to the comments generated by the NBMA and submitted by Jim Fleming regarding septage management issues. Ecology concurs with the comments regarding the need for a more equitable fee structure and the appearance of the subsidization of some septage management activities by some POTWs. As stated in the response to the NBMA comments, later this year the department intends to commence a process to develop a system that better addresses septage management issues, including permit fees.

Section 9.1 - 9.10 Comment: CWPC encourages the addition of a prompt reporting directive when there are observed deviations from permit requirements or guidelines. We see the potential for the excursions to remain un-reported until the March reporting deadline.

ECOLOGY RESPONSE

Partial concurrence. Change.

Reporting of noncompliance is already required by the general permit. Subsection 9.19.4 states, "You must report all instances of noncompliance as soon as possible, but not more than 30 days after becoming aware of the noncompliance, unless as a condition of your permit coverage or other administrative action you are required to report sooner." However, based upon other comments received during the public comment period, in the final general permit Ecology has changed "30 days" to "five days" in Subsection 9.19.4.

Commenter(s): Daniel C. Thompson

Organization: City of Tacoma

Comment(s) or Question(s):

We support Ecology’s approach to streamlining the permit renewal process for renewing facilities which have properly complied with permit process requirements and are not proposing any significant changes in biosolids management practices.

ECOLOGY RESPONSE

No change.

Ecology has maintained the provisions intended to streamline the renewal process for facilities that are in compliance and that are not proposing any significant changes.

The City of Tacoma believes the provisions of section 4.2 of the proposed permit should be amended to address all areas outside of the jurisdiction of the Washington State Department of Ecology. Specifically, this would then extend to Indian lands (at least), and not be limited to out of state transfer of biosolids.

ECOLOGY RESPONSE

Concur. Change.

Ecology agrees that the provisions in Subsection 4.2 need to be amended. This has occurred in the final general permit language. The language, “outside the state of Washington” has been changed to read, “outside the jurisdiction of the state of Washington”, and a sentence reading, “Facilities outside the jurisdiction of the state of Washington include those located on tribal lands, those located in other states, and those located in other nations” has been added.

The City of Tacoma opposes changes in section 5.5.2.4 of the proposed permit regarding reasonable attempts to notify adjacent landowners. The standard for reasonableness is vague and open for interpretation, thus inviting conflict. Both the state biosolids rule and SEPA have a clearly defined public notice process which can include newspaper notice, posting of proposed land application sites, and notice to an interested parties list. We believe this is a good process and that the proposed change will be a burden to permit applicants which cannot be successfully implemented.

ECOLOGY RESPONSE

Partially concur. Change.

The term “reasonable” is necessarily vague and will always be subject to interpretation and cannot be specifically defined. Ecology does not believe that this fact alone is sufficient to remove Subsection 5.5.2.4. However, consideration of other comments received during the public comment period have resulted in the deletion of Subsection 5.5.2.4 from the final general permit. Ecology has maintained Subsection 5.5.2.1(2) which requires a facility to issue public notice by any method required by the department. The original language in Subsection 5.5.2.4 should have used the term “adjoining” rather than “adjacent”. Ecology believes that ideally for every site where Class B biosolids is proposed to be applied, the proponent should make a “reasonable” effort to contact the owners of all “adjoining” properties either by way of a phone call, letter, email, or direct contact. However, site- and facility-specific conditions should be used to determine the most appropriate method for conducting public notice.

The City of Tacoma supports the elimination of resubmitting land application plans in 6.1.1.3 of the general permit, when those plans have been previously approved and practices remain unchanged, or which remain subject to review but which comply with the basic requirements for the content of land application plans. This is an excellent approach to minimizing the burden of permitting without compromising the intended ends.

ECOLOGY RESPONSE

No Change.

The final general permit contains this allowance.

The City of Tacoma requests that Ecology clarify the provision of 8.2.4 of the general permit regarding a reduction in the frequency of monitoring. The City of Tacoma believes the ability to request such a reduction should remain available to permit holders, according to the agency's good judgment, unless such future reduction is specifically eliminated as an additional or more stringent requirement during the approval of coverage process. The potential loss of this flexibility would not otherwise be immediately evident to permit applicants, who might then subsequently forego an opportunity for appeal of the permit condition.

ECOLOGY RESPONSE

Concur. Change.

