

# FINAL ENVIRONMENTAL ASSESSMENT

## Schellinger Construction Co., Inc. Application to Conduct Opencut Mining Operations at the Tutvedt 2 Site

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY  
July 2006

This Environmental Assessment (EA) is required under the Montana Environmental Policy Act (MEPA). An EA is used to identify and disclose the environmental effects of a proposed action, and to ensure that these effects receive careful consideration before a permit decision is made. An EA also provides an opportunity for public participation in the assessment process.

Even though MEPA requires an analysis of the effects on the physical and human environments, it sets no environmental standards. This document may disclose impacts over which there is no regulatory authority or legally required mitigative measures. The state legislature provided no authority in MEPA to allow the Montana Department of Environmental Quality (DEQ), or any other state agency, to require conditions or impose mitigations on a proposed permitting action that are not included in the permitting authority and operating standards in the governing state law or other applicable state laws. However, a company may agree to modify its proposed activities or accept permit conditions.

The state law that regulates gravel mining operations in Montana is the Opencut Mining Act (Act). The Act and the Rules adopted thereunder (Rules) place a number of operational guidelines and limits on a project and require reclamation of land affected by opencut mining operations. The Act requires that a bond be submitted to the state to cover the total cost of reclaiming an opencut mine site to its approved postmining land use.

A permit decision is not based upon the popularity of a project, but upon whether or not the proponent has met the requirements of the Act, Rules, and other laws pertaining to the proposed action.

**PROPONENT:** Schellinger Construction Co., Inc.

**SITE NAME:** Tutvedt 2

**LOCATION:** NW¼ Section 16, T29N, R22W

**COUNTY:** Flathead

### **TYPE AND PURPOSE OF ACTION**

The proponent has submitted a permit application to the Opencut Mining Program for a 40-acre sand and gravel mine site on the east side of Farm To Market Road, one-quarter mile south of its junction with Church Drive (see map in Attachment 1). The site is about 7 miles northwest of the center of Kalispell. All application materials required under the Act and Rules have been submitted. The operation would supply 1.5-million cubic yards of sand and gravel over a 10-year period, primarily for construction use in the Flathead Valley. The operation would involve excavating, crushing, screening, stockpiling, and hauling mine material.

As part of its permit application, the proponent has submitted a Plan of Operation (plan), including premine information, operations, and reclamation plan sections, and a map. Many details of the plan are discussed in this EA. The proponent is legally bound by its permit to appropriately conduct opencut operations and properly reclaim the site to a postmining land use of grazing (pasture). Reclamation according to the approved plan would be guaranteed by a \$143,000 bond posted by the proponent. The proponent would be required to complete all reclamation work on an area no longer needed for opencut operations within 1 year after the cessation of such operations. The proposed final reclamation date is December 2015.

The Act and Rules give the Opencut Mining Program varying degrees of regulatory authority over potential off-site impacts to water quality, water quantity, sight, sound, and dust. These and other potential impacts may also come under the jurisdiction of other government entities.

## **PUBLIC COMMENTS/QUESTIONS AND DEQ RESPONSES**

The proponent's application was reexamined in April 2006 and several changes were made to the plan. The EA was revised based on the new plan, public comments, and additional evaluation of the proposed opencut operation. The plan and EA respond to comments and questions submitted by the public. Comments were combined and paraphrased, as necessary, for efficiency and convenience.

### **Aesthetics**

**Public Comment/Question.** The deterioration of aesthetics during operation is not acceptable because the site would not be reclaimed for 10 to 15 years. There is no requirement to return the site to a visually acceptable condition. It will look like many other undesirable sites in the valley. The site will be subject to a substantial change in aesthetics for decades as the many mine phases progress.

**DEQ Response.** DEQ understands that an opencut operation can create a substantial visual impact. DEQ worked with the proponent to develop a plan to minimize the visual impact. See Section 8 below.

**Public Comment/Question.** Noise is not desirable. Noise will be detrimental to the area. Noise impacts must be adequately addressed and mitigated.

**DEQ Response.** DEQ agrees that noise is not desirable, especially in a rural setting. DEQ worked with the proponent to develop a plan to minimize the noise impact. See Section 8 below.

### **Air Quality**

**Public Comment/Question.** Air quality will be degraded beyond the permit boundary. Have the required air quality permits been obtained? Will Best Available Control Technology be used on equipment operations? How will dust generated from un-paved public roads be controlled? How will engine exhaust from on-site machinery and off-site haul trucks be controlled? It needs to be specifically addressed how dust would not further degrade the air quality and violate EPA standards.

**DEQ Response.** DEQ worked with the proponent to develop a plan to minimize particulate matter (dust). See Section 3 below.

### **Archeology**

**Public Comment/Question.** Who is the operator? Is he/she capable of identifying artifacts or sites that would need protection? Who specifically has the responsibility of prompt notification of the State Historic Preservation Office? This responsibility should be assigned to a designated agent and not the operator.

**DEQ Response.** Schellinger Construction, the proponent of the permitting action, is the operator. A qualified DEQ representative established an appropriate transect interval and inspected the site. There was no evidence of any cultural properties. Because of the low likelihood that any party would find additional cultural resources at the site, and because the proponent's employees will be most familiar with the site, it is appropriate for them to be the designated party to give notification of additional cultural resources found. This is standard operating procedure for most if not all industries in the state of Montana that disturb the surface of the ground. See Section 7 below.

### **Court Case**

**Public Comment/Question.** This pit is in direct violation of the West Valley Neighborhood Plan. No further action should be taken on this permit until the court case has been settled.

**DEQ Response.** DEQ has no authority to delay processing the permit application until the court case is settled. DEQ must make a decision on the revised application as submitted.

### **DEQ Oversight**

**Public Comment/Question.** Is the local DEQ characterized as promptly and effectively responding to air quality problems? Provide the citizens with a report on the air quality violations mitigated in the past year and benefit provided by such scrutiny.

DEQ Response. All DEQ programs respond to problems and complaints as soon as they are able. Complaints may be registered with DEQ's Enforcement Division or the respective program. A person wanting information about DEQ enforcement activities (violations) should contact the Enforcement Division (<http://www.deq.mt.gov/enf/contacts.asp> or 406-444-0379).

**Public Comment/Question.** It is not sufficient to allow further risks to human health with a mere warning to take precautions.

DEQ Response. The permit application process requires that an applicant make several commitments regarding compliance with the Act and Rules. DEQ is charged with the responsibility of ensuring that operators follow their plans and make good on their commitments. DEQ and other agencies assist operators in their compliance efforts. DEQ issues violations as necessary to remedy problems that may arise and to bring operators back into compliance. Private sector operators are required to post bond to ensure a site is properly reclaimed.

## **Employment**

**Public Comment/Question.** Give the operator credit for creating new jobs. The site will employ additional people and provide trucking firms with additional contracts.

DEQ Response. See Section 13 below.

## **Ground Water**

**Public Comment/Question.** Properly describe the Lost Creek alluvial fan. The Lost Creek alluvial fan is not fully understood nor has it been fully investigated. More water quality tests must be done now and throughout the operation. The project should be postponed until additional data are collected. No mining should be permitted until the DEQ Remediation Division study is completed. A complete hydrology study is needed to ensure that water in the West Valley remains safe. More groundwater flow information is needed. Address cumulative impacts of agricultural activities (fertilizer use, dairy waste, feedlot waste), sewage disposal, the proposed mining operation, and the fact that the sources of elevated nitrates have not been determined. The recommendations in the nitrate investigation report must be performed to provide answers the community needs to avert continued losses.

DEQ Response. See Sections 1 and 2 below. Section 2 indicates that there will be no impacts from the mine on water quality. The mine will not be adding any additional impacts to those of the other possible sources listed in the comment.

**Public Comment/Question.** Describe the water source for the proposed operation, the water quality, and the quantity of water to be used. Address the effect of the proposed operation on shallow ground water, deep ground water, and well quality and quantity in the area. Will ground water be intercepted? Ground water will likely be contaminated by the opencut operation.

DEQ Response. See Section 2 below.

**Public Comment/Question.** The relationship between the shallow and deep aquifers is not well understood. If they are hydraulically connected, nitrates could potentially migrate from the upper to the lower aquifer.

DEQ Response. Mining would not penetrate the ground water and would therefore not hydraulically connect the upper and lower aquifers. See Section 2 below.

**Public Comment/Question.** The direction of ground water flow is an important consideration.

DEQ Response. This characteristic of a ground water system is important when mining would intercept or go into the ground water. In such cases, an evaluation must be made regarding how a mining operation might affect ground water flow and quality upgradient, around, and downgradient of a proposed mine site. This is not a consideration at the Tutvedt 2 site, because the maximum depth of mining will remain above the seasonal/historic high water table level. See Section 2 below.

**Public Comment/Question.** What is the plan for obtaining water for the proposed mining operation and how will pumping water for the mining operation impact the quantity and quality of water in nearby wells.

DEQ Response. See Section 2 below.

**Public Comment/Question.** Does the plan include a Spill Prevention, Control, and Countermeasure Plan to protect surface and ground water from accidental spills? Are managers and emergency phone numbers listed?

DEQ Response. The Spill Prevention, Control, and Countermeasure Plans program is administered by the Environmental Protection Agency (EPA). A Spill Prevention, Control, and Countermeasure Plan (SPCCP) must be prepared by all facilities subject to EPA regulation. The purpose of the SPCCP is to help prevent discharge of oil in navigable waters or adjoining shorelines (including the spillage of oil in ephemeral drainageways). The main thrust of the EPA regulations is prevention as opposed to after-the-fact reactive measures.

Under EPA regulations, oil is defined as “oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil and oily mixtures.” The proponent is responsible for knowing the EPA requirements, determining if it needs an SPCCP, and preparing the SPCCP. The SPCCP must be certified by a licensed professional engineer. The proponent is not required to submit the SPCCP to the EPA, but must keep it on hand. The EPA does random site inspections and investigates complaints and spills.

Based on EPA information given at <http://www.epa.gov/region5oil/plan/spcc.html>, it appears that the proponent is required to have an SPCCP for this proposed opencut mining operation. The proponent verified to DEQ that it has an SPCCP for the proposed operation. The commenter is advised to contact Schellinger for specific information about its SPCCP for this site, if she or he wants additional information about the plan.

See Section 2 below for a description of DEQ fuel storage and containment requirements.

**Public Comment/Question.** The opening of the mine site should be delayed until more water testing and study is done in the area.

DEQ Response. Considering the new proposed water source location and information available to evaluate the impacts of the proposed operation and the fact that the operation would not intercept ground water, more water testing and study are not needed. See Section 2 below.

### **Cumulative Impacts, Aesthetics, Quality of Life, Zoning**

**Public Comment/Question.** A cumulative impact study is needed of the 122 gravel pits in Flathead County, including cumulative impacts to air quality. This permit would open the door for other opencut operations in the area. A long-term mining operation is not compatible with community of the future. Residential development has been occurring in the West Valley area for some time as evidenced by the 4,000 residences in the West Valley area. This area is no longer agricultural based. We don't need more gravel mines. The proposed mining operation will make the West Valley area a less desirable place to reside. The majority of people in the West Valley area are opposed to the proposed opencut mining operation. The West Valley neighbors' rights to a clean and healthy environment will be violated. Approving this application will deny nearby residents the right to use their property for its intended purposes--a home safe from polluting and damaging impacts. The equity of costs and benefits external to market transactions (e.g., visual, noise, dust) that will be paid by people not receiving any benefits should be discussed. The operation should not be allowed. To allow mining operations to dot the area is poor planning. Rezone populated areas appropriately. Do the needed impact studies and award industrial permits intelligently. Cumulative impacts are not addressed in the EA.

DEQ Response. The Department will not include an assessment of all the gravel pits in Flathead County. This would be beyond the scope of this EA. In the Department's rules at ARM 17.4.603(7) under the Montana Environmental Policy Act, cumulative impact is defined in part as “the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type...”. The proposed Tutvedt 2 operation would not interact with or be additive to all other such operations in the county to produce county-wide impacts or at least measurable or significant county-wide impacts. Cumulative impacts in the context of a specific proposed mine permit action are most commonly analyzed with respect to resources, operations, or entities that have some geographical or system connection (e.g., a groundwater aquifer, a wildlife population, local residents, tax collections). Applicable cumulative impacts have been addressed in the revised plan and the final EA text below at a level of detail appropriate to the proposal.

Under the Opencut Mining Act, any party has the right to apply for an opencut permit on any site at any time, if the land is zoned such that this activity is allowable. The Act does not allow DEQ to limit the number of opencut operations in a given area or make permit decisions based on a perceived lack of “need” for additional operations, on who will and will not benefit from a proposed operation, on whether a proposed operation fits the character of an area, or on the popularity of a proposed operation. DEQ is required to evaluate a proposed opencut mining operation based on the requirements of the Act and Rules. Mitigative measures may be required to reduce certain on- and

off-site impacts, and this has been done with this application. DEQ must issue an open-cut permit to the applicant, if the application is complete and adequately addresses the requirements of the Act and Rules. DEQ believes that potential off-site impacts will be reasonably mitigated within the limits provided by state law.

Issues raised with respect to a) the stated lack of compatibility of a long-term mining operation with the local community, b) the proposed mining operation making the West Valley area a less desirable place to reside, c) allowing mining operations to dot the area is poor planning, and d) the need for rezoning populated areas appropriately in Flathead County are issues over which DEQ has no authority under the Act. These are issues that must be addressed at the local level, i.e., Flathead County. The county can prohibit sand and/or gravel mining in an area zoned as residential, and can impose reasonable conditions on an operation in all zones other than residential. Last year, the county issued a Conditional Use Permit (CUP) with 28 conditions on the proposed Tutvedt 2 operation (see Attachment 2). The Flathead County Planning & Zoning Office should be contacted about further or continuing planning and zoning issues.

The comment “The West Valley neighbors’ rights to a clean and healthy environment will be violated.” refers to Montana Constitutional provisions that occur in two places. In Article II of the Constitution the following provision is found:

“**Section 3. Inalienable rights.** All persons are born free and have certain inalienable rights. They include the right to a clean and healthful environment...”

DEQ has no power or authority to interpret or apply this provision in the Constitution.

In Article IX these provisions are found:

“**Section 1. Protection and improvement.** (1) The state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations.  
(2) The legislature shall provide for the administration and enforcement of this duty.  
(3) The legislature shall provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources.”

As is evident, the state legislature is responsible for implementing these provisions of the Constitution. The Open-cut Mining Act, the Clean Air Act of Montana, the Water Quality Act, and other state environmental laws are the responses of the state legislature to regulate mining and to protect or mitigate impacts to air and water quality and other environmental resources under the Montana Constitution. DEQ is charged with administering those laws and their pursuant rules, and has no authority to apply or interpret the Montana Constitution with respect to mining or other issues. If any citizen believes the above mentioned laws or any other laws do not sufficiently implement the clean-and-healthful-environment provisions of Article IX, Section 1 of the Constitution, he or she needs to bring those issues to the attention of the state legislature.

**Public Comment/Question.** The magnitude and significance of potential impacts is clear and overwhelming. Conditions may lessen impacts, but the potential for hazardous consequences cannot be ignored. The protection of drinking water, clean air, safety, and welfare of its citizens are the reasons governmental regulations exist. Do a complete analysis of the impacts.

DEQ Response. The revised plan, including mitigative measures, adequately addresses the requirements of the Act and Rules. The proponent must also comply with other local, state, and federal requirements. See the final EA text below, particularly Sections 2, 3, 8, 11, 14, 23, and 24.

**Public Comment/Question.** The proposed operation should be evaluated as the first phase of an expansive operation. The mine could exist for decades.

DEQ Response. DEQ is required to evaluate a proposed open-cut mining operation based on the application as submitted. The proponent’s application is for a 40-acre gravel mining operation. However, it is clear that the proponent wants to expand this operation over time to 320 acres, because the proponent’s application for a county CUP referenced a 320-acre area, which is acknowledged in Condition 22 of the CUP (Attachment 2). When the proponent wishes to expand the site, a complete amendment application would need to be submitted to DEQ. DEQ would review that proposal and prepare an EA or EA supplement, which would be subject to public review and comment.

At this time, DEQ has received no specific information about future mine plans within the 320-acre area. To the extent that the site resources and future mining plans in the remaining portion of the 320-acre tract are or would be similar to the current 40-acre site and mine plan proposal, the impacts of mining the rest of the 320-acre tract would be similar to what is described in this document, but would extend over a much longer and undetermined period of time.

**Public Comment/Question.** Flathead County has adopted the West Valley Neighborhood Plan as a legal zoning district.

The land can be taken out of agricultural production but cannot be put into industrial/commercial use.

Industrial use is permitted in light industrial and heavy industrial zoning only, and as a conditional use in other zoning districts, but not the West Valley Neighborhood Plan.

To permit an openpit mining operation would violate local zoning laws.

The EA should address this issue and the issue should be reviewed by the state Attorney General's office.

The decision of the Flathead County Planning Board and Board of Adjustments is disputed in District Court.

The Extractive Industry classification of this permit is heavy industrial use not permitted in the legally adopted West Valley Neighborhood Plan.

The conditions were applied to the permit under the mistaken presumption that the West Valley Neighborhood Plan allowed Gravel Extractive Industry as a conditional use.

Until the courts make a determination in the granting of the permit, the DEQ should not proceed with granting a permit.

DEQ Response. These are all issues that are outside of DEQ's authority and jurisdiction. They are the responsibility of Flathead County, which is the legally designated agency to administer zoning and land use planning matters in the county. Last year, Flathead County issued a Conditional Use Permit with 28 conditions on the proposed Tutvedt 2 operation (see Attachment 2). After this decision, the county issued a signed form to DEQ indicating that the proposed Tutvedt operation was in compliance with local zoning regulations. DEQ has no legal authority to intervene in the legal dispute regarding the county's CUP decision. Finally, DEQ has no authority to delay its decision on the openpit mining permit application, pending a court decision on the disputed county CUP.

## **Land Use**

**Public Comment/Question.** There is recreational potential within the tract. The potential for development for recreational use is there whether or not it is currently considered.

DEQ Response. See Section 17 below.

**Public Comment/Question.** Reclamation to pasture cannot be assured when the condition of the pit 10 years in the future is not known (water table may be near pit floor by then, use by livestock could contaminate ground water).

DEQ Response. The proponent would be committed to the postmine land use of pasture. Bond money would be used by DEQ to reclaim the site to pasture if the operator was unable or refused to complete the reclamation. Conversely, the permit could be amended if the operator proposed to revise the postmine land use to an acceptable alternative, either because pasture turned out to be an inappropriate postmine land use or because the operator otherwise wanted to change the land use for his own purposes. A proposed change in postmine land use would be subject to public notification and comment.

The pit floor would be about 10 feet above the potential high water table elevation. This is greater separation than that required by DEQ and Flathead County for septic system leach fields (4 feet). It is not expected that ground water quality would be affected by a postmine land use of pasture. There would be 8 inches of replaced soil and a grass and legume vegetative cover. Under normal grazing conditions, nutrients from livestock waste would not reach the ground water. Much of the ammonia would volatilize. The remaining nutrients would be utilized by the vegetation or bound to the soil. If the proponent applied for an amendment to change the postmine land use to a feedlot that would involve a large concentration of livestock waste, the application would undergo the Openpit Mining Program's review process, and the proponent would have to comply with Montana Water Quality Act requirements.

## **Montana Environmental Policy Act (MEPA)**

**Public Comment/Question.** A full evaluation of impacts as required by and in accordance with MEPA must be done. The EA does not address the criteria used to determine the type of analysis and documentation that should be done to satisfy MEPA. It is not clear why an EA was preferred over other forms of analysis and documentation. Comments throughout the EA suggest that the checklist approach is not adequate. The process used to determine the significance of impacts should be followed and documented. The format recommended by

MEPA was not followed. There is little mention of how public comment was conducted. “There needs to be a crosswalk displayed in the EA to show how public participation relates to the development of issues to be analyzed and eventually serve as the basis for the development of alternatives to the proposed action.” There is inconclusive evidence in the EA that an interdisciplinary team was used with an adequate array of professional specialists. The team, along with their responsibilities and qualifications, should be listed in the EA. “There is a failure to reference to specific analysis used to support a point and the professional specialists or scientists and literature responsible for the documentation or analysis. There is also a failure to discuss any disagreement over positions on scientific issues.” The recognition and discussion of cumulative impacts is woefully inadequate in the EA. Reasonably foreseeable future actions should be included as cumulative impacts. There appear to be no alternatives other than the proposed action. MEPA requires that a “reasonable range of alternatives” be offered and evaluated. There was little presented regarding economic analysis. An environmental impact statement should be done.

DEQ Response. The Opencut Mining Act provides that DEQ must make a permit decision within 60 days of receipt of a complete application. The Montana Supreme Court has held that a 60-day review period does not provide adequate time for preparation of an EIS and that, when DEQ is under a 60-day review requirement, the EIS requirement of the Montana Environmental Policy Act (MEPA) is not applicable. Furthermore, for permitting decisions for which the EIS provisions of MEPA are applicable, an EIS is required only when there are significant actual or potential impacts. DEQ has not identified any actual or potential impacts that it believes are significant.

The level of detail suggested in the comment is more commonly associated with an environmental impact statement--what MEPA refers to as a “detailed statement” that must be prepared for “major actions of state government significantly affecting the quality of the human environment.” In an EA, the agency must provide the information that is applicable to the situation at a level of detail appropriate to the complexity of the action, environmental sensitivity of the area, uncertainty about the significance of the impacts, and the need for mitigation. DEQ followed its standard application review and EA procedure for this type of proposed opencut operation. The plan and EA have been revised to be more detailed and comprehensive.

Cumulative impacts are addressed in this final EA where applicable. There are other commercial and residential developments (present and future) that do or could have impacts. DEQ does not expect the proposed Tutvedt operation to make any significant contribution to those impacts.

There are two alternative actions considered, denial of the application and approval with conditions (see Section 22).

See Section 23 regarding Public Involvement, Agencies, Groups, or Individuals Contacted. See Section 27 for referenced literature used in the EA preparation. Near the end of this document is a list of the preparer, contributors, and reviewers.

**Public Comment/Question.** MEPA requires that the agency complete a meaningful no-action alternative analysis. The no-action alternative analysis must include the projected beneficial and adverse environmental, social, and economic impact of the project’s non-completion. This was not done in the EA.

DEQ Response. MEPA requires completion of “a meaningful no-action alternative analysis” when a state agency prepares a detailed statement (environmental impact statement) for a major action of state government that would significantly affect the quality of the human environment. For an EA, the appropriate level of detail in the analysis is keyed to the situation, and a no-action alternative is not absolutely required. For this EA, “denial of application” in Section 22 constitutes the no-action alternative.

### **Socio-economics, Property Values, and Property Rights**

**Public Comment/Question.** There is no explanation as to why no new jobs will be created as a result of the proposed operation.

DEQ Response. See Section 13 below.

**Public Comment/Question.** The tax section is not accurate. It is inconsistent with the position that no jobs will be created. For taxes to increase there would have to be increased total revenue. This would mean an increase in the quantity of gravel mined in the area, which would also increase employment.

DEQ Response. See Section 14 below.

**Public Comment/Question.** Additional taxes on income, fuel, etc will be offset by declining property tax revenues. Residential developments and land improvements increase the real estate tax base. Infrastructure improvements accompanying residential development increase the tax revenues of Flathead County, school districts, fire districts, and mill levy supported programs.

DEQ Response. See Section 14 below.

**Public Comment/Question.** The Guide to the Montana Environmental Policy Act and the MEPA Model Rules recommend that a benefit/cost analysis be done for the proposed action and alternatives. The EA does not mention any benefit/cost analysis having been done.

DEQ Response. A cost/benefit analysis is not required by MEPA. However, if one is prepared for some reason, it must be included. A cost/benefit analysis was not prepared for this EA.

**Public Comment/Question.** There is no mention of an economic feasibility analysis.

DEQ Response. Economic feasibility of this project is not relevant to the objectives of an EA. Also, the Opencut Mining Act does not allow DEQ to make permitting decisions based upon the economic feasibility of a proposal. Whether or not a proposal is economically feasible is the proponent's concern.

**Public Comment/Question.** The Social Structures And Mores section has not been addressed. This needs to be analyzed by someone trained in rural sociology. If the area around the mine became less desirable, there could be a downward adjustment with more affluent residents leaving and being replaced by residents in lower socio-economic classes. This can result in a community having significantly different values and lifestyles.

DEQ Response. The possibility of affluent residents leaving and being replaced by residents in lower socio-economic classes may be indirectly related to the effects of opencut mining on property values. See Section 14 for an analysis of this issue.

Under the Opencut Mining Act, DEQ has no authority or jurisdiction over property value issues. The Montana Legislature has specifically limited DEQ's authority to issues relating to taxable value. The Legislature has given DEQ two means of mitigating the effects of gravel operations on adjacent property. Firstly, DEQ has authority to minimize noise and visual impacts to the degree practicable through use of berms, vegetation screens, and limits on hours of operation, and to otherwise prevent significant physical harm to adjacent land (See the Opencut Mining Act at 82-4-434(2)(o) and (p), MCA). Secondly, in order to protect and perpetuate the taxable value of property, land on which operations are completed must be graded and revegetated.

**Public Comment/Question.** The tranquility of country living carries a price and the price is included in the market value of homes. Destruction of aesthetics, noise, and pollution erode the quality of life and the value of residential investments. There is no discussion of the impact on property values of adjacent real estate.

DEQ Response. See Section 14 below.

**Public Comment/Question.** A regulatory restriction analysis is not located in the EA.

DEQ Response. A regulatory restriction analysis is performed to disclose the impacts of state-agency-imposed permit conditions or permit denial on the private property rights of the proponent or the landowner on whose property the project is proposed. The analysis is not required if the conditions are needed to comply with the law. As noted in Section 26 below, the private property analysis indicates no impact on the proponent's or landowner's property rights.

## **Roads and Traffic**

**Public Comment/Question.** Increased gravel truck traffic on area roads will increase safety hazards on area roads and around schools. All gravel trucks should be prohibited from using Church Drive until it is improved. Traffic regulations are not adequately enforced. Roads in the West Valley area are not built to handle additional truck traffic. Wear and tear on the roads, the need for safety improvements, responding to increased accidents, and lawsuits will increase costs to several agencies including Flathead County, the Montana Department of Transportation, Flathead County Sheriff's Department, school district. All of these costs will be borne by taxpayers. Has a traffic study been done? Has the cumulative impact of increased truck and residential traffic been analyzed? No traffic studies have been made by the applicant to reduce the danger. Direct access to Farm To Market Road, a secondary highway, should not be allowed, because vehicles frequently drive 60 to 70 miles per hour and truck drivers often do not obey posted traffic regulations. Truck traffic will have a substantial aesthetic impact.

DEQ Response. See Section 11 below.

## Weeds

**Public Comment/Question.** In the vegetation section there is no mention of the potential effects from invasive weeds. Will herbicides be used?

DEQ Response. See Section 4 below. Herbicide use is included in the county-weed-district-approved noxious weed management plan for this site. No noxious weeds have been seen on site.

## Wildlife

**Public Comment/Question.** The EA lists numerous wildlife species in the area. It is apparent that the proposed operation will significantly degrade wildlife populations. Habitat and nesting areas will be destroyed and increased number of deer will be killed by vehicles. Having this gravel pit will decrease the amount of wildlife.

DEQ Response. See Section 5 below. There may be more deer killed because of increased traffic in general, including that due to gravel trucks. See Section 11 for analysis of additional traffic.

**Public Comment/Question.** The area is frequented as a hunting ground for the bald eagle. Eagles perch in the forest northwest of the subject property. Noise and loss of small animal habitat will lessen the presence of eagles and hawks in the vicinity. There is a potential nesting site just west of the proposed mine and it has never been studied by FWP. There is a nesting pair of bald eagles within a quarter mile of the site. There are several families of bald eagles living among us.

DEQ Response. See Section 5 below.

## Miscellaneous

**Public Comment/Question.** What will be the maximum height for gravel piles at the site?

DEQ Response. Stockpile heights vary with the type of material being piled, the bulk of the pile, and method of stockpiling (conveyors versus loaders). DEQ asked the proponent this question and the response was that stockpiles would be approximately 20 feet higher than Farm To Market Road.

**Public Comment/Question.** Have the necessary agencies been contacted to get required permits or plans for this mine (including the West Valley Rural Fire Department, see Flathead County Special Condition 5)? Notification to the EPA for a complete investigation should have been submitted, as well as notification to the Flathead County Health Department regarding nitrate effects.

DEQ Response. The appropriate agencies have been contacted about the proposed opencut operation. See Section 23 below. The proponent, not DEQ, is responsible for obtaining all other required permits for this proposed operation. The commenter is advised to contact the Flathead County Planning & Zoning Office regarding the status of Condition 5. EPA has no authority or responsibility regarding this operation, except for the Spill Prevention, Control, and Countermeasure Plan (see comment above under Ground Water). The Flathead County Health Department will receive a copy of this final EA, although DEQ anticipates no impacts on ground water quality from this mining operation (see Section 2 below).

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>1. GEOLOGY AND SOIL QUALITY, STABILITY, AND MOISTURE:</b> Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?	<b>Geology.</b> The site is located on the Lost Creek Fan (LCF), a gently-sloping alluvial fan produced by outwash from Lost Creek. The LCF covers several square miles in the West Valley area. Deposits consist of stratified layers of water-worked glacial outwash sand and gravel covering bedrock.  Removal of gravel to a maximum depth of 35 feet would alter the topography. All

	<p>surfaces would be graded to 3h:1v or flatter as required for the proposed postmining land use of grazing (pasture). The site would be graded to blend into the surrounding topography. Potential impacts due to the removal of mine material have been reviewed and DEQ has determined that the site can be reclaimed to a stable condition.</p> <p><b>Soils.</b> The site is an irrigated wheat field with marginal yields due to thin soils. The predominant soil within the proposed permit area is the Yeoman cobbly loam. The soils vary in thickness from 5 to 10 inches, averaging 8. All soil would be stripped before other surface disturbance occurs, and placed on areas prepared for resoiling or stockpiled for later reclamation use. Soil handling degrades soil due to at least partial loss of soil structure, pores, microorganisms, and organic matter. However, soil replaced on reclaimed areas is soon capable of producing a vegetative cover similar to predisturbance vegetation. Long-term soil stockpiles would be seeded at the first seasonal opportunity to the approved reclamation seed mix.</p>
<p>2. <b>WATER QUALITY, QUANTITY, AND DISTRIBUTION:</b> Are important surface or ground water resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p><b>Surface Water.</b> The only apparent surface water feature in the area is a dugout located about 200 feet east of the proposed site. This dugout is located in a larger dry pond bed. Water from the dugout is pumped to the center pivot on the Tutvedt wheat field.</p> <p><b>Lost Creek Fan and Deeper Ground Water.</b> The LCF is an area of coarse alluvium through which Lost Creek runs and is eventually “lost” underground. Many older wells (&gt;15 years) in this area were completed in LCF alluvial deposits at depths ranging from approximately 30 to 150 feet. A DEQ investigative report (Alvey, January 2006) calls this zone the “shallow aquifer.” Ground water in this aquifer generally flows from west to east and possibly with surface topography, although the geology of the area is complex and varying preferential flow paths seem to exist. The shallow aquifer overlies a “deep aquifer” into which most of the recent wells have been drilled in the West Valley area. The deep aquifer is considered to be more than 150 feet deep and ground water flow in this aquifer is also generally to the east.</p> <p><b>Ground Water Interception.</b> Montana Bureau of Mines and Geology water well information for 14 wells within one-half mile of the proposed site shows static water levels at 58 feet or deeper. These levels are substantially below the proposed 35-foot maximum depth of mining.</p> <p>In addition, in February 2006, Schellinger determined relative elevations of the dugout water table (84 feet), dry pond historic high water mark which is the historic high water table (100 feet), and top of hill to be mined (146 feet). The dry pond historic high water mark is clearly visible on site. Considering the 35-foot maximum depth of mining, the pit floor would be at an elevation of about 111 feet (146 minus 35). This is 11 feet above the historic high water table elevation and 27 feet above the current dugout water table (111 minus 84). DEQ verified this information during a subsequent field inspection with the proponent. All of this information indicates that mining will not intercept ground water or impact flow to wells in the area. Finally, in its plan of operation at II4(B), Schellinger states: “In the unlikely event that groundwater is encountered during the life of the operation, we will stop mining in that area and promptly notify the Department.”</p> <p><b>Operational Water Source.</b> It is important to know the water source of a proposed opencut mining operation to ensure that surface water, ground water, and water rights impacts can be identified and addressed.</p> <p>The proponent plans to obtain water for the proposed operation from a new well that would be drilled into the deep aquifer in the NW¼, Section 16, T29N, R22W. A sample of the water would be analyzed for nitrate and the results submitted to the DEQ for review. If DEQ approves this source, water would be pumped from it at a rate up to 35 gallons per minute, a rate that does not require the proponent to obtain a water right on the well. Water would be stored in one or more large tanks. The operator would then go through the process of obtaining a water right to allow pumping 500 gallons per minute. To the extent</p>

that volumes of water greater than what could be supplied by pumping 35 gallons per minute would be needed prior to obtaining the necessary water right to pump those higher volumes, Schellinger would import good-quality water from outside sources.

**Water Quality.** Although some types of mining have the potential of contributing pollutants to surface or ground water, sand and gravel mining does not, except for sediments, because sand and gravel are chemically inert. Sand and gravel mining is relatively environmentally benign if certain preventative or protective measures are followed. Also, as discussed below, the deep aquifer water well proposed as the water source for the opencut operation yields high quality water; therefore, this water will not add contaminants to the proposed mine area.

The proponent is required to take appropriate measures to protect on- and off-site surface water and ground water from deterioration of water quality and quantity that could be caused by opencut operations. The proponent is required to store fuel in accordance with the current codes adopted by the State Fire Marshall, and to report a fuel spill that reaches state waters or is greater than 25 gallons to the Montana Spill Hotline. The proponent must comply with Flathead County's Conditional Use Permit Condition 26 which prohibits the storage of unleaded fuel on site. The proponent must comply with applicable local, state, and federal requirements regarding the storage and management of used oil and hazardous materials, and has committed to following DEQ's Spill Management and Reporting Policy should there be a release or spill of such materials. A Spill Prevention, Control, and Countermeasure Plan is required by EPA when the aggregate aboveground storage capacity of oil (including diesel fuel) at a site would be greater than 1,320 gallons, including fuel tanks and trucks to remain on site. The proponent has such a plan.

The proponent would use grading, berms, and silt fence as needed to control runoff and sediment.

In addition, DEQ conducts inspections to ensure that opencut operations are in compliance with their plans, and investigates and resolves complaints received about operations.

**Water Quantity.** A water truck would be used to spray water for dust control (estimated 1.3-million gallons per year). Spray bars would be used on the crusher and screen to control dust (estimated 360,000 gallons per year). A pug mill may be used to add moisture to aggregate product (estimated 2.9-million gallons per year). The total potential annual water use is therefore about 4.6-million gallons. According to the landowner, Bruce Tutvedt, in a "normal" year he pumps about 120-million gallons of water from his deep aquifer water source well for irrigation purposes. The pump test that would be needed for the water right on the proposed new well water source will ensure that its use would not negatively affect the use of other deep aquifer wells in the area.

**Nitrate Issue.** The DEQ Groundwater Remediation Program (GRP) has been conducting an investigation of nitrate concentrations in the shallow aquifer of the LCF. The investigation (Alvey, January 2006) has found that nitrate concentrations remain elevated in some areas. At this time no conclusions have been reached regarding the sources causing the elevated nitrate levels. The DEQ GRP plans to conduct additional sampling and other investigative activities in 2006.

Alvey (January 2006) stated: "Currently, the relationship between the shallow and deep aquifer is not well understood. It may be possible that the LCF (shallow) aquifer and the deep aquifer may be hydraulically connected, at least in some areas. If the two aquifers are connected, nitrates could potentially migrate from the upper (shallow) to the lower (deeper) aquifer."

An existing deep-aquifer well owned by the landowner, Bruce Tutvedt, is located in Section 15, T29N, R22W and about 1 mile east of the proposed mine site and has a total

	<p>depth of 470 feet. An analytical report of water quality from this well, completed by Montana Environmental Laboratory on May 3, 2006, showed a nitrate + nitrite total of 0.21 mg/L.</p> <p>In 2005, three shallow wells were sampled around the location of the existing Tutvedt well. One well, located about ¼-mile northwest of the Tutvedt well, showed a nitrate level of 6.83 mg/L. The second well, located about ¼-mile south of the Tutvedt well, showed a nitrate level of 8.23 mg/L. The third well, located about ½-mile east of the Tutvedt well, showed a nitrate level of 1.28 mg/L. The nitrate levels in these wells are below the Montana water quality standard of 10 mg/L for nitrate (Montana DEQ, February 2006).</p> <p>Any connections between the shallow and deep aquifers would be occurring at approximately 80 to 100 feet or deeper. Therefore, at the proposed mine site where the proposed maximum depth of mining is 35 feet, mining should not create a hydraulic connection between the shallow and deep aquifers. The existing Tutvedt deep well has been used for years to supply irrigation water at a far greater quantity than the quantity of water the proposed opencut operation would require, yet this water remains of very high quality, indicating that the somewhat higher nitrate levels in the shallow aquifer in that area are not affecting deep aquifer water quality of this well.</p>
<p>3. <b>AIR QUALITY:</b> Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>The proposed operation would increase the levels of some pollutants in the area, particularly particulate matter and carbon monoxide. The proponent would be required to comply with state air quality regulations, which are as or more strict than federal (Environmental Protection Agency) requirements. The proponent has obtained all required air quality permits. The air quality permitting process includes an analysis of Best Available Control Technology.</p> <p>Because the proposed site is in or within 10 km of a PM<sub>10</sub> (particulate matter no greater than 10 micrometers in aerodynamic diameter) nonattainment area, the proponent has an addendum to its DEQ air quality permit that: 1) requires water spray bars on crushers, screens, and material transfer points, 2) limits visible emissions from the crushing and screening plant, other equipment, works areas, and roads within the permit area to less than 10 percent opacity (a measurement of visibility through a dust plume) over 6 consecutive minutes, 3) requires treatment of unpaved roads and work areas with a dust suppressant as necessary to maintain compliance with the 10 percent opacity limitation, 4) limits crusher and screen production during any rolling 24-hour period, and 5) limits diesel generator hours of operation during any rolling 24-hour time period. Exhaust from machines other than diesel generators, including haul trucks, is not regulated.</p> <p>In addition to the requirements of the DEQ air quality permit, the proponent has committed to a dust control plan detailed in Section II(7) of the plan of operation in the mining permit application. Condition 9 of the Flathead County Conditional Use Permit requires that the proponent perform dust abatement consistently and conscientiously to limit any impacts to the surrounding properties and general air quality. Flathead County, not the proponent, is responsible for dust control on public roads in the area; however, fugitive dust from county roads near the proposed mine site would appear to be an insignificant issue, because these roads are paved and because of Condition 19 of the County's CUP: "The proponent shall obtain and furnish proof of an approach permit from the Flathead County Road and Bridge Department for the access onto Farm To Market Road and abide by any conditions regarding dust abatement and maintenance." Gaseous emissions from mobile equipment such as front-end loaders and haul trucks used on- or off-site are not regulated by any agency.</p> <p><b>Cumulative Impacts.</b></p> <p>Two other prospective mine sites are nearby, Beasley-Silverstone and Krueger. The first of these is an existing permitted site approximately ½ mile west of the Tutvedt site. An amendment has been submitted for the Beasley-Silverstone site; this amendment would,</p>

	<p>among other things, increase production to a total of 700,000 cubic yards over a 15-year period. This site would also include a crusher, but the permittee has not obtained an air quality permit for this facility. Also, the Conditional Use Permit (CUP) on the Beasley-Silverstone site was recently revoked by the Flathead County Board of Adjustment; the mine cannot operate unless the operator submits application for and receives a new CUP.</p> <p>The Krueger site is a proposed operation located about 1.5 miles east of Tutvedt. The initial permit area would be 80 acres of which only 4.2 acres would be disturbed. If subsequent amendments on the 80-acre tract were submitted and approved, a total of approximately 2.7 million yards of materials would be mined over 20 years. The proposal for this site includes a crushing operation, but the applicant has not obtained an air quality permit for such a facility.</p> <p>It is likely that air quality permits for Beasley-Silverstone and Krueger would be similar in their requirements and restrictions to that of Schellinger at the Tutvedt site (see paragraph two above in this section). Also, the plans of operation in the Beasley-Silverstone mine permit amendment and the Krueger mine application both contain dust control commitments. The county issued a CUP to Krueger in April of this year. Several CUP conditions imposed on Krueger with respect to fugitive dust control are identical in content or concept to those in the Tutvedt CUP (see Tutvedt CUP Conditions 9, 13, 19, and 22 in Attachment 2). Thus, each of the three sites would be subject to similar requirements that would limit air quality impacts in relation to state and county requirements.</p> <p>The Air Resources Management Bureau (ARMB), which is the DEQ bureau responsible for issuing air quality permits and conducting air quality compliance work, does not monitor dust emissions on individual sand and gravel mine sites, especially of this size. Thus, quantitative particulate (dust) emission data are not collected on sites such as these. Typical permits of ARMB issued for crushers working on sand and gravel sites in this area require that dust emissions from crushers and associated equipment be limited to no more than 250 tons per year and to meet certain air opacity requirements. Based on generally accepted particulate emission factors on mine sites such as these, dust from other sources (known as fugitive dust) such as trucks or other equipment moving across/around the pit or on access roads, loading of trucks, stockpiling of soil or overburden, etc. is considered to be less than 15 tons per year by ARMB. Thus, on average, these three mines collectively could emit close to 795 tons of particulates per year <math>[(250 \times 3) + (15 \times 3)]</math>. How this would affect air quality in the general area around these operations is difficult to predict. It is possible to conceive of atmospheric, weather, and operational conditions wherein the emissions from these operations could be additive in terms of air quality deterioration: all operating at full capacity at the same time when there is an air inversion in the valley and low humidity. The likelihood of all of these circumstances occurring at the same time is unknown.</p> <p>DEQ has been monitoring air quality at certain locations in the Flathead Valley for quite some time. Community air pollution control plans have been developed to help Columbia Falls, Kalispell, and Whitefish meet state and federal air quality standards, because these towns have been designated by the federal government as out of compliance with particulate standards (i.e., nonattainment). Please see Attachment 3 for details concerning DEQ's initiatives and efforts in this regard.</p>
<p><b>4. VEGETATION COVER, QUANTITY, AND QUALITY:</b> Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>Vegetation within the proposed permit area consists of wheat stubble within the center pivot area, and grass and alfalfa in the area outside the center pivot area. The Montana Natural Heritage Program reports no plant species of special concern in the area. The site would be reclaimed to pasture consisting of native grasses and alfalfa. Bond would not be fully released until reclamation vegetation is established.</p> <p>The Flathead County Weed Control District approved a Soil Disturbance &amp; Weed Management Plan for the proposed operation. Also, in Section III(5) of the proposed plan, the proponent commits to using seed that is as weed free as possible, and to complying</p>

	with the noxious weed management plan approved by the local weed district for the site.
<p><b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b> Is there substantial use of the area by important wildlife, birds, or fish?</p>	<p>The proposed permit area is used by gophers, coyotes, songbirds, an occasional white-tailed deer, and other animals. Opencut operations would temporarily eliminate existing wildlife habitat until the site is reclaimed to pasture.</p> <p>The Montana Natural Heritage Program reports the lynx as a species of special concern in a large area west of Farm To Market Road, up into the mountains. Lynx typically inhabit forested mountainous areas. Their favored prey species is the snowshoe hare, but they will eat other small animals. It is unlikely that lynx have visited the proposed permit area due to its openness, use as farmland, and absence or limited occurrence of preferred prey species.</p> <p>Bald eagles have also been seen in the vicinity of the proposed permit area. Bald eagles prefer forested areas along rivers and lakes, nest mostly in timber stands, and eat fish, waterfowl, small to medium mammals, turtles, and carrion. It is unlikely that bald eagles would be impacted by the proposed opencut operation. The proposed 40-acre mine site does not consist of preferred habitat or provide nesting sites, nor does it offer many of the bald eagle's preferred prey species. Timber is available for nesting sites about ½-mile southwest of the proposed mine site.</p>
<p><b>6. UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES:</b> Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p>	<p>See Sections 4 and 5 above. No threatened or endangered species occupy the proposed site. No wetlands or riparian areas would be affected by the operation. No unique wildlife habitat would be affected.</p>
<p><b>7. HISTORICAL AND ARCHAEOLOGICAL SITES:</b> Are any historical, archaeological, or paleontological resources present?</p>	<p>Surface disturbances by opencut mining operations may alter or destroy cultural resources. A June 7, 2005 letter from the State Historic Preservation Office (SHPO) states that SHPO records show no previous recorded cultural resource sites in or around the proposed opencut operation area. Surface disturbance by farming has decreased the likelihood that such resources could be found on site. A site inspection by a DEQ environmental specialist did not reveal on-site cultural resources. The plan requires that the proponent provide appropriate protection for identified cultural resources that could be affected by opencut operations and promptly notify SHPO and DEQ should additional resources be found.</p>
<p><b>8. AESTHETICS:</b> Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p><b>Viewscape.</b> An opencut operation can create a substantial visual impact. The proposed site is visible from Farm To Market Road and residences in the area. Of the two closest residences, one is about 1,000 feet west-southwest of the southwest corner of the proposed site, and the other is about 1,000 feet south-southwest of the southwest corner of the proposed site. Stripping and excavating equipment, haul trucks, screens, crushers, and possibly a pug mill would be used on site. The proponent has committed to a viewscape impact control plan detailed in Section II(7) of the plan. Key mitigative measures include establishing a vegetated soil berm along Farm To Market Road, maintaining a neat and orderly operation, and locating facilities and stockpiles on the pit floor as soon as possible. In addition, Condition 11 of the Flathead County Conditional Use Permit requires that any light used on site be directed so as to minimize off-site impacts. Ultimately, the site would be graded, resoiled, and revegetated for a postmining land use of pasture.</p> <p><b>Noise.</b> The proposed opencut operation would increase noise levels in the area. No numerical standards for off-site sound levels apply to opencut operations. However, several noise reduction practices can be used at an opencut operation, and the proponent has committed to a noise control plan detailed in Section II(7) of the plan. Key mitigative measures include following specified hours of operation (7:00 a.m. to 7:00 p.m. Monday through Friday, and 7:00 a.m. to 2:00 p.m. Saturday), establishing soil berms along Farm To Market Road, and locating facilities and stockpiles on the pit floor as soon as possible. In addition, Condition 10 of the Flathead County Conditional Use Permit requires that mufflers and other sound-dampening devices be installed on all generators to reduce noise</p>

	impacts.
<b>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR, OR ENERGY:</b> Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?	No resources that are limited in the area would be used.
<b>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:</b> Are there other studies, plans or projects on this tract?	A study is underway by DEQ's Groundwater Remediation Program to identify the sources and distribution of nitrates in the ground water of Lost Creek Fan.

### IMPACTS ON THE HUMAN POPULATION

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<b>11. HUMAN HEALTH AND SAFETY:</b> Will this project add to health and safety risks in the area?	<p>On-site excavating, crushing, screening, stockpiling, loading, hauling, and other operational activities create a potentially hazardous work environment. The proponent must comply with safety and health regulations administered by the federal Mine Safety and Health Administration and Montana Department of Labor and Industry, Bureau of Safety and Health, Mining Section.</p> <p>Depending on the proposed opencut operation, off-site impacts may involve the viewscape, noise, dust, noxious weeds, and surface water and ground water quality and quantity. Viewscape and noise are addressed in Section 8, dust in Section 3, noxious weeds in Section 4, and surface water and ground water in Section 2. The proponent has adequately addressed potential off-site impacts and has proposed appropriate mitigative measures.</p> <p><b>Traffic.</b></p> <p>Over the past several years, the Montana Department of Transportation (MDT) has conducted traffic counts and systems impacts studies in the vicinity of proposed opencut operation to determine existing traffic flows and possible impacts from planned developments. These continuing efforts provide a factual basis for road or traffic control improvements. The county planning staff is working on a growth policy amendment. The policy is expected to be complete in the fall of 2006 and should address road and traffic impacts. Also under review is a master plan amendment on 3,200 acres in the area of Highway 93 around West Spring Creek Road to Fox Farm Road.</p> <p>Trucks must follow the same rules of the road as other traffic. Speed limits, signage, and other traffic control devices are designed to protect humans. For example, the springtime truck speed limit is reduced to 35 mph on Farm To Market Road due to road breakup. The MDT traffic studies, in conjunction with the local government planning efforts, would be used to determine if speed limits should be reduced, warning signs or traffic signals should be installed, or other actions should be taken to control or reroute traffic.</p> <p><i>Tutvedt 2 Traffic</i></p> <p>Three conditions of the approved county Conditional Use Permit refer to traffic and roads. Condition 8 requires paving 200 feet of the approach from the mine site onto Farm To Market Road. Condition 16 requires signs to alert vehicular and pedestrian traffic to the presence of heavy truck traffic travel along all travel routes, including Farm To Market Road, Church Drive, West Reserve Drive, Stillwater Drive, and West Valley Drive.</p>

Condition 27 prohibits truck traffic within 1 mile of West Valley School during the hours of 7:30 a.m. to 8:30 a.m. and 3:00 p.m. to 4:00 p.m.

The Tutvedt 2 site is basically intended for normal commercial sales, that is, for commercial buildings, housing projects, subdivisions, shopping mall development, street and utilities repair. The general construction season is strong from March through November but depending on weather, can last throughout the winter. In reality, more traffic would be generated during the general construction season than in the winter. However, when MDT does traffic counts on state highways and secondary roads, it adjusts those numbers for seasonality and number of axles (trucks and cars). By using a calculated annual average for the mining operation, it can be compared to the MDT annual averages.

Traffic that might be generated due to the Tutvedt 2 operation can be calculated as follows. The average traffic that would be generated by this operation is computed by dividing the total volume of product proposed to be mined (1.5-million cubic yards) by the estimated volume per truckload (20 cubic yards). This number of loaded-truck trips is multiplied by two to account for empty trucks returning to the site. Then, dividing the total truck trips by the 10-year life of operation and by 286 working days per year (5.5 days per week) results in 52 average daily trips or average daily traffic (ADT) = 52 (1.5M yds<sup>3</sup> / 20 yds<sup>3</sup>/truck x 2 trips / 10 years / 286 days). Using an estimate of 15 employees at the site, an extra 30 car trips per day would be generated for employees to get to and from work. Therefore, on average, this pit would generate 82 ADT.

*General Area Traffic Counts*

The MDT has conducted traffic counts on Farm To Market Road, Reserve Drive, and Highway 93. The latest traffic count information (2004) for Farm To Market Road was 3,030 ADT measured just north of the intersection with Reserve. Information collected the same year for Reserve Drive just east of Farm To Market yielded 1,860 ADT, and just west of Highway 93 yielded 4,820 ADT. In 2005, the ADT on Reserve Drive west of Highway 93 was 7,290 ADT. The ADT on Highway 93 measured just south of Reserve Drive was 24,090 in 2004 and 22,340 in 2005.

LOCAL TRAFFIC ADT

Year	Farm To Market north of Reserve	Reserve Drive east of Farm To Market	Reserve Drive west of Highway 93	Highway 93 south of Reserve Drive
2005			7,290	22,340
2004	3,030	1,860	4,820	24,090

*Estimated Impacts*

It is not possible to know which road each truck and car would use. However, for the purposes of this analysis, it will be assumed that 100 percent of the ADT would travel from the proposed mine site onto Farm To Market Road, then Reserve Drive, then Highway 93 (vice versa on a return trip).

Using 2004 numbers, if all of the traffic (82 ADT) from the Tutvedt 2 site traveled south on Farm To Market, there would be a 2.7 percent average increase in traffic. On Reserve Drive, the Tutvedt 2 traffic would result in a 4.4 percent average increase in traffic just east of Farm To Market Road and a 1.7 percent average increase in traffic just west of Highway 93. If the Tutvedt 2 traffic then traveled south of Reserve Drive on Highway 93, there would be a 0.3 percent average increase in traffic on Highway 93.

*Cumulative Impacts*

Two new major traffic sources on Reserve are the high school and West View Estates subdivision. MDT has calculated that the high school would generate 2,530 ADT Monday through Friday. MDT uses the estimate of 10 ADT per house to figure subdivision traffic, so the West View Subdivision would generate 1,270 ADT for the 127 homes. Using the 2005 traffic count of 7,290 on Reserve Drive west of Highway 93, and with all other traffic remaining the same, those two projects would result in a 52.1 percent increase in traffic on Reserve Drive.

Traffic from the existing gravel pits (including LHC, Tutvedt, and others) along Stillwater Road is already being counted. Applications for an amendment to an existing operation and for one new gravel operation have been received by DEQ. They are the Beasley-Silverstone site located ½ mile directly west of Tutvedt 2, and the Krueger site located about 1.5 miles east on Church Drive. Specific traffic counts for Church Drive and Stillwater Road are unavailable, because they are not state highways. However, the majority of traffic from the Stillwater Road mines goes south onto West Reserve and is included in those numbers.

If the amendment were approved, the Beasley-Silverstone pit would extract about 700,000 cubic yards of product over the next 15 years. Using the same formula to calculate traffic as was used above for Tutvedt, this pit would generate 16 truckloads per day including the empty return trip plus 30 ADT for employees, for a total of 46 trips per day. Again, the assumption is made that all those trips would flow south on Farm To Market, to West Reserve, to Highway 93. A 0.8 percent increase in existing traffic could be expected on West Reserve and 0.2 percent increase on Highway 93 South due to Beasley-Silverstone-generated traffic.

If the Krueger application were approved, approximately 2.7 million cubic yards of materials would be mined over 20 years or about 135,000 cubic yards per year. That would result in about 23 loaded trucks or 47 truck ADT, and 30 ADT for employees, or a total of 77 ADT. Assuming this site-generated traffic would travel east on Church Drive about 1.5 miles to Stillwater Road, then south to West Reserve and east to Highway 93, an increase of 1.6 percent on West Reserve and 0.3 percent on Highway 93 South would result.

Thus, the average worst-case scenario assumes all the traffic from the 3 proposed pits would travel on West Reserve to Highway 93. The total increase from these 3 pits would be 205 ADT daily or a 4 percent increase in traffic. Of that, 115 would be truck trips.

Condition #27 of the Conditional Use Permit for Tutvedt 2 states that no trucks can travel within a mile of West Valley school for one hour at the beginning and at the end of the school day or about one-sixth of the work day. If this restriction were to be applied to the Beasley-Silverstone (the Krueger site has no such restriction), truck traffic from the two mines during those periods would probably have to be routed along Church Drive to Highway 93. Eleven trucks of the day's total truck traffic volume of 68 (16 percent) from the two mines would be diverted along Church Drive.

#### *Summary*

Additional traffic means a greater risk of accidents and more wear on roads. The proposed Tutvedt 2 operation would add light- and heavy-vehicle traffic to area roads, increasing traffic on area roads at estimates ranging from 0.3 to 4.4 percent. In comparison, the new high school and the West View Estates subdivision will increase traffic on Reserve Drive by an estimated 52.1 percent. DEQ has very little regulatory authority over traffic outside of mine permit areas. That authority more appropriately lies with Flathead County and/or the Montana Department of Transportation, who are actively studying traffic issues in this area as described above.

<p><b>12. INDUSTRIAL, COMMERCIAL, AND AGRICULTURAL ACTIVITIES AND PRODUCTION:</b> Will the project add to or alter these activities?</p>	<p>Forty acres of irrigated grain and grass/alfalfa ground would be taken out of production. Upon completion of opencut operations, the land would be returned to pasture.</p>
<p><b>13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:</b> Will the project create, move, or eliminate jobs? If so, estimated number.</p>	<p>People currently employed by the proponent would work at this opencut operation. The proponent estimates that the proposed operation would eliminate no jobs, create 1 to 2 new jobs, and relocate 6 to 10 Schellinger employees from another job site.</p>
<p><b>14. LOCAL AND STATE TAX BASE AND TAX REVENUES:</b> Will the project create or eliminate tax revenue?</p>	<p>Local, state, and federal tax revenue may increase depending on how the land is taxed upon conversion to industrial use, the licenses and fees the proponent is required to pay, and whether the proponent adds employees or equipment, increases overall production, or moves employees and equipment from one jurisdiction to another (See Section 13 above).</p> <p>Sale or market value of adjacent property may be negatively affected by the presence of a gravel pit, but DEQ has no specific information on this issue at this site. Under the Opencut Mining Act, the Legislature has provided DEQ two means of mitigating the effects of gravel operations on adjacent property. First, DEQ has authority to protect air quality; to minimize noise and visual impacts to the degree practicable through use of berms, vegetation screens, and limits on hours of operation, and to otherwise prevent significant physical harm to adjacent land. Second, in order to protect and perpetuate the taxable value of property, land on which operations are completed must be graded and revegetated. Several years ago, DEQ contracted a study to determine “whether the existence of a gravel pit and gravel operation impacts the value of surrounding real property.” The study (Rygg, February 1998) involved some residential property near two gravel operations in the Flathead Valley. Rygg concluded that the above-described mitigating measures were effective in preventing decrease in taxable value of those lands surrounding the gravel pits. In his review of the study, Jim Fairbanks, Region 3 Manager of the Montana Department of Revenue, Property Assessment Division said:</p> <p style="padding-left: 40px;">"In the course of responding to valuation challenges of ad valorem tax appraisals, your reviewer has encountered similar arguments from Missoula County taxpayers regarding the presumed negative influence of gravel pits, BPA power lines, neighborhood character change, and traffic and other nuisances. In virtually ALL cases, negative value impacts were not measurable. Potential purchasers accept newly created minor nuisances that long-time residents consider value diminishing."</p> <p>The proposed Tutvedt mine and crushing facility and other prospective operations in the area (Beasley and Krueger) create the possibility of reducing the attractiveness of home sites to potential homebuyers seeking a quiet, rural/residential type of living environment. These operations could also affect the marketability of existing homes, and therefore cause a reduction in the number of interested buyers and may reduce the number of offers on properties for sale. This reduction in property turnover could lead to a loss in realtors’ fees, but should not have any long-term effect on taxable value of property. If homeowners believe their property values are decreased because of a gravel operation, they may appeal to the county and the state for tax adjustments.</p> <p>Schellinger has already submitted a bond in the amount of nearly \$143,000 that would allow DEQ to reclaim the land if Schellinger were unable or unwilling to do so, which would protect taxable value. DEQ is required by law to see that the work is done, as specified in the Plan of Operation. This would also apply to the prospective Beasley and Krueger operations.</p>
<p><b>15. DEMAND FOR GOVERNMENT SERVICES:</b> Will substantial traffic</p>	<p>DEQ would periodically inspect the site for compliance with the approved permit until the site is reclaimed according to the plan. See the discussion about traffic in Section</p>

<p>be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?</p>	<p>11 above.</p>
<p><b>16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:</b> Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?</p>	<p>Flathead County has a master development plan. The West Valley Neighborhood Plan is part of that master plan. There is also a West Valley Zoning District that is part of the county's zoning regulations. On June 14, 2005, the Flathead County Board of Adjustment issued a Conditional Use Permit (CUP) under Section 2.06 of the Flathead County Master Plan that is applicable to the proposed opencut operation (see Flathead County CUP conditions listed in Attachment 2 below). The county also signed a Zoning Compliance form on July 15, 2005; this was subsequently submitted to DEQ as part of Schellinger's mine permit application.</p>
<p><b>17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:</b> Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?</p>	<p>No public lands or recreational areas are nearby or accessed through this tract. The tract proposed for mining has low recreational potential due to lack of attractive natural features such as rock outcrops, trees, surface water, and wildlife. If the tract does not remain in agricultural use, it will likely be developed for housing.</p>
<p><b>18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:</b> Will the project add to the population and require additional housing?</p>	<p>The project would not add to the population or require additional housing.</p>
<p><b>19. SOCIAL STRUCTURES AND MORES:</b> Is some disruption of native or traditional lifestyles or communities possible?</p>	<p>The area was originally a rural farming and ranching community. Over time, residential development has increased to the point where, today, about 4,000 people live in the West Valley area. The proposed action is expected to have little or no impact on social structures and mores.</p> <p>The proposed opencut operation would have a visual impact and add some noise, air pollutants, and traffic to the surrounding area. Please see Sections 3, 8, and 11 above.</p> <p>Upon final reclamation, the site would be graded, resoiled, and revegetated for a postmining land use of pasture.</p>
<p><b>20. CULTURAL UNIQUENESS AND DIVERSITY:</b> Will the action cause a shift in some unique quality of the area?</p>	<p>The residents of West Valley value the area's rural lifestyle. Residences and residential development continue to be added to the area. The addition of the proposed Tutvedt opencut operation, along with the prospective Beasley and Krueger operations in the same general area are not considered positive additions to this area by some residents. However, visual, aesthetic, noise, air quality, and traffic impacts would be mitigated by conditions in the plan of operation and by the conditions imposed by the county in the Conditional Use Permit.</p>
<p><b>21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES.</b></p>	<p>None.</p>

**22. Alternatives Considered:**

**Denial of application.** The permit would not be approved and impacts from the opencut operation would not occur. The proponent could submit a revised application or an application for another site. In the latter case, the impacts described in the EA for this site would not occur.

**Approval of application with mitigative conditions.** The permit would be approved and opencut operations conducted according to the proponent's plan of operation as revised, conditions set forth in the Flathead County's Conditional Use Permit, and other applicable local, state, and federal laws, rules, and regulations.

**23. Public Involvement, Agencies, Groups, or Individuals Contacted:** Resident Notification forms were sent to residences near the proposed site during the initial application process in early 2005. The West Valley Land Use Advisory Committee met on April 26 and May 24, 2005 to discuss the proposed operation. The Flathead County Board of Adjustment held a public hearing on the proposed operation on

June 14, 2005. Numerous telephone calls, letters, emails, and personal visits were received by DEQ from multiple parties since the application was submitted. In December 2005, DEQ issued a public notice about the availability of the draft EA and mailed copies of the draft EA to West Valley residents and other interested parties on DEQ's mailing list. The public comment period concluded on February 17, 2006.

Agencies or other sources contacted or used as information sources in the preparation of the final EA include: Montana Bureau of Mines and Geology (ground water), Natural Heritage Program of the Montana State Library (plant and animal species of special concern), Montana Department of Transportation (traffic), Montana Department of Military Affairs (spill reporting), various programs in Montana Department of Environmental Quality (spill reporting, air quality, hazardous waste, ground water), Montana Department of Natural Resources and Conservation (water rights), Montana Department of Fish, Wildlife and Parks (wildlife), Montana Department of Labor and Industry (mine safety and health), State Historic Preservation Office of the Montana Historical Society (cultural resources), Flathead County Planning and Zoning Office (zoning), Flathead County Weed Control District (weed control), Montana Department of Justice (fuel containment), USDA Natural Resources Conservation Service (soils), Schellinger Construction (proponent), and Bruce Tutvedt (landowner).

**24. Other Governmental Agencies with Jurisdiction, List of Permits Needed:** Flathead County Planning and Zoning Office (Conditional Use Permit), Flathead County Road and Bridge Department (approach permit), Montana Department of Transportation (approach permit), Montana Department of Environmental Quality (air quality permit, storm water permit); Montana Department of Natural Resources and Conservation (water rights permit); Mine Safety and Health Administration (mine safety training plan).

**25. Magnitude and Significance of Potential Impacts:** Substantial impacts to the physical environment or human population are unlikely due to: minimal potential impacts to surface and ground water; lack of unique, endangered, fragile, or limited environmental resources in or next to the site; lack of cultural resources; and mitigative measures regarding water protection, waste disposal, visual impacts, noise, dust, soils, vegetation, and traffic provided for in the proposed plan and/or required in Flathead County's Conditional Use Permit.

**26. Regulatory impact on private property:** The analysis done in response to the Private Property Assessment Act indicates no impact. DEQ does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

**27. References**

Alvey, Laura. January, 2006. *Report of Findings for the Lost Creek Fan Nitrate Investigation July-October 2005*, Montana Department of Environmental Quality.

Rygg, Phillip J. 1998. *Gravel Pits: The Effect on Neighborhood Property Values*. Appraisal Research Group, Kalispell, Montana.

Montana Department of Environmental Quality. February 2006. *Montana Numeric Water Quality Standards*. Circular DEQ-7.

**Recommendation for Further Environmental Analysis:**     EIS     More Detailed EA     No Further Analysis

**EA Checklist Prepared By:**    Mark Carlstrom

**DEQ Opencut Mining Environmental Specialist**

**Review and/or Contributions by:** Peter Mahrt  
Rod Samdahl  
Jo Stephen  
Neil Harrington  
Greg Hallsten

**DEQ Opencut Mining Program Supervisor  
DEQ Opencut Mining Environmental Specialist  
DEQ Opencut Mining Environmental Specialist  
Chief, DEQ's Industrial and Energy Minerals Bureau  
DEQ MEPA Specialist**

**Approved By:**    Neil Harrington

Chief, IEMB

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## ATTACHMENT 2

### FLATHEAD COUNTY CONDITIONAL USE PERMIT

June 14, 2005

1. Development and operation of the facility shall be performed in compliance with the information presented and approved except as otherwise modified by these conditions.
2. Any change or modification to the use not specified in the application may not be effected unless specifically approved in writing either by the Flathead County Planning and Zoning Office or the Flathead County Board of Adjustment.
3. If the permittee fails to implement the use of the property as allowed by this permit within one year from the date of issuance, this permit shall expire one year from the date of issuance.
4. A Conditional Use Permit runs with the property. Should the property be sold and the new owner wish to continue the use of the property, said use shall remain in compliance with all terms of this conditional use permit AND be commenced within one year of transfer of ownership.
5. The proponent shall obtain a letter from the West Valley Rural Fire Department stating all access, parking, fire suppression, and emergency evacuation plans are acceptable.
6. Hours of operation shall be in conformance with those outlined in the application, 7:00 AM to 7:00 PM, Monday through Friday and 7:00 AM to 2:00 PM Saturday. No exception will be made for expanded hours allowed under Department of Environmental Quality regulations.
7. Blasting operations are expressly prohibited.
8. Two hundred feet of the approach onto Farm To Market Road shall be paved. Any future approach, if proposed and approved, shall be paved 200 feet. Requests for additional approaches will require approval by the Flathead County Road Department and the Flathead County Zoning Administrator.
9. Dust abatement shall be performed consistently and conscientiously to limit any impacts to the surrounding properties and general air quality.
10. Mufflers or other sound-dampening devices shall be installed on all generators to reduce noise impacts.
11. Any light used for the operation shall be directed in such a way as to be contained within the boundaries of the property and shall be hooded, screened or directed in a manner that it shall not be detrimental to the adjoining property owners or the neighborhood. Lights shall be extinguished at the close of business each day, with the exception of limited security lighting.
12. Soils stockpiled onsite shall be bermed to a minimum of eight feet. Berms shall be maintained to reduce noise and visual impact of the extraction operation on surrounding ownerships.
13. Stockpiled topsoil and overburden berms shall be revegetated in accordance with a plan approved by the County Weed and Parks Department. A signed Invasive Plant Management Form shall be obtained from the County Weed and Parks Department and submitted to Flathead County Planning and Zoning.
14. Pockets and stagnant pools of water resulting from surface drainage shall be treated with EPA-approved larvicides to eliminate breeding places for mosquitoes and other insects. Method and chemical uses shall be approved by the Montana Department of Agriculture; or the ponds shall be periodically drained to prevent the creation of such breeding places. Any larvicides used shall be environmentally safe and pose no threat to water quality.
15. Both the landowner and proponent of the mining operation shall comply with the Montana Opencut Mining Act, as administered by the Montana Department of Environmental Quality. The conditions of this permit shall be in addition to the requirements of the State.
16. Signage shall be erected to alert vehicular and pedestrian traffic to the presence of heavy truck travel along all travel routes, including

Farm To Market Road, Church Drive, West Reserve Drive, Stillwater Drive, and West Valley Drive.

17. The proponent shall contact the Department of Natural Resources and Conservation to obtain proof of the proponent's existing water rights. Such proof shall be furnished to Flathead County Planning and Zoning.
18. All parking areas for employee vehicles and company vehicles shall be provided onsite.
19. The proponent shall obtain and furnish proof of an approach permit from the Flathead County Road and Bridge Department for the access onto Farm To Market Road and abide by any conditions regarding dust abatement and maintenance.
20. A Plan of Operations shall be signed and approved by the owner or proponent and the Montana Department of Environmental Quality and a copy submitted to Flathead County Planning and Zoning.
21. Fencing shall be installed around the mining perimeter to prevent livestock and wildlife from inadvertently entering the site.
22. No more than 80 acres of the 320-acre site shall be in use at any time. "Use" is defined as extraction, any activities related to extraction, and reclamation.
23. The proponent shall notify Flathead County Planning and Zoning when an application is made to DEQ for any acreage beyond the pending 160-acre DEQ permit (*DEQ note: the mine permit application is for 40 acres*).
24. Items required in Conditions 5, 13, 17, 19, and 20 shall be furnished to Flathead County Planning and Zoning prior to commencement of operations.
25. Should the permittee fail or be unable to comply with any condition of approval, this permit is null and void.
26. The proponent will not store hazardous materials such as unleaded fuel onsite. Diesel fuel will be contained in a manner outlined by DEQ.
27. No trucks will travel within one mile of West Valley School during the hours of 7:30 AM to 8:30 AM and 3:00 PM to 4:00 PM when school is in session.
28. Asphalt and concrete batch plant operations are prohibited.

## ATTACHMENT 3

### AIR QUALITY IN FLATHEAD COUNTY

(Excerpted and Edited from a Submittal by Bob Habeck, Air Resources Management Bureau, DEQ; June 2006)

**Background:** The federal Clean Air Act (Act) applies to the entire nation. However, state and local air pollution control agencies do much of the work to fulfill the requirements of the Act. States and counties develop community air pollution control programs to address automobile emissions, outdoor burning, road dust, or similar sources of air pollution.

States and counties develop and maintain State Implementation Plans (SIPs) that explain how they will protect against air pollution under the Act. A SIP is a collection of programs, policies and rules used to attain and maintain the primary and secondary National Ambient Air Quality Standards (Standards). EPA must approve each SIP, and if a SIP fails in some way to protect the Standards, EPA may reject an Agency's SIP and assume administration of any specific portion of the Act in that state and/or develop its own implementation plan for the state.

DEQ implements state and federal air quality standards in Flathead County, in part, through the development of community air pollution control plans. Flathead has three communities that have violated state and federal air quality standards. These communities are Columbia Falls, Kalispell, and Whitefish. Air pollution control plans have been developed for each of these areas.

Comprehensive, valley-wide air pollution studies have not been performed. Evaluation of current air pollution is performed through an assessment of ambient air quality monitoring, located within each community. Because monitoring data indicate compliance with state and federal air quality standards, further studies to evaluate air pollution are generally not warranted. However, in anticipation of a revised particulate air quality standard, DEQ will conduct an air quality study in the Whitefish area in the winter of 2006-2007 to determine the sources and contributions of fine particulate matter.

Air quality issues in Flathead County primarily involve particulate matter originating within the communities of Columbia Falls, Kalispell, and Whitefish. The air quality status of each community is outlined below.

**Columbia Falls:** Particulate monitoring has been conducted in Columbia Falls since 1971. Air quality standards were exceeded in 1987 and the area was federally designated nonattainment in 1990. Re-entrained road dust from paved roads was determined to be the major contributor. DEQ and the Flathead County Health Department developed an air quality control plan and submitted it to EPA in 1991. The control plan focused on fugitive dust emissions from roads, parking lots, construction, and demolition, as well as the Plum Creek facility. EPA approved the control plan in 1994.

Dust generated by a bark processing facility in the industrial park on the northeast side of Columbia Falls generated considerable concern in 1998-2000. Monitoring for dust never identified any exceedances of air quality standards. To date, no further air quality control measures are being taken in Columbia Falls. Current air quality monitoring data indicate the area is in compliance with state and federal air quality standards. However, officially, the federally designated nonattainment status of Columbia Falls has not changed.

**Kalispell:** Particulate monitoring has been conducted in Kalispell since 1971. From 1977 to 1982, Kalispell was one of the communities involved with the Flathead River Basin Environmental Impact Statement. Monitoring was conducted at several locations in the basin and it was determined that most of the high concentration sites were associated with anthropogenic sources in the city centers.

Air quality studies performed in 1986 and 1987 determined that re-entrained road dust was the predominant source of air pollution followed by residential wood combustion. Kalispell was federally designated nonattainment in 1990. DEQ and the Flathead County Health Department developed an air quality control plan and submitted it to EPA in 1990. The control plan consisted of controls on fugitive dust emissions from roads, parking lots, construction, and demolition. EPA approved the control plan in 1996.

To date, no further air quality control measures are being taken in Kalispell. Current air quality monitoring data indicate the area is in compliance with state and federal air quality standards. However, officially, the federally designated nonattainment status of Kalispell has not changed.

**Whitefish:** Whitefish was federally designated nonattainment in 1993. An air quality study determined that re-entrained road dust as the largest source of particulate. DEQ and the Flathead County Health Department developed a control plan and submitted it to EPA in 2000. EPA has not approved this control plan.

To date, no further air quality control measures are being taken in Whitefish. Current air quality monitoring data indicate the area is mostly in compliance with state and federal air quality standards. However, air quality in Whitefish continually threatens the standards. Following an exceedance in 2006, the Whitefish Public Works Department was re-engaged by the Flathead County Health Department to step-up efforts to apply mandatory road dust control measures within the Whitefish area.

The Whitefish area is targeted for a Chemical Mass Balance (CMB) study during the winter of 2006-2007. The CMB study will determine the origins of fine particulates commonly referred to as "PM-2.5" (refers to particles no greater than 2.5 micrometers in aerodynamic diameter). EPA is currently revising the standards for PM-2.5 that may result in Whitefish being designated nonattainment with respect to these standards. Sources of PM-2.5 emissions are mostly the result of combustion, such as from vehicle exhaust, prescribed outdoor burning, residential woodstoves, industrial operations, etc. Results from this study will be used by DEQ and the Flathead County Health Department to determine what, if any, additional control measure are necessary to meet state and federal air quality standards.