MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Waste and Underground Tank Management Bureau
Solid Waste Section

Response to Public Comments Received for the Proposed Land Application Site – Foster Property

July 14, 2011

Frank and Vianna Larabaster (applicants), owners of Robbins Septic-Sewer Master, submitted an application to the Department of Environmental Quality (Department) for approval of a new septage land application site in Gallatin County. Specifically, Robbins Septic-Sewer Master proposed to land apply septage, portable toilet/vault toilet waste, and grease trap type wastes on the Robert S. Foster property in Gallatin County located in the SE ¼ of Section 2, T1S, R5E.

The Environmental Assessment (EA) completed for the proposed project was mailed to adjoining property owners at the beginning of the 30 day public comment period that initially ended on May 29, 2011. To provide extra time for additional interested persons to review the proposal, the Department extended the comment period to June 6, 2011. Several project opponents felt that immediate withdrawal of the proposal was warranted by their opposition. However, a final decision to approve or deny the requested land application site could not be made until the comment period had ended and all written comments that had been received had been reviewed and evaluated.

On May 20, 2011, the applicants withdrew their application for the proposed land application site. In spite of this, the Department continued to accept comments on the proposal until the close of the extended comment period. The Department's response to the comments received during the public comment period is provided herein.

The written comments that were received have been reviewed and those with similar content that are within the context of the project have been summarized and combined for the purpose of providing an inclusive response to comparable issues. The Department's responses to the written comments that were received are organized as follows:

I. Site Selection Criteria – setbacks, slopes, and soils
II. Traffic Impacts
III. Surface Water Impacts
IV. Ground Water Impacts
V. Wildlife Impacts
VI. Environmental Assessment
VII. Site Operation and Management
VIII. Miscellaneous
IX. Conclusions and Recommendations

I. Site Selection Criteria – setbacks, slopes, and soils

I.1 Comment:
Several commenters felt that the site was located too close to a residential development and too close to properties that may be developed for residential use in the future. Another commenter stated that they were located approximately 240 feet from the boundary of the proposed site and felt the minimum 500 feet setback was too close given the nature of their own home-based business.

I.1 Response:
Comment noted. Land application sites must meet specific minimum criteria in order for a site to be considered for land application. In accordance with the Administrative Rules of Montana (ARM) Section 17.50.809, the following restrictions apply:

- *Pumpings may not be applied to land within 500 feet of any occupied or inhabitable building;*
- *Pumpings may not be applied to land within 150 feet of any state surface water, including ephemeral or intermittent drainages and wetlands;*
- *Pumpings may not be applied within 100 feet of any state, federal, county, or city maintained highway or road;*
- *Pumpings may not be applied to land within 100 feet of any drinking water source;*
- *Pumpings may not be applied where ponding or runoff of septage is likely to occur;*
- *Pumpings may not be applied to land with slopes greater than 6%, or on slopes greater than 3% when the ground is frozen or snow covered;*
- *Pumpings may not be applied to land where less than six feet separate the land surface from seasonally high ground water;*
- *Pumpings may not be applied at a rate greater than the agronomic rate of the site for nitrogen on an annual basis; and,*
- *Pumpings may not be applied to land where a threatened or endangered species or its designated critical habitat is likely to be adversely affected;*

The proposed land application site met the minimum requirements. Had the site been approved and additional development occurred on adjacent properties, the site setbacks would have been reviewed to ensure the minimum setbacks were maintained.

I.2 Comment:
One commenter noted that the red circle on the overview map of the property was larger than 20 acres.

I.2 Response:
Comment noted. The circle on the map represented the location of the proposed site and was not meant to depict the site setbacks.

I.3 Comment:
A few commenters asked why this site was chosen over other areas of the county where vast quantities of open, non-residential land exist that would be better suited for this activity. The pumper has other approved sites in undeveloped areas that he can use. Septic tanks are only emptied once per several years and a small additional cost for the extra fuel should not present a problem.

I.3 Response:
Comment noted. All pumper businesses are responsible for finding their own land application sites and may use any site they are licensed and approved to use at their own discretion. With rising fuel costs, many pumpers are trying to manage costs by establishing additional sites. Once a licensed

pumper finds a new site, the site must be evaluated and approved at the local government level before the request for a new site is sent to the Department. Sites that do not meet local requirements, including local zoning regulations, are typically denied at the local level. Sites that do not meet the minimum state requirements are denied at the state level. In this particular situation, the applicants obtained approval for the site from both the Gallatin County Health Department and the Gallatin County Planning Department before the request was sent to the Department for review. While alternative sites may exist in the County, the Department's review was specific to the applicant's proposal as it was submitted.

I.4 Comment:
One commenter noted that the area is zoned for agricultural use and the waste dump proposal interferes with their lifestyle, health, and property value.

I.4 Response:
Comment noted. The land application of domestic septage is an economical and environmentally sound practice and considered the beneficial use of a waste product when the material is applied in accordance with the laws and rules governing land application. The reuse of the organic material and nutrients in the waste are beneficial to the soil and to the crops being grown. The increase in organic matter enhances the soil moisture retention properties and improves the soil structure. In addition, due to the high nutritive value of the pumpings, in most instances the material takes the place of commercial chemical fertilizers. A properly managed land application program can be operated without adversely affecting public health. In addition, there are no known or documented cases of declining property values in Montana that have been attributed to land application sites.

I.5 Comment:
A few commenter's stated their surprise and opposition at the Department's consideration of the proposal to land apply raw sewage anywhere, much less in a residential area. In addition, one commenter felt that since they are not allowed to dump raw sewage on their property, why should a commercial septic service be allowed to.

I.5 Response:
Comment noted. Section 75-10-1201(7), Montana Code Annotated (MCA,) defines "septage" as liquid or solid material removed from a septic tank, cesspool, portable toilet, or similar treatment works that receives only domestic sewage. Although portable toilet and vault toilet wastes have not undergone the same treatment as waste in a septic tank, they have been chemically treated. Therefore, septage, including septic tank, portable toilet, and vault toilet wastes, are not considered raw sewage. In addition, tank owners with more than 5 acres of land that are able to meet the minimum setbacks for land application, as discussed in the response to comment I.1 above, may land apply the septage from their own tank on their own property. The requirements for vector attraction and pathogen reduction must be met. As discussed in the response to comment I.4, the land application of these wastes is considered the beneficial reuse of a waste product and the State of Montana allows this when the activity is conducted in accordance with the laws and rules.

II. Traffic Impacts

II.1 Comment:
Several commenters noted concerns about an increase in traffic on the small roads in the subdivision, the heavy trucks rumbling down the road causing the road structure to deteriorate, and the increase in

the noise level due to traffic. In addition, an increase in heavy truck traffic would endanger children, bicycle riders, and cross-country training teams.

II.1 Response:
Comment noted. The land application site would have been accessed on an as-needed basis. Pumper trucks currently service septic systems in the area as needed. The additional traffic or noise from such activity would be minimal and comparable to other delivery vehicles delivering packages and parcels to other residents in the area. Pumper businesses routinely service on-site septic systems in residential areas and are aware of the potential hazards associated with these areas when conducting business. Pumper truck drivers are required, like every other licensed driver in the State of Montana, to adhere to all traffic laws.

II.2 Comment:
One commenter noted that it unclear how the proposed dump site would be accessed. If the land was wet and muddy, the sewage truck would throw mud all over the subdivision roads and create a safety issue for children or adults riding bicycles that could fall from hitting the mud and debris that the sewage truck has left.

II.2 Response:
Comment noted. The pumper intended to use the Springhill Road to the Foster property.

III. Surface Water Impacts

III.1 Comment:
Several commenters noted that there are drainages on the Foster property that run off across the residential properties to the west of the site and eventually to the East Gallatin River. It was noted that severe runoff events occurred during the spring and that Cottonwood Creek flooded regularly and flowed over the Foster property. This runoff flows over the down gradient lawns, wells, and gardens. It was also noted that the statements in the EA regarding impacts to surface water were incorrect. There were concerns that this run-off would carry septage off of the land application site onto the residential properties.

III.1 Response:
Comments noted. In accordance with ARM 17.50.809, septage may be land applied within 150 feet of any state surface water. To confirm the site setbacks could be met and determine whether or not the site would have been suitable for the proposed activity, a site inspection was conducted by Solid Waste Program personnel. During the inspection, it was noted that the property proposed for land application was relatively flat, with a slope of 0.5 – 1.5 %. In addition, although the area had received record precipitation amounts, there was no evidence of water movement across the property. The landowner indicated that Cottonwood Creek did flood earlier in the spring, but the flooding occurred down gradient of the property, at the location where the creek intersects Springhill Road and goes into a culvert under the road. In addition, a low spot near the landowner's home was identified as a possible historic flood irrigation channel, but it did not appear to have an outlet connected to any down gradient water feature. Therefore, the Department verified that the likelihood of down gradient surface water contamination from the site was low.

The land application of septage requires the application in a manner that prevents ponding or runoff allowing the septage to soak into the soil as it was land applied. In addition, because all land applied

wastes that are not alkali-stabilized must be incorporated into the ground surface within 6 hours of application, runoff from the site would have been highly unlikely as the waste would ultimately have been tilled into the soil within 6-hours of application.

III.2 Comment:
There were concerns that surface water runoff water would enter the annular space around wells and contaminate the wells.

III.2 Response:
Comment noted. An annular seal is installed in the upper portion of domestic water supply wells to prevent the intrusion of surface water into the annular space around the well. If surface water runoff enters the annular space around the well, it is because the annular seal is absent, leaking, or has been otherwise compromised. Maintenance of domestic water wells is the responsibility of the well owner. Therefore, if the annular seal is missing or has been compromised, it should be repaired.

IV. Ground Water Impacts

IV.1 Comment:
Several commenters noted concerns that groundwater and residential wells would become contaminated by the land application site. It was noted that there were many domestic water supply wells near the site, and that some wells had water at 70 feet below ground surface. It was also noted that water wells and septic systems in the area had been specially designed to preserve the natural groundwater quality.

IV.1 Response:
Comments noted. The laws and rules regulating land application require a minimum separation to groundwater of 6 feet below ground surface. This minimum separation distance was met at this site. By utilizing only approved application methods and limiting application rates, the ponding and subsequent infiltration of liquids to the groundwater would be minimal. The liquids that are land applied would then either evaporate, be taken up by plants, or be stored in the soil column for later use. The liquids that would infiltrate from the surface application of septage would move slowly enough through the soil that any contaminants would be degraded by soil bacteria prior to reaching the groundwater. Compared to the proposed land application activity, an individual septic system releases a greater quantity of wastewater into a smaller area on a continual basis and typically occurs several feet below ground surface. Thus, the potential for groundwater contamination from individual septic systems is greater than from land application of septage. The land application site would only be used as needed. With a minimal volume of liquids that would potentially reach groundwater and the subsurface processes that would breakdown contaminants in the soil and groundwater, the impacts to domestic water supplies from the land application site would not be expected.

V. Wildlife Impacts

V.1 Comment:
One commenter noted that there would be impacts to the current terrestrial and avian habitats and populations from the proposed activity. In addition, the use of the site for land application would ruin the natural habitat for these animals.

V.1 Response:
Comment noted. The Montana Natural Heritage Program conducted an assessment of the proposed site which encompassed a 5 mile radius around the site. The assessment included a survey of the presence of terrestrial, avian and, aquatic life, as well as any unique, endangered, fragile, or limited environmental resources and habitats that could be affected from land application. The results show that the Yellowstone Cutthroat Trout, Gray Wolf, a Stonefly species, Rocky Mountain Twinpod, and Slender Wedgegrass are listed as sensitive species within the 5 mile radius of the site. There were no species of concern within the proposed site. The impact to aquatic species was negligible because there were no continuously active aquatic systems within the boundary of the proposed site. Further, there are no wetlands or permanent surface water bodies located on the proposed site, and there is limited development and low human population adjacent to the proposed site. Finally, the residential development and road expansion into the existing habitat areas and migration routes do not appear to have had an adverse affect on wildlife in the area. The Department believed that the proposed land use would not negatively impact wildlife populations. Grazing animals tend to avoid septage land application sites for a number of reasons – the presence of the human scent and human activity being the primary one. In addition, based upon the volume proposed for land application, a maximum of only 2 ½ acres would have been used per year. Therefore, the conclusion that the proposed activity would not negatively impact wildlife populations is further substantiated by the fact that there is adequate acreage of similar habitat available in the vicinity to accommodate any species that may be forced to relocate.

VI. Environmental Assessment (EA)

VI.1 Comment:
One commenter felt that the precipitation information on page 5 of the EA was in error.

VI.1 Response:
Comment noted. The precipitation information was obtained from the Western Regional Climate Center for the Belgrade Airport. The monthly climate summary records for the period January 2, 1941 through December 31, 2010 show the average annual total precipitation in inches is 14.04 inches. This is what was stated on page 5 of the EA.

VI.2 Comment:
A few commenters noted that Table 1 on page 11 of the EA incorrectly states the impacts as either "None" or "Minor" and felt all impacts to the physical environment would be more than just "Minor".

VI.2 Response:
Comment noted. The laws and rules governing septage land application were based upon the U.S. EPA's rules for the management of biosolids (wastewater treatment plant wastes). The required management practices for land application sites in Montana were designed to be protective of human health and the environment by establishing minimum setbacks and requirements for operations at land application sites. Adherence to these requirements minimizes the impact the activity would have on the environment.

VI.3 Comment:
One commenter noted that the impact to human health and safety on Table 2 is incorrect and was concerned about runoff from the site as well as the activity generating blowing dust too close to homes in the area.

VI.3 Response:
Comment noted. Please refer to the response to comment III.1 for the runoff concern. The rules prohibit the application of pumpings to land within 500 feet of any occupied or inhabitable building. The location of the proposed land application site was greater than 500 feet from occupied or inhabitable building. After 6 hours of land application, typical soils still contain enough moisture to abate any dust that would be generated during the tilling process. Therefore, the Department believes that the generation of dust is negligible.

VI.4 Comment:
One commenter disagreed that there would be no economic impact to the community or individuals and felt that the site would have significant impact on the homeowners directly surrounding the site as their property values plummet.

VI.4 Response:
Comment noted. As noted previously, there are no known or documented cases of declining property values in Montana attributable to the proximity of septage land application sites.

VI.5 Comment:
Two commenters noted that although the request for this project is for 20 acres, Mr. Foster owns much more land that the applicants could potentially expand into.

VI.5 Response:
Comment noted. Any additional parcels within the landowners property would require the submittal of a new disposal site application and the publication of a new EA prior to the Department's final decision. Therefore, unrestricted expansion of disposal sites are not allowed and it it occurs would be a violation of the septage regulations.

VII. Site Operation and Management

VII.1 Comment:
One commenter noted there is no way to plow into the soil human waste septage when the soil is muddy or snow-covered. In addition, the commenter noted that the high clay content will result in very low percolation and thus will create runoff.

VII.1 Response:
Comment noted. The rules for land application during times when the ground is snow covered or frozen provide additional restrictions to reduce pathogens and prevent runoff. When the ground is frozen or snow covered, septage may not be applied to slopes greater than 3% or where runoff is likely to occur. In addition, wastes applied to frozen or snow-covered ground must be alkali-stabilized. Alkali-stabilization requires the addition of alkali material (lime) to the waste before land application so that the pH is raised to, and remains at 12 or higher for a period of at least 30 minutes. The alkali-stabilization process reduces the levels of pathogenic organisms by effectively destroying bacteria in the waste and preventing re-colonization. In addition, alkali-stabilization lowers the potential for putrefaction and reduces odors. Because alkali-stabilized wastes effectively destroy pathogens and render the materials unappealing to vectors, wastes treated in this manner do not require incorporation into the soil.

VII.2 Comment:
Several commenters were concerned about odors coming from the site from blowing winds especially after the waste sits in the hot sun for 6 hours before being tilled.

VII.2 Response:
Comment noted. As long as the licensee adheres to the minimum requirements for operation of the site, there should be no strong odors off-site as a result of the activity. Tilling incorporates the pumpings into the soil allowing the soil bacteria to degrade the wastes. Although the Department has no authority to regulate odors, the presence of strong odors off-site that are attributable to the land application of septage is typically an indication of improper site management – an issue to which we would respond. During previous site inspections, inspectors have stood next to the pumper trucks as they were land applying their loads. When the septage is first applied, an odor is usually detected. As the inspector walked through the wet application area only minor odors were detected. However such odors routinely dissipate in a short period of time as the pumpings soak into the soil. By the time the inspection was completed, the odors associated with the land application were undetectable.

VII.3 Comment:
Several commenters believe there will be an increase in rodents and vermin that will impact this area and the surrounding subdivisions. In addition, the dump site would contain an abundance of bacteria, viruses and parasites that wildlife, including rodents and vermin, would spread around.

VII.3 Response:
Comment noted. The requirements for the annual application rate and incorporation into the soil are the methods used to reduce the attractiveness to vectors like flies, rodents and other potential disease carrying organisms. Most pathogens and viruses do not live long after leaving their host. When pumpings are applied to the soil, the sun and the soil microbes decompose any remaining harmful bacteria, viruses and add nutrients to the soil and plants. These methods also reduce the potential for objectionable odors.

VII.4 Comment:
A few commenters noted that the airborne particulates would make everyone sick and that the waste will cover everything making this very unsanitary.

VII.4 Response:
Comment noted. The dispersive mechanism does not spray the waste up into the air. Rather, the device is attached to the tank valve to evenly distribute the pumpings over the top of the soil. The pumper then drives slowly through the field with the valve open to disperse the material. The liquids soak into the first few inches of the soil. The solids remain on the top and are incorporated within 6 hours of being land applied.

VII.5 Comment:
One commenter noted they would like to see the application mechanism changed to injection so that nothing remains on the land surface immediately after application of the waste.

VII.5 Response:
Comment noted. This option could be discussed with the applicant and landowner for their consideration.

VII.6 Comment:
One commenter wanted to know about how many times per year an application might occur.

VII.6 Response:
Comment noted. The applicants would have applied septage waste at a rate not to exceed 63,461 gallons per acre per year. With most individual septic tanks averaging 1,500 gallons, this would be the equivalent of approximately 42 septic tanks per acre or 420 septic tanks per year for the entire 10 acre parcel. For most pumper businesses, summer and early fall are the busiest times. In this case, although the site would have only been used on an as-needed basis, depending upon the number of septic tanks pumped in the area, the site could be used every day of the week.

VII.7 Comment:
One commenter asked if this was something the landowner's were asked to do as a service.

VII.7 Response:
Comment noted. As noted in the response to comment I.3, all pumper businesses are responsible for finding their own land application sites. With rising fuel costs, many pumpers are trying to manage costs by establishing additional sites. Pumper businesses find farmers and ranchers willing to accept pumpings for land application in areas where they conduct business. Most farmers and ranchers recognize the benefit derived from the land application of septage – the material adds organic matter and nutrients that would otherwise have to be commercially manufactured, purchased, and applied. In most instances, the material takes the place of commercial chemical fertilizers.

VII.8 Comment:
One commenter expressed their concern over the overlap of the tourist season in Bozeman with the dumping season, the recent cholera outbreak in Haiti, and asked why this site was being forced into a neighborhood when all the other sites for disposal of human waste were located in undeveloped areas.

VII.8 Response:
Comment noted. The Department is not aware of any documented evidence that confirms that this type of operation has interfered with tourist season. The outbreak the commenter reference was caused by sewage that ran directly into waterways and drinking water sources. This is a completely different scenario from the regulated land application of domestic septage being used as fertilizer.

VII.9 Comment:
One commenter felt that the rules governing site selection need to be revised in consideration of the changing nature of many areas of our state.

VII.9 Response:
Comment noted. The laws and rules governing land application are current and, as noted previously, reflect those of the U.S. EPA's rules governing the land application of biosolids.

VII.10 Comment:
One commenter indicated that they saw Robbins Septic truck on two occasions in the proposed land application site and believed they were applying waste at that time.

VII.10 Response:
Comment noted. Septic tank owners with over 5 acres of land and with all required setbacks in place as discussed above in responses I.1 and I.5 may have their septic tank pumped and land applied on their own property.

VII.11 Comment:
One commenter noted that while all non-putrescible litter must be removed from the land application site within 6 hours of application, that a previous business owner that used to do this says it stinks, it dumps a tremendous amount of unsavory trash on the ground that is unsafe, and it eventually gets buried, making the farm land a dump.

VII.11 Response:
Comment noted. All non-putrescible litter must be removed within 6 hours of application. If litter is not removed as required, the pumper business is in violation of the laws and rules and the site could be closed until all litter has been removed. Additional restrictions could also be placed on the use of the site to ensure that litter does not become an issue.

VIII. Miscellaneous

VIII.1 Comment:
One commenter noted from their research that Ms. Hill is the person in charge of making sure Regulations are followed and inspect the sites. She is one person, and cannot possibly inspect and follow these sites. There are too many of them in the state.

VIII.1 Response:
Comment noted. The land application sites are inspected by several programs. The Department's Solid Waste Section staff has the primary responsibility of inspecting all licensed solid waste management systems and sites. The Department's Enforcement Section inspects sites that violate the laws and rules and are in the midst of an enforcement action. Local county sanitarians may perform site inspections at these locations at their own discretion. There are adequate personnel available to inspect this and similar sites in the state.

VIII.2 Comment:
Several commenters state that they did not receive the environmental assessment the Department mailed out for comment. These commenters either live in the area, or live adjacent to the proposed site, or it was mailed to an old address. Not all of the adjoining property owners were notified, making the 30 day deadline difficult to satisfy.

VIII.2 Response:
Comment noted. The Department is required by law to notify property owners who share a common boundary with a proposed land application site. Copies of the notice are sent to County Health Officers for posting and it is also posted on the internet. The Department is not required to notify every individual living in the vicinity of a proposed land application site. It is the policy of the Solid Waste Program to notify everyone within a one-mile radius of a proposed site. However, that was not done in this case and we regret the oversight. The addresses listed on the cover page of the EA are those that were used for the mailing. The Department uses the Montana Cadastral mapping website to obtain the information on property owners and addresses within one-mile of proposed sites.

VIII.3 Comment:
One commenter requested the reference to the statute that outlines the requirements for an Environmental Assessment of this type.

VIII.3 Response:
Comment noted. The statute requested is found in the Montana Environmental Policy Act, Title 75, chapter 1, parts 1 through 3, Montana Code Annotated. The statute can be found at the following link: http://data.opLmt.gov/bills/mcatocnS1.htm.

VIII.4 Comment:
One commenter asked why the applicants weren't using the City of Bozeman's wastewater treatment plant.

VIII.4 Response:
Comment noted. While septic tank pumper businesses do have several options for disposal, those options depend on what is actually available to them in the local area. The options include disposal at a wastewater treatment plant, a dewatering facility, a landfill, or a land application site. The wastewater treatment facilities in Bozeman and Belgrade do not currently accept these wastes because their capacity is limited and the facilities would have to be retrofitted to ensure the acceptance of such wastes does not impact the current permitted operations. The nearest facility that does accept septage is located in Helena. Transport to this facility would result in additional costs that would be passed on to the customer. Although the dewatered solids from a septic tank may be disposed of at a landfill, the liquids still require treatment. There is also no facility in the vicinity that accepts such solids. Another option is to have new residential developments, and older ones with aging septic systems, hook up to centralized wastewater treatment system. However, developers and homeowners commonly do not want to take on the extra expense associated with such connections.

VIII.5 Comment:
One commenter noted complaints and violations dating back to 1996 for a pumper business with the name of Robbins Septic. One complaint was in June 2001 with illegal dumping into state waters.

VIII.5 Response:
Comment noted. The Robbins Septic–Sewer Master license S-980 identified in the EA for the proposed site has only been licensed since 2005. There have been no complaints or enforcement actions taken against this pumper business relating to illegally dumping into state waters.

VIII.6 Comment:
Several commenters indicated the property was zoned.

VIII.6 Response:
Comment noted. At the time the Department received the proposed application, the Gallatin County Planning and Zoning certified that the site had met all zoning requirements in place as of March 30, 2011.

IX. Conclusions and Recommendations

The applicants withdrew their request for Department approval of the proposed land application site. Although the Department did not technically have to proceed with responding to comments, we did so in the interest of public service and educating about septage land application. As rural residential development continues to utilize individual wastewater systems, the need to manage septage will become more contentious in parts of Montana. Local planning with citizen involvement is critical to achieve viable solutions. If land application of septage is not acceptable to a community, then alternatives must be created and funded. In the meantime, the Department will continue to perform our statutory obligation to process septage land applications professionally, objectively, and in a manner protective to human health and the environment. No further action is necessary pertaining to this application.