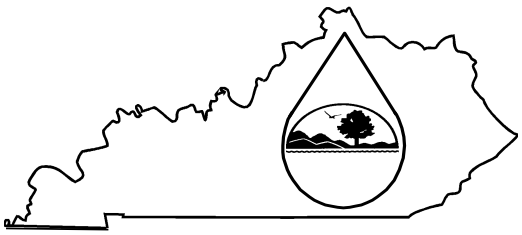
KPDES FORM SDAA



Kentucky Pollutant Discharge Elimination System (KPDES)

Socioeconomic Demonstration and Alternatives Analysis

The Antidegradation Implementation Procedure found in 401 KAR 10:030, Section 1(3)(b)3 requires KPDES permit applications for new or expanded discharges to waters categorized as "Exceptional or High Quality Waters" to conduct a socioeconomic demonstration and alternatives analysis to justify the necessity of lowering local water quality to accommodate important economic or social development in the area in which the water is located. This demonstration shall include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

I. Project Information

Facility Name: KDNR No. 836-0385, Laurel Mountain Resources, LLC (KPDES No. KYG046118)

Location: 1801 Watergap Road, Prestonsburg, KY 41563 | **County:** Floyd

Receiving Waters Impacted: Raccoon Branch and Salyers Branch of Saltlick Creek

II. Socioeconomic Demonstration

1. Define the boundaries of the affected community:
(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

The proposed project is a combination of contour and auger mining, located at 37-29-40 N and -83-52-49 W. (KDNR Permit No. 836-0385 formerly Miller Bros. Coal, LLC Permit No. 836-0338 A3) The project will be recovering reserves from the Fireclay, Fireclay Rider, and Lower Taylor coal seams. The site is located near the junction of Route 2029 and KY Route 7 within the David, Handshoe, and Wayland 7.5 minute quadrangles. The nearest community is Welco Station, located west of the project area. All discharge will enter into Raccoon Branch, Salyers Branch, and Saltlick Creek. Raccoon Branch and Salyers Branch are tributaries of Saltlick Creek a tributary of the Right Fork of Beaver Creek of the Levisa Fork of the Big Sandy River. The proposed project lies in the Saltlick Creek (HUC No. 05070203-060-660) watershed.

2. The effect on employment in the affected community:

The economy in this portion of Floyd County is dependent on the mining industry. The surface mine itself would create approximately 50 jobs. The project would also create an additional 75 jobs in the support industries that will help supply the material and equipment needed for mining, as well as other services, such as engineering and training. Therefore, this operation will provide in total for the continuation of 75 higher-wage permanent jobs in the area work force. See the table below for employment data for Floyd County.

Floyd County Employment Data	
Labor Force	15,835
Percent Unemployment	11.10%
Total Unemployed	1,751
% of Labor Force Employed by this Project	0.32%
% of Labor Force Affected by this Project	0.47%

2009, Workforce Kentucky

With the current unemployment rates in this county, it is likely that a new mine will lead to an increase in employment, but at the very least, it will certainly avoid a decrease in local employment figures. The current unemployment rate of 11.1% is higher than the Kentucky average of 10.7% and the national average of 9.8%.

II. Socioeconomic Demonstration- continued

3. The effect on median household income levels in the affected community:

(Compare current median household income levels with projected median household income levels. Discuss how proposed project will positively or negatively impact the median household income in the affected community including the number of households expected to be impacted within the affected community.)

This mining operation would provide employment for an estimated 50 employees. These mining positions prove to be higher paying jobs than other industries in Floyd County. This also positively affects as many as 75 employees in the support industries that will help to supply the material and equipment needed for mining, as well as other services, such as engineering and training. See the table below for income data for this county.

Wages	Floyd County
All Industries	$672.00
Mining	$1,171.00

Weekly salary provided by 2009, Kentucky Workforce Development Cabinet

The average weekly wage in the mining industry is approximately double compared to the average weekly wage for all other industries in Floyd County. Loss of these higher-paying jobs would result in decreased revenue to local businesses that cater to the needs of the employees on a daily basis.

4. The effect on tax revenues of the affected community:

(Compare current tax revenues of the affected community with the projected increase in tax revenues generated by the proposed project. Discuss the positive and negative social and economic impacts on the affected community by the projected increase.)

This mine facility will provide jobs in communities in this portion of Floyd County and help prevent the loