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Via e-mail to akra461@ecy.wa.gov and bbic461@ecy.wa.gov

**Re: Fire Mountain Farms - Rosman Farms Site Specific Land Application Plan proposal**

Mr. Krafft:

This letter is submitted on behalf of Morton Alexander and Ernest Barrett. Mr. Alexander and Mr. Barrett are property owners in the Mill Canyon area of Lincoln County, near the Rosman Farms properties for which biosolids use is proposed. Mr. Alexander maintains an organic orchard. Both are deeply concerned that escape of biosolids materials from the Rosman property will contaminate their lands, water supply, and food. They are joined in their concerns by dozens of others who live in the canyon, many of whom have provided comments on the Fire Mountain Farms-Rosman Farms proposal at the October 11 hearing, or will do so during the written comment period.

It is difficult to understand why, with 2 million acres of rolling wheat fields in eastern Washington, Fire Mountain Farms (FMF) would propose Rosman Farms as a site to apply biosolids. Rosman Farms sits atop a highly erosive rim of the Columbia Plateau where water, soil, and rock routinely course into steep canyons that surround his property, eventually discharging into the Spokane River drainage. This is not a place where the landowner can exercise control over the often harsh elements that act on his property. It *is* a place where activities that occur on the rim above can and do affect people, water, vegetation and wildlife in the incised arroyos below.

Biosolids and their use are heavily regulated. The Department of Ecology has a duty to ensure that entities that wish to alter the environment through application of materials that are known to contain pollutants, even requiring warning signs to keep the public away, do so in a manner that does not harm third parties. This letter is submitted to assist the Department in understanding the issues and threats associated with the FMF-Rosman Farms proposal, and the Department's authorities in addressing those issues and threats. We conclude with a set of requests and recommendations relating to the decision on the proposed permit.

## I. Overview of Issues.

As set forth below, Mr. Barrett and Mr. Alexander have numerous concerns. First, the FMF-Rosman Farms biosolids application and associated SEPA checklist lack critical information that is needed to both inform the public and assist the Department, as decision maker, in determining whether it is appropriate

to issue a letter of coverage and if so, what special conditions need to be added to protect the neighboring community.

Second, Rosman Farms contains steep slopes, highly erodible soils and drainage patterns that promote surface water runoff and make the property largely unsuitable to receive biosolids. Crop fallowing and tillage practices combined with the wind erosion that characterizes eastern Washington dryland agriculture will lead to windborne release of biosolids particles into Mill Canyon and beyond. Recent catastrophic flood events in Mill Creek Canyon are evidence of the erosive potential of the farmlands above the canyon.

Third, the escape of biosolids and constituent pollutants off of the Rosman Farms property could cause substantial damage to my clients. At risk are human health, water supplies, organically grown food and organic food certifications, and general ecological health of the Mill Creek and Harker Canyon areas.

Fourth, both Fire Mountain Farms and Rosman Farms have negative track records with respect to compliance with biosolids law. FMF has been the subject of several regulatory orders, issued by the Department, for mixing dangerous waste with biosolids, and was recently denied coverage for some of its application sites in western Washington. B&B Septic has been applying septage to Rosman Farms for several years, and we believe has over-applied that product to fields that drain to Angel Springs. This poor compliance record indicates a need, at minimum, to impose stringent monitoring conditions on any approval of FMF biosolids use, if not outright denial of the request for coverage. Because neither the SSLAP application nor SEPA checklist acknowledged the historic and continuing use of septage on Rosman fields, we are concerned about double application of biosolids.

Fifth, Mr. Alexander and Mr. Barrett have legitimate concerns about the content of biosolids and the dangers they pose to public health and the environment. This concern is exacerbated by the fact that FMF does not know where the biosolids will originate that will be spread on Rosman Farms, or how they will be treated.

Finally, it is important to note that Mr. Alexander and Mr. Barrett attempted to negotiate a new landowner consent form with Mr. Garry Rosman which would have removed certain unsuitable lands from biosolids use and establish buffers to protect neighboring properties. Eventually Mr. Rosman broke off discussions. Had he agreed to my clients' reasonable proposal, we would have avoided the resource expenditures and stress to Mill Canyon residents required to respond to the SSLAP proposal.

## II. Procedural Issues.

The biosolids rule requires that all facilities submit a complete and factually correct permit application, and that the site specific land application plan contain all information necessary to determine if the site is appropriate for land application, along with description of how the site will be managed. WAC 173-308-310 (6) and (8)(d), citing Appendices 1 and 3. Minimum content for a permit application includes land application plans, and "any information required to determine the appropriate standards for permitting under this chapter." WAC 173-308-90001(9) and (11). An applicant must supply reasonably adequate information as part of the SEPA checklist. WAC 197-11-100.