The commenter appears to be referring to a situation in which during the issuance of final coverage under the general permit Ecology includes an "additional and more stringent" condition that requires certain monitoring requirements. Ecology agrees that under such a situation, the allowance to request a reduction in monitoring in accordance with Subsection 8.2.4 (and WAC 173-308-150) should be maintained unless Ecology specifically states in the condition that no reduction is allowed. The following language has been added to Subsection 8.2.4 in the final general permit, "This provision applies to any monitoring requirement(s) included as an "additional and more stringent" condition issued by the department as part of final coverage under this permit unless the additional and more stringent condition specifically states that the monitoring requirement(s) may not be reduced."

A subsection should be added to Section 9 of the general permit. Section 9.5 should require prompt reporting of any observed violations of state rule or permit requirements. Current Section 9.5 should be renumbered 9.6 and other following sections should be similarly renumbered.

ECOLOGY RESPONSE

Partial concurrence. Change.

Reporting of noncompliance is already required by the general permit. Subsection 9.19.4 states, "You must report all instances of noncompliance as soon as possible, but not more than 30 days after becoming aware of the noncompliance, unless as a condition of your permit coverage or other administrative action you are required to report sooner." However, based upon other comments received during the public comment period, in the final general permit Ecology has changed "30 days" to "five days" in Subsection 9.19.4.

The City of Tacoma supports the inclusion of a spill prevention/response plan under 9.8.1 of the renewing permit. We oppose the specific examples cited in the agency's summary of significant changes. We do not believe that tarping should be required, nor would it necessarily prevent spills. This should be considered on a case-by-case basis. We also think admonitions regarding

speeding are beyond the authority of the agency, and in any event will not prevent spills where the improper actions of other motorists are involved. We support the proposal in the Small Business Economic Impact Statement prepared by Ecology, which recommends an agency template be developed to minimize costs to permit holders. We further recommend that this template not be required for agencies which do wish to develop custom plans of their own.

ECOLOGY RESPONSE

Partially concur. No change.

Some spills known to Ecology could, in fact, have been prevented by tarping. Regardless, while generally tarping is a good practice for transporting any materials in open beds, Ecology does not believe that tarping should always be required. Specific requirements can and should be based on material- and facility-specific conditions, and that's one of the purposes for requiring a Spill Prevention/Response Plan. Ecology, of course, recognizes that we cannot enforce speed limits. However, transporters of biosolids should recognize that one of the most visible aspects of biosolids management is often the transportation of the material. Numerous complaints have been received in the past regarding transportation of biosolids. Mistakes made during the transportation of biosolids can be very costly in terms of public support for a facility's biosolids management program in particular and the state biosolids program in general. Ecology intends to develop a plan template but does not intend to require adoption of it.

Regarding equation 13.1 under 13.6 of the proposed general permit, the City of Tacoma requests that the agency clarify either in its responsiveness summary or in the proposed general permit, that the formula for land application of septage is the extent of agronomic rate determinations for septage applied to the land as such. That is, the more complex method of agronomic rate determinations found in Ecology's Biosolids Management Guidelines and similarly elsewhere is not required for simple, septage land application operations. We also ask that the agency cite federal guidance regarding the proper method of back-calculation of the application rate when septage is dewatered. The City of Tacoma believes that the staff time and resources consumed by Ecology in implementing septage management portions of the state biosolids program are in significant disproportion to the revenues collected. We are concerned that education of the septage management community and compliance issues are a disproportionate drain on agency resources which hinders proper implementation of the program for other fee payers. We are also concerned that the current approach to septage management does not support encourage good environmental stewardship. The City of Tacoma requests that the agency seek equity in the fee system and use of fees. We recommend increasing the fees for septage management. One possible approach would be to change the basis for residential equivalent calculation for septage from 1,250 gallons per RE, to the 250 gallons per RE which has been used in other cases. This would require further analysis by the agency and stakeholders and is just one possible course of action.

ECOLOGY RESPONSE

Concur. Change.

Section 13 has been altered substantially due to formatting and content changes based on comments received during the public comment period. The first statement of the altered section states the following: "Domestic septage applied to the land must either be managed in accordance with the provisions described in this section, or it must be managed as biosolids originating from municipal sewage sludge. When domestic septage is managed as biosolids originating from municipal sewage sludge, the material must meet all the quality and site

management requirements (including application rate determinations) applicable to the particular classification of biosolids into which it falls.” The remainder of the section applies only to septage managed as such. The language in Subsection 13.6 (now Subsection 13.11) has been amended in the final general permit to state, “The application rate for domestic septage must be determined by Equation 13.1, below. Equation 13.1 can be amended for facilities that manage a dewatered domestic septage product. In such cases, please review the approach for calculating the dewatered domestic septage application rate described in the guidance document, “*Domestic Septage Regulatory Guidance*”; this document is listed in Subsection 3.10(6).”

Ecology concurs with the comments regarding the disproportionate fee structure and the staff time associated with addressing septage management issues. The recommendation by the commenter regarding a possible approach to developing a more equitable fee structure is appreciated. Implementing the specific recommendation, however, would require changes to the current state biosolids rule. Later this year, the department intends to commence a process to develop a system that better addresses septage management issues. It is expected that this process will include amending the current state biosolids rule, especially with regards to septage management.

The City of Tacoma opposes the removal of the reduced permit fee for incinerators in 16.1 of the proposed permit. We believe a reduced fee continues to be appropriate and that Ecology should implement the incinerator fee as originally intended.

ECOLOGY RESPONSE

Partially concur. Change.

Ecology agrees that a reduced fee for facilities whose biosolids are incinerated is appropriate. However, Ecology does not agree that the fee structure in the original permit was appropriate. Under the previous fee structure, biosolids incinerators were charged no fee. For the following reasons Ecology believes that a fee should be charged to facilities whose biosolids are incinerated to help support the state biosolids program: 1) Ecology has to permit facilities whose biosolids are incinerated for the transfer of biosolids within the incineration facility, for the transfer of biosolids from the treatment plant to the incineration facility, for the transfer of biosolids from other treatment plants to the incineration facility, and for the disposal of biosolids in a municipal solid waste facility; 2) facilities whose biosolids are incinerated must submit annual reports to Ecology, and Ecology must review these reports and enter information from them; 3) Ecology must provide technical assistance to facilities whose biosolids are incinerated in instances when other management alternatives are sought (e.g. when the incinerator is out-of-commission; 4) charging no fee to facilities whose biosolids are incinerated (i.e. the biosolids are not managed for a beneficial purpose) appears to conflict with the state biosolids program goal of maximizing beneficial use. It should be noted that for facilities whose biosolids are incinerated the cost per residential equivalent (RE) determined under WAC 173-308-320(4)(e)(ii) is very low (e.g. it is <10% of the cost per RE for a facility whose biosolids are land applied for a beneficial purpose). The resulting full permit fees in 2005 resulting from the current cost per RE for the five municipal biosolids incineration facilities in the state would have ranged from \$117.52-\$767.85. In the final general permit, Ecology has maintained the deletion of the subsection in the original general permit which allowed for a fee of \$0.00 but has reinserted the allowance for a fee of a maximum of \$500.00. The final general permit

contains a new bullet under Subsection 16.1 stating, “The permit fee for municipalities that operate incinerators applicable under this permit is the amount calculated under WAC 173-308-320 or \$500.00 per year, whichever is less.” Thus, no facility whose biosolids are incinerated will pay a biosolids permit fee of greater than \$500.00.

The City of Tacoma found the responsiveness summary format developed by the agency for the original rule and general permit to be extremely helpful in providing a clear understanding and durable record of the agency’s decisions regarding comments received. We ask that the agency use the same approach in drafting a responsiveness summary to the proposed permit.

ECOLOGY RESPONSE

No change.

This responsiveness summary is very similar to that used for the responsiveness summary for the original general permit.

Commenter(s): Heather Trim, Urban Bays Project Coordinator

Organization: People For Puget Sound

Comment(s) or Question(s):

Our main concern with the proposed permit is that the contaminants of concern are restricted to metals and nutrients. Emerging chemicals and toxic chemicals should be monitored as well, and if needed, should be limited.

“Emerging chemicals,” such as birth control drugs, painkillers, and other pharmaceuticals, have recently been assessed in studies by the United States Geological Survey and others. Wastewater is considered one of the main sources for these chemicals to surface waters, groundwater and sediment. These chemicals are designed to be stable at temperatures in the human body and long-lived and thus do not readily break down.

In addition, toxic chemicals of recent concern including Polybrominated Diphenyl ethers (PBDEs), perfluorinated chemicals as well as Bisphenol A (BPA) and phthalates are also being found in the water and sediment ecosystem. These chemicals have found in household dust, human breast milk and in wildlife. One major pathway into the water and sediment system is in wastewater streams. Legacy toxic chemicals such as dioxins, DDT and to a certain extent PCBs are also of concern in wastewater as well. All of these chemicals partition into sediment or to particles and thus will settle into the biosolids during treatment.

We are concerned that these emerging and toxic chemicals are building up in the soils where the biosolids are spread, that these chemicals may be taken up by the plants (especially food stock) and that the workers at the farms or handling the transfer of the biosolids may be exposed at unsafe levels.

People For Puget Sound requests that the draft *General Permit for Biosolids Management* include a monitoring requirement for toxic chemical of concern. This could be a tiered approach, depending on the mass of biosolids and the intended use of the biosolids. Toxic chemicals must be addressed so that we can protect our food chain and wildlife.

ECOLOGY RESPONSE

Partially concur. No change.

Ecology shares some of the concerns expressed by the commenter regarding the potential for adverse impacts from some of the compounds discussed. Ecology is involved in work examining the presence of and means for elimination of some of the compounds cited. The focus in the general permit on metals (including some plant micronutrients) and plant macronutrients is due to many factors. The primary rationale for focusing on these constituents in biosolids is that during development of the federal and state biosolids regulations, it was these constituents that were believed to potentially pose the greatest impact to human health and the environment from biosolids management. We actually know quite a lot about the concentration of these constituents in biosolids and what happens to them following the application of biosolids. Unfortunately, that is not the case with the compounds cited by the commenter. There currently is a dearth of research on the presence of the compounds in biosolids and a far greater lack of research on the potential risk posed by the compounds from biosolids. However, some research is currently underway, and significantly more research is being planned.

It should be noted that biosolids (and wastewater) are not the direct source of the compounds but, rather, one of several repositories of the compounds. The compounds in biosolids can then potentially be transferred to the environment through land application. The little work that has been done to date indicates that the concentration of some of the compounds in biosolids (PBDEs, for example) are many orders of magnitude lower than the concentration found in some everyday products. Thus, we would expect that any risk from these particular compounds due to biosolids would be orders of magnitude lower than any risk posed by our everyday activities.

With respect to contamination of the food chain due to biosolids applications, please consider the following.

- 1) In order for the compounds to get from the biosolids to a human, the soils where vegetation is grown would have to be amended with biosolids, the biosolids would have to remain on the vegetation, then the vegetation would have to be consumed by the human or by an animal which is subsequently consumed by a human.
- 2) The vast majority of biosolids are not applied directly to vegetation. Rather, the biosolids are typically applied, the soil is tilled and seeded, then a crop is grown. So, there is no direct contact of the biosolids with the harvested vegetation when managed in the most common manner.
- 3) In situations where biosolids are applied directly to pasture or rangeland upon which cattle (many of which will eventually be consumed by humans) are grazed, the estimated percent of direct soil (including biosolids) consumption by the animal is 2.5-6%--depending on whether grazing occurs seasonally or throughout the year. Of course, biosolids would only make-up a fraction of the consumed soil matrix. Thus, the portion of the diet which could include biosolids in these management scenarios would only be a very small fraction of the overall diet.
- 4) Results from 2003 annual biosolids reports for facilities in the state show that <0.09% of the agricultural land in the state receives biosolids in any given year. Agricultural land includes pasture/rangeland sites as well as sites where crops are grown.

Considering all of the above, it is expected that the probability of consuming any of the compounds cited as a result of biosolids application is extremely low. Regardless, much research needs to be conducted to better assess the potential risk from biosolids both on humans and the environment.

Ecology does not believe that at this time it would be appropriate to require testing of the compounds cited by the commenter for several reasons, including the following: 1) for some of the compounds adequate analytical methods don't even exist, 2) at present we wouldn't be able to properly evaluate any data we received, and 3) the tests that can be conducted are frequently very expensive. Ecology does, however, believe that facilities that produce and manage biosolids should be aware of the concerns regarding these compounds and that they should seriously consider participating in and helping to fund some of the research that is currently being considered regarding these compounds.

Please note that while Ecology does not support a requirement for testing of the described compounds at this time, when our understanding of the presence of and risk of the cited compounds is greater, if deemed appropriate at such time, Ecology will reconsider testing requirements.