**1. Incomplete Documents.**

The FMF-Rosman Farms SSLAP[1] and SEPA checklist are incomplete and contain inaccurate information. The SSLAP list of appendices (at p. 15) do not correlate to the provided appendices, some of which are missing. More importantly, the SSLAP application and SEPA checklist are missing important information that is required by the biosolids regulation, general permit and guidance provided on Ecology's Biosolids website. A full list of missing information is described in Appendix A to these comments, and in the two comment letters submitted by Don Hanson.[2]

Important examples of missing information include:

- Lack of any data regarding surface water systems on and adjacent to Rosman Farms property, including seeps and springs downgradient of the property susceptible to contamination from biosolids,
- No analysis of historic and continuing application of septage biosolids to the Rosman Farms fields,
- Failure to include complete maps regarding local soils, including NRCS maps that indicate that lands in this area are highly erodible,
- Lack of information about cropping and tillage practices, including seasonal fallowing that could cause wind erosion of applied biosolids.

As required by the biosolids rule, this information should be available to the public to comment on before the permit is approved, not some time in the future after Ecology has approved the SSLAP. This missing and incomplete information makes it impossible to fully review and understand the FMF-Rosman Farms proposals, including elements of vital concern to Mr. Alexander and Mr. Barrett. It also undermines confidence that the applicant is able to engage in the detailed monitoring and recordkeeping requirements of the biosolids rule.

**2. Procedural Irregularities.**

The existence of multiple versions of the FMF-Rosman Farms SSLAP has been a matter of confusion to my clients and the interested public, and has effectively deprived them of the ability to review and comment on a complete application and checklist, as biosolids and SEPA regulations require.

[1] All references to the Rosman Farms property are to Site A. Unless otherwise explicitly stated, all references to the SSLAP are to the 9-23-16 version.

[2] Mr. Hanson submitted two letters on behalf of the Community Committee of Concerned Residents and Landowners in Green Canyon and Mill Canyon. The first letter is dated 9/23/16 and is referred to in these comments as Hanson 1. The second letter is dated 10/25/16 and is referred to herein at Hanson 2. Mr. Hanson's area of expertise is agricultural and biological engineering, he has experience designing waste containment, waste transfer, and waste utilization systems, has carried out and published hydrologic research pertinent to land use and runoff mechanisms, and is familiar with farming practices and soils in the Palouse.

On October 27, 2016, at an in-person meeting between myself, Morton Alexander, Betty Ann Bickner and Wayne Krafft at Ecology's Spokane office, Ms. Bickner stated that Fire Mountain Farms applied and submitted a SSLAP for the Rosman Farms property in 2014, but that later in the year, received a phone call from the applicant indicating they wished to withdraw or put the application on hold pending the general permit process. This is semi-consistent with a phone call received by Corrina Barrett from Garry Rosman, indicating he was withdrawing the application "as he does not wish to adversely affect his neighbors" (see Ernest Barrett comment letter dated 10/27/16, and attachment), and with Ms. Bickner's statement to Mr. Barrett that his comments on the 2013 SLAPP would be disregarded as irrelevant.

Notwithstanding that FMF and/or Rosman Farms halted the application process via phone call to Ms. Bickner, Ecology did not notify interested parties and continued to process the SEPA checklist and issued a Determination of Nonsignificance (DNS). The DNS was improperly issued given that the application process had been halted.

FMF submitted a new SSLAP dated February 12, 2016 which, as described above, contains numerous inaccuracies and omissions. A particularly significant error was the inclusion of two sections of land, Sections 17 and 20, in the description of property where biosolids were to be applied. Neither FMF nor Mr. Rosman own these two sections, rather they are the sections where Mr. Alexander and Mr. Barrett's properties are located. Needless to say, this inaccurate description of property boundaries was a matter of substantial concern to my clients.

Upon discovery of this error, Ecology apparently directed FMF to submit a new SSLAP. The Sept. 23, 2016 revised SSLAP was posted to the Ecology website and circulated to some of the people on the Interested Parties list. It also contains omissions and errors.

At the October 27 meeting in Ecology's offices, Mr. Alexander and I expressed concerns about the inaccuracies contained in the Sept. 23, 2016 version of the SSLAP. Ms. Bickner responded that she had an April 23, 2016 version of the SSLAP and that both the April and September 2016 versions of the SSLAP comprised the application file.

To recap, the original SSLAP appears to be the version dated 7/16/13. The SSLAP originally posted on the FMF website and circulated to the community on June 23, 2016 as the complete SSLAP is dated 2/12/16. Ms. Bickner has been working from a SSLAP dated 4/23/16. And a revised SSLAP dated 9/23/16 was circulated as a corrected SSLAP and is posted on the Ecology website and identified there as part of the "Documents for public review and comment."

The chaotic and confusing nature of the SSLAP submittals, the stop-and-start nature of the approval process, the lack of public notification as to which SSLAP was appropriate for public comment, and Ecology's use of multiple versions of the FMF-Rosman SSLAPs to find compliance with regulatory requirements (including versions not posted on the website as "documents for public review and comment") is highly irregular. This problem can only be remedied by a re-initiation of an ordered process that apprises all parties of what documents are actually to be reviewed, and ensures that such documents are in fact complete.

**3. Draft "Permit."**

WAC 173-308-310(13)(d) requires public notice "at the time when a draft permit is provided for formal review by the department." It your response to comments, you are to "briefly described any changes that resulted . . . to a permit." WAC 173-308-310(15)(d). There is a "Draft Final Coverage Letter" posted on the Ecology website, but oddly it contains no conditions or special provisions for the Rosman Farms site. Because this draft "permit" is essentially a boilerplate document, we request that, should Ecology decide to extend coverage, a fact sheet be prepared and explicit conditions included to protect the neighboring community from the migration of biosolids onto their properties (as discussed below).

## III. Site Specific (Rosman Farms) Concerns

**1. Rosman Farm Soils and Erosion Control.**

Ecology's website, Biosolids Land Application Site Management discusses the problem of "highly erodible" or HEL soils, as does Ecology's Biosolids Management Guidance, p. 6-2.[3]

According to NRCS maps, most if not all of the Rosman Farms fields consist of Highly Erodible (HEL) soils, however, there is no mention of this in the SSLAP nor mention of the mandatory NRCS farmland conservation plan for Rosman Farms, nor analysis of how application of biosolids will ensure compliance with the conservation plan.

Much of Rosman Farms is unsuitable for application of municipal sewage sludge products. These soils are also susceptible to soil restrictive layers. See Hanson 1, Appendices B, C and D. HEL fields should be excluded from the permit for biosolids use, and an appropriate site specific soils investigation should be undertaken.

Further, the practice of applying nutrients to soils during autumn months is controversial. Rosman Farms soils are particularly susceptible to erosion due to minimal vegetative cover, high soil-water saturation, rain on snow events, soil crusting leading to impermeability, and etc. See Hanson 2, ¶ 2.

The SSLAP gives no clue as to when or how biosolids are to be applied, leading to concern about the pollution potential associated with these seasonal conditions. The SSLAP contains minimal data and no analysis about the erodibility of soils present on Rosman Farms. The SEPA checklist is likewise silent. The "Erosion Control Plan" in Section 12 of the SSLAP, provides one paragraph of boilerplate that is completely inadequate to inform the public and decision makers about the condition of the property. To our knowledge, Mr. Rosman has not consulted with NRCS offices about soil conditions and erosion control.

**2. Wind Erosion Potential.**

Given the low precipitation rates and need for fallowing associated with dryland wheat cropping in this region, large portions of the Rosman Farms properties will present bare, dry soils for much of the year.

[3] http://www.ecy.wa.gov/programs/swfa/biosolids/management.html

These types of lands are notoriously susceptible to wind erosion. Yet the SSLAP contains no discussion of how cropping and tillage practices will be amended to prevent release of biosolids to the atmosphere, where they will blow onto neighboring properties. Nor does the SSLAP discuss water management to control wind erosion.

**3. Surface Water Contamination Potential.**

Biosolids application sites must comply with the state Water Pollution Control Act, RCW Ch. 90.48 and the state surface water quality standards, WAC Ch. 173-201A. WAC 173-308-030(4). Fresh water designated uses require protection of both aquatic life, recreation, and human uses of water for water supply, agricultural and stockwater uses. WAC 173-201A-200(1), (2) and (3).

The SSLAP and SEPA checklist contain no information about seasonal and permanent surface and groundwater present on the Rosman Farms property. Standing water during winter and spring months is common on fields in this region, as are seeps and springs. Moreover, headwaters of streams that flow down to Mill and Harker Canyons originate on or flow through the Rosman Farms property (Site A). See Hanson 2, App. A (text and maps). Absent this information it is not possible to design buffers and otherwise condition the permit to apply biosolids to prevent contamination on the property and flowing from the property.

**4. Groundwater Contamination Potential.**

Biosolids application sites must also comply with the state groundwater quality standards, WAC Ch. 173-200, including the anti-degradation standard. WAC 173-200-030(2)(c). WAC 173-308-030(4). Ecology's Biosolids Land Application Site Management web page states that "Groundwater should be at least two feet below the soil surface, and static or receding before biosolids are applied."[4]

The SSLAP and SEPA checklist assert that there is no groundwater within three feet of the surface of Rosman Farms fields. However, there are numerous surface water seeps, standing water and intermittent streams, as is common in this area. See Hanson 2, ¶6 and App. A (maps). These water bodies can be associated with a seasonally high water table, and should be investigated. This information was not provided in the SLAPP or checklist.

Further, there are numerous seeps and springs on properties downgradient from Rosman Farms, none of which were identified in the SLAPP or checklist.

Wrongly timed application of biosolids has significant potential to contaminate groundwater associated springs, and adversely impact drinking water supply for neighboring residents.

**5. Agronomic Rate of Application.**

The biosolids rule devotes a section to discussion of agronomic rates, noting its goal in the title as "protecting waters of the state." WAC 173-308-190. Federal rules require that the agronomic rate be

[4] http://www.ecy.wa.gov/programs/swfa/biosolids/management.html.

specified for the crops grown and that excess nitrogen not be able to penetrate below the root level of the specified crop in order to ensure that the aquifers are protected. 40 CFR § 503.11.

As an initial matter, we have concerns with the SLAPP proposal (at p. 10) that, if Ecology fails to respond to agronomic rate recommendations within 14 days, they are approved. How does this protect the public interest and accommodate Ecology's chronic understaffing problem?

Of great concern to my clients is that parts of Rosman Farms have already been subject of biosolids application in the form of septage. "Agronomic rate determinations must take into account nitrogen supplied from other sources such as . . . biosolids." WAC 173-308-190(2). Further, the history of biosolids application has to be known and accounted for in order to ensure cumulative limits are not exceeded. 40 CFR § 503.12(b)(1-3). The SSLAP, Section 2, acknowledges septage has been applied, but provides no details. The SEPA checklist contains no information about prior septage use or the pending approval process for continuing septage use.

B&B Septage has been applying septage (a form of biosolids) to Rosman Farms properties since 2007, but Ecology does not know the precise extent of the application by BB Septic. Further, as the errors with the SSLAP property description reveal, discrepancies exist as to where the FMF biosolids would be applied. What safeguards are in place to ensure that there will be inadvertent double application by one or the other of the applicators?

**6. Fire Mountain Farms and B&B Septic Track Record**

FMF has been the subject of several regulatory orders, issued by your agency, for spreading dangerous waste on farm properties, and has been denied coverage to apply biosolids at properties in eastern Washington (Cowlitz County and PCHB appeals pending). See Att 5. This poor compliance record indicates a need, at minimum, to impose stringent monitoring conditions on any approval of FMF biosolids use, if not outright denial of the request for coverage. WAC 173-308-310(19).

Further, as per Mr. Barrett's comment letter, we believe there has been over-application of septage on steep slopes in an unpermitted section of the Rosman Farms property, leading to polluted runoff in the Angel Springs area, possibly with Mr. Rosman's knowldge. See Ernest Barret comment at pp. 2-3 (10-27-16).

**IV. Neighboring Lands Concerns.**

"The legislature declares that a program shall be established to . . . ensure that municipal sewage sludge . . . is managed in a manner that minimizes risk to public health and the environment." RCW 70.95J.005(2). "Biosolids must not be applied or allowed to run onto non-permitted areas. . . . Properly designed surface and groundwater buffers protect water quality off-site. . . . When designing property buffers, your objective will be to reduce any nuisance to neighbors and the public." Ecology Biosolids Management Guidelines, Publ. No. 93-80, p. 4-21, -22. "Facilities and sites where biosolids are applied to the land must comply with other applicable federal, state and local laws, regulations, and ordinances . . ." WAC 173-308-030(6). The intentional deposit of microscopic particles could give rise to action for trespass as well of claim of nuisance. Bradley v. American Smelting, 104 Wash.2d 677 (1985).

**1. Topographic Relationships.**

Rosman Farms wheat fields lie directly above and drain to Green and Mill Canyon, where Mr. Alexander and Mr. Barrett's properties lie, as well as to Harker Canyon. See Hanson 2, App. A (map showing surface water channels). Although the SLAPP contains some maps that show the topographic relationships to the canyons, and the locations of surface waters, the SLAPP and SEPA documents contain no discussion of the potential impacts to neighboring properties that could arise as a result of the forces of weather and gravity.

**2. Water Quality Impacts to Springs.**

Numerous seeps and springs are located downgradient from Rosman Farms, including Turnley Spring, owned by Mr. Alexander, which is located directly below Parcel No. 2638019700000. Mr. Alexander owns a water right on this spring, has installed diversion works, and uses the spring for domestic supply and orchard irrigation. Att. 4. He shares ownership with Deanne Burdine, who also uses the spring for domestic supply and irrigation. These beneficial uses are protected as a matter of both water resources and water quality law. As noted above, the SLAPP and SEPA documents contain no identification or discussion of canyon hydrologic resources that are likely connected to Rosman Farms.

The Turnley Spring has been utilized for drinking water for many decades. Among the comment letters are found discussions of the use of these springs. In addition to Mr. Alexander's personal use, Laura Harris uses the spring for drinking water, and Carla Martinez irrigates her organic herb farm from the spring. Mr. Alexander makes spring water available, at no cost, to a large number of neighboring residents who cannot access a municipal system at their homes and cannot afford to drill a well. Turnley Spring is an important source of clean water in Mill Canyon.

To prevent contamination of drinking water sources Ecology should require as a condition of coverage a hydrogeologic study of groundwater/springs/seeps in the vicinity of and downgradient from Rosman Farms.

**3. Surface Runoff and Flooding.**

The runoff mechanisms that exacerbate the potential for surface water pollution from Rosman Farms are due to farmland having steep slopes, soil-surface-freezing that creates a nearly impermeable layer, rain on snow which is frequently combined with Chinook winds that cause flash flooding, potential soil-surface crusting that reduces infiltration capacity, and soils classified as highly erodible leading to tons of sediment yield per acre per year where erosion is not properly controlled. See Hanson 2, ¶ 2. The headwaters of both Mill Creek and Harker Creek are located on or flow through Rosman Farms property, and are the locus of eroded soils from Rosman Farms. See Hanson 2, App. A (surface water channels originating on and flowing through Rosman Farms property).

The problem is not theoretical. Mill Canyon has been subject to catastrophic flooding, bringing many tons of rock and soil from wheat fields above into the canyon below. In 2014, two 50-year floods washed through the canyon, washing out Mill Canyon Road in numerous places along a 4-mile stretch, and flooding Tolstoy Farm. See Ernest Barrett comments (10-27-16), Laura Harris statement and photographs (10-27-16) (Att. 1), Corrina Barrett comments and photographs (10-27-16).

Video of the March 5, 2014 flood can be viewed at https://www.youtube.com/watch?v=FEeeXQHBfWk.

Ms. Barrett puts it succinctly: "Flooding is most intense in the canyon when the ground is frozen and the water cannot soak in. It rushes across the surface in sheets, taking topsoil and rolling boulders. Any biosolids near the surface in fields that drain to the canyon would surely be carried down into the canyon waterways during flooding." The statement of Laura Harris (Att. 1) confirm these conditions were present during the March 2014 flood. The Barrett and Harris photographs show the tremendous damage done to Mill Canyon, the road, the creek system and their property as a result.

Catastrophic flooding and erosion from Rosman's property holds great potential to transfer biosolids into Mill and Harker Canyons. Yet the SLAPP and SEPA documents are silent on this matter. The potential for migration and deposition of biosolids into Mill and Harker Canyons must be evaluated and provided for in the decision on the SLAPP.

**4. Aerial Deposition.**

It is common knowledge that in this region windy conditions lead to erosion of soils and airborne deposition of those soils and any products contained within them on sites beyond the farms where they originate. The problem is documented on Ecology's "Outdoor Dust" website, noting that "Most dust storms happen in the spring or fall, because of a combination of high winds, dry weather conditions, and uncovered fields," and that windblown dust is the result of "tilled, harvested and fallowed farm fields."[5]

Windblown dust is a public health issue because of the danger of inhaling small particulate matter.[6] As Ecology's website notes, groups at the highest risk include "infants, children, teens, the elderly, and pregnant women" and "healthy adults working or exercising outdoors (for example, agricultural workers . . . )."[7] This problem will only be exacerbated when the windblown particulates include biosolids containing § 503 and other pollutants.

This is a particular concern when Rosman Farms discs and fallows its fields during high-wind seasons. As discussed above, most of Rosman Farms fields consist of highly erodible (HEL) soils. Rosman cultivates wheat that requires seasonal fallowing, periodically completely exposing HEL soils that contribute to windblown dust in the locality.

As set forth in the statements of Mill Canyon residents, dust and soil from the fields above Mill Canyon, including Rosman Farms, falls into Mills Canyon. As noted in the statement of Timothy Pellow of Tolstoy Farms, "There are many days every summer when the weather prediction is "blowing dust" and the air

[5] WA Department of Ecology, "Outdoor Dust," website at www.ecy.wa.gov/programs/air/other/Windblown_dust_information.htm. Dust storms can be extreme, as occurred on August 12, 2014 near Harrington, WA. See Seattle Times, "Dramatic Dust Storm Precedes Rain in Eastern Washington" (Aug.13, 2014) http://blogs.seattletimes.com/today/2014/08/dramatic-dust-storm-precedes-rain-in-eastern-washington/.

[6] WA Department of Ecology, "Windblown Dust" FAQ, Publ. No. 04-02-009 (Rev. April 2012) at https://fortress.wa.gov/ecy/publications/documents/0402009.pdf;

[7] "Outdoor Dust," supra.

is thick with dust from the cultivated fields of the farms surrounding us." Att. 2. As noted by Carla Martinez of Perianth Herbs, blowing dust is deposited on the plants and soils which are being cultivated pursuant to organic certification requirements. Tolstoy Farms depends on its organic certification to maintain its business. Biosolids in the air and floodwaters threatens their ability to maintain their livelihood and feed their families.

Further, canyon residents must breathe the dust coming from Rosman Farms, and even absent pollutant concentrations, breathing particulates is not healthy. Dust that contains biosolids particles poses exceptional risks to people who are forced to breathe it during uncontrollable wind events.

**5. Impacts to the Community**

Mill Canyon is home to a number of organic farmers and farms, including Tolstoy Farms and Perianth Herbs. Several representatives of the community testified at the October 11 hearing. Timothy Pellow and Stash Jackowski, representing certified organic grower Tolstoy Farms, describe their business concerns relating to the impacts of biosolids migration from Rosman Farms. Att. 2 and 3. Carla Martinez discusses her concerns relating to Perianth Herbs, for which she is currently seeking organic certification.

The U.S. Department of Agriculture's National Organic Program informs certified farms that "As an organic farmer, you are responsible for all materials applied to your fields, *even when you do not apply those materials yourself.* Organic crops can be contaminated through residues in spray equipment, drift from nearby fields, accidental sprays, or mistakes made by employees."[8]

Mr. Pellow explains the importance of maintaining a healthy, uncontaminated environment:

> For decades before certification the community in which our farm resided eschewed the use of agricultural chemicals, utilizing methods to build up the health of the soils, increasing their biomass and microfauna activity, while minimizing chemical exposure and toxic buildup. This focused attention and commitment to healthy organic land stewardship is what draws our customers to us, what makes our business thrive. Our hundreds of families in Spokane area and dozens in the Davenport area who consume our produce do so for the security this knowledge provides. It is important to them, and it is personally important to us, that our soils and food not be contaminated by us, and, as much as we have control over it, by the actions of others.

Ecology has statutory duties to ensure that biosolids and their constituent pollutants do not flow, erode, drift or blow into Mill Canyon and thereby threaten the commercial success of the farms located there. Given the difficulty in controlling wind and flood borne contamination, it is appropriate for FMF-Rosman Farms permit coverage to be denied.

[8] US Dept. of Agriculture, Guide for Organic Crop Producers (Nov. 2012) (emphasis added) at https://www.ams.usda.gov/sites/default/files/media/GuideForOrganicCropProducers.pdf.

**6. Ecological Concerns.**

Mill Canyon is home to a diverse ecological community, and is considered a birders paradise.[9] The importation of toxic chemicals can be as or more damaging to the animals that depend on canyon vegetation. In fact, the SEPA checklist appears to contemplate wildlife feeding on biosolids-tainted grains where it states that "the application of biosolids to farm land will increase feed availability for wildlife." SEPA Checklist at p. 10. At what point does the accumulation of toxic chemicals and pollutants in the environment achieve a threshold that the Department considers unacceptable?

Hundreds of millions of dollars are being spent to remove pollutants from wastewater entering the Spokane River. Rosman Farms drains to the Spokane River, and biosolids runoff will end up contributing to the problem of municipal wastewater contamination, rather than the solution.

## V. Biosolids General Concerns

**1. Untreated Pollutants.**

Biosolids consist of processed municipal sewage sludge, which contains industrial products that are minimally treated before discharge into sewer systems. While municipal sewage treatment technologies have improved, they are not perfect. A number of contaminants are known to escape monitoring, filtration and treatment in the municipal sewage process. These include persistent bioaccumulative toxins (such as PCBs), emerging contaminants (such as pharmaceuticals and personal care products), pathogens (such as MRSA), and most recently discovered, micro-plastics. In addition, thousands of chemicals are available for consumer use that are not regulated or tested for in municipal sludge.

We concur in the comments regarding the dangers posed by biosolids provided by Sierra Club Washington State Chapter and reiterate a statement made by Prof. Carolyn Snyder, set forth in the attachment to the Sierra Club comments:

> Land application of sludge is wrought with uncertainties. Experts estimate that sludge generated in industrialized urban centers -- and most land-applied sludge is generated in these areas -- contains not only pathogens and toxic metals, but thousands of anthropogenic chemical compounds for which there are not even basic toxicity data. … Pathogens are evolving and becoming more virulent.
>
> Land-applied municipal sewage sludge (bio-solids) is a highly complex and unpredictable mixture of biological and chemical pollutants. Most of the 90,000 man-made chemical compounds in commerce today--with 1,000 new ones added annually--end up in sewage, and many of those, concentrate in the resulting bio-solids. They include carcinogens, mutagens, neurotoxins, endocrine disrupters, solvents, pharmaceuticals, radioactive waste, leachates from landfills and superfund sites, as well

[9] Mill Canyon bird sitings are listed here:
https://www.birdingbuddies.com/birds/location/united_states/washington/mill_canyon_lincoln_county/

> as disease causing and antibiotic resistant pathogens. Upgrading and building improved treatment plants that will remove more pollutants from sewage, will cause sludge to become even more contaminated. Bio-solids generated in our large industrialized urban centers -- and 84% of land applied sludge originates in those centers -- is very likely the most pollutant rich waste mixture of the 21st century.

As noted in Tim Pellow's statement (Att. 2), biosolids may not be used for organic crops. Mr. Pellow explains:

> Organic regulations under the National Organic Program (NOP) preclude the use of sewage sludge (biosolids) in any form. This is due to the admixture which makes up municipal sludge, which includes: actual human waste products, which are oftentimes contaminated with synthetic drug residues; whatever else gets dumped down residential drains, including household chemicals, synthetic drugs, and many other unsafe products; industrial waste; and road runoff, which includes oil, antifreeze, gasoline dripped or spilled from automobiles and home mechanics; chemicals released through asphalt degradation; animal wastes and carcasses; and yard, garden, and farm agricultural chemical runoff. The chemical residues and other toxic contaminants in sewage sludge (biosolids) caused the NOP to ban its usage in organic certified systems.

As reported by Puget Consumer Co-op's Sound Consumer:[10]

> In 2008 scientists from the U.S. Geological Survey and Colorado State University found that earthworms in soil plots amended with biosolids had bioaccumulated multiple human-manufactured compounds, including: disinfectants, anti-foaming agents and flame retardants, antibiotics, synthetic fragrances, detergents and pesticides, as well as other chemicals "reflecting a wide range of physicochemical properties" (Environmental Science & Technology, Feb. 20, 2008). Some of the same compounds were found in earthworms living in soils treated with animal manure.
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> In 2006 scientists from Eastern Washington University and the U.S. Geological Survey's National Water Quality Laboratory found a total of 87 different human-manufactured compounds in biosolids originating from wastewater treatment plants in seven U.S. states. The researchers described biosolids as a "potentially ubiquitous nonpoint source" of "contaminants" in the environment (Environmental Science and Technology, Sept. 13, 2006).
>
> "A minimum of 30 and a maximum of 45 [wastewater contaminants] were detected in any one biosolid," the scientists noted.
>
> EPA's 2009 Targeted National Sewage Sludge Survey Report found 28 metals in every biosolids sample from 74 randomly selected water treatment plants in 35 states. The

[10] Joel Preston Smith, Sound Consumer, "Biosolids Hit the Fan," (March 2012) at http://www.pccnaturalmarkets.com/sc/1203/biosolids_hit_the_fan.html.

samples, collected in 2006 and 2007, also contained 72 pharmaceuticals, 25 steroids and hormones, flame retardants, and a variety of "semi-volatile organics and polycyclic aromatic hydrocarbons."

It is wrong to assert or assume with any degree of certainty that biosolids are safe and will not contaminate the environment and harm people and wildlife.

**2. Unknowns of Biosolids.**

FMF is not forthcoming in how, if at all the Class B biosolids will be treated. Under 40 CFR § 503.12, FMF is required to know the history of application, the totals of § 503 pollutants that have accumulated in Rosman Farms soils, and how their application of biosolids will increase those pollutants. This information deficit impedes the public's ability to effectively comment and Ecology's ability to effectively review the permit application. How will third parties who are potentially affected be able to know of, comment on and react to future data regarding biosolids proposed for application to Rosman Farms?

This concern is compounded by the imbalance between the number of wastewater plants seeking to divest themselves of their biosolids versus the number of farms willing to accept biosolids. In reality, biosolids are not being accepted in the food-growing sector, the uncertainties and risks are too high. This places enormous pressure on Ecology's Waste 2 Resources program to allow application of biosolids even where and when conditions are inappropriate. See Att. 2 (Pellow statement, p. 2).

**3. Impacts on Grain Markets.**

There is widespread concern about the use of biosolids on food crops. The Department of Ecology recognizes this problem at the generic level. "Some food processors have refused to accept crops grown on land amended with biosolids." Ecology Biosolids Management Guidelines, p. 4-23. How will the mixing of Rosman Farms' biosolids-tainted crops in regional grain storage facilities affect the market for those crops? The SLAPP and SEPA documents are silent about this important potential consequence of biosolids use on Rosman Farms.

## VI. Request for Relief.

1. **Permit Denial is Appropriate.** We ask that the Department of Ecology disapprove the FMF-Rosman Farms SSLAP and deny a permit for coverage because both the SSLAP and the associated SEPA checklist provide incomplete and inaccurate information, in violation of WAC 173-308-310(8)(d), Appendix 3, which specify minimum content for the site specific land application plans. We request that the SEPA DNS be withdrawn due to procedural irregularities in the timing and public notification involved with processing of the FMF-Rosman Farms application. We further request that Ecology disapprove the SSLAP and deny permit coverage because of the inappropriate nature of the proposed application site, and the danger posed to neighboring properties and commercial interests.

2. **Issuance of a Fact Sheet.** If Ecology chooses to approve the Rosman Farms application, we request that Ecology prepare a fact sheet on the basis that this permit "is the subject of widespread public interest" and "raises major issues." We request that the fact sheet be sent to myself, Mr. Alexander, Mr. Barrett and all other persons on the interested parties list. WAC 173-308-310(17).

3. **Request for Special Conditions.** If Ecology chooses to approve the Rosman Farms application, we request that the following additional and more stringent conditions be imposed on the approval. Special conditions are appropriate to protect the public health and environment. Special conditions are also appropriate when an applier or landowner fails to conform to applicable requirements of the biosolids rule and general permit. WAC 173-308-310(19).

   a. Site specific soils investigation and continuing soils evaluation, including of sediment deposits and baseline pollutant concentrations. See Hansen 2, ¶¶ 9-10.
   b. Baseline inventory of current status of natural resources on-site and in surrounding area that could be affected, including soils and ground and surface (spring) water testing.
   c. Biosolids pollutant monitoring, including appropriate independent testing and monitoring.
   d. Groundwater quality evaluation program and monitoring program. See WAC 173-200-080 and WAC 173-308-190(6).
   e. Notification regarding biosolids use, including enforceable stipulation regarding conflicts with neighbor activities.
   f. Public access to monitoring and testing records and data.
   g. Conditions to ensure protection during extreme weather events and prevent water and windborne erosion of soils and sediments that may contain biosolids.

Sincerely,

Rachael P Osborn

Rachael Paschal Osborn
Attorney for Morton Alexander and Ernest Barrett

**CC:** Rob Duff, Office of Governor Jay Inslee
Dan Opalski, Director, Office of Water & Watersheds, U.S. EPA, Region 10

**Appendices**
Appendix A SSLAP application deficiencies

**Attachments**
Att. 1 Laura Harris statement and photographs of March 2014 flood (10-31-16)
Att. 2 Statement of Timothy Pellow, Tolstoy Farms (10-30-16)
Att. 3 Statement of Stash Jackowski, Tolstoy Farms (10-30-16)
Att. 4 Morton Alexander Water Right Claim No. 038829 (10-30-73)
Att. 5 Fire Mountain Farms Enforcement Documents

**Appendix A –Deficiencies in FMF-Rosman Farms SSLAP and SEPA Checklist**

1. Lack of Access to Full Application. The 9-23-16 version of the SSLAP application lacks several of the appendices cited in the list of appendices at p.15.

2. Application Form. The application form is blank with respect to discussion of pathogen reduction.

3. Permit and SSLAP Incomplete and Inaccurate Information
   a. Biosolids monitoring data as per WAC 173-308-90001(7) and (10) and WAC 173-308-90003(1) (relating to B&B septage application to properties identified for FMF biosolids application).
   b. Surface Waters. The largest omission in the application is the failure to map and discuss potential impacts to local seeps, springs and streams that are on properties adjacent to and downgradient from Rosman Farms, and that have high potential to be impacted when runoff occurs. This omission makes it impossible for the applicant to comply with the state Water Pollution Control Act, RCW 90.48 and associated water quality standards, WAC Chs. 173-200 and 201A. See also WAC 173-308-90003, App. 3, Section 9(k).
   c. Septage. At p. 3, SSLAP states no septage has been applied to the "Level Road" lands, i.e., the parcels of concern to the neighbors. We believe this is incorrect. SSLAP, p. 4, Section 2.0 states that a portion of the farm has received septage, but not biosolids, but does not provide further detail. Per WAC 173-308-005, septage and biosolids are to be treated the same in site specific land applications. The SSLAP fails to provide specific information about past septage usage required in WAC 173-308-90003(1).
   d. Crop data. Incomplete information about crops to be grown and end use. See 173-308-90003(2).
   e. Seasonal/Daily Timing of Biosolids Use. Section 4.0 (p. 5) of the SSLAP explicitly declines to provide detail as to when biosolids will be applied and requests "no limitations" on timing. WAC 173-308-90003(5).
   f. Groundwater Protection Plan. Section 11 of the SSLAP (p. 13) asserts that there is no groundwater within 3 feet of surface. We believe this is inaccurate description of the property. WAC 173-308-90003(10). See Hanson 2d Comments, App. A, Permanent and Intermittent Surface Water Channels.
   g. Erosion Control Plan. Section 12 of the SSLAP (p. 13) fails to mention Highly Erodible Soils (HEL) maps indicating much of the property is not suitable for biosolids application. See Hanson comments, p. 2, paragraph 3 and Appendix B.
   h. Municipal Sewage Sludge Maps. The SSLAP fails to reference or discuss NRCS map showing that most of the lands proposed for biosolids application are unsuitable. See Hanson Comments, pp. 2-3, para. 4 and Appendix C.
   i. Appendix 3, Maps. Overall, the maps do not provide sufficient detail to understand precisely where biosolids are proposed for use. More specific topographic maps should be utilized, particularly given the topography of the area, in which Rosman Farms fields sit atop steep slopes that drain to seeps, springs, wetlands and canyon streams. See Hanson comments,

Appendix A, for examples of appropriate maps. WAC 173-308-90003(9) (requiring maps of appropriate scale and detail).

j. Appendix 1, Landowner Agreement, SSLAP p. 17. The Landowner Consent Form does not indicate exclusion from biosolids use of designated CRP, Timberlands, and Badlands on the Rosman Farms site.

k. Listed species and critical habitat. SSLAP, p. 3 indicates Lincoln County species are listed in Appendix 7, but that Appendix is not included with the application. ESA candidate and listed species in the area include Greater sage-grouse, Washington ground squirrel, Yellow-billed Cuckoo, Bull Trout, Spalding's Catchfly and Pygmy Rabbit.

4. SEPA Checklist and DNS (dated 4-15-15) has several inaccuracies,
   a. Failure to acknowledge that provisional coverage for septage and a new application are pending for same Rosman Farms fields as proposed in the SSLAP application.
   b. Potential for wind erosion to cause biosolids to spread to neighboring properties and pollute waterways.
   c. Potential for high precipitation and rain-on-snow events to cause biosolids to spread to neighboring properties and pollute waterways, including via catastrophic floods.
   d. Impact of inclusion of biosolids crops on wheat storage and marketing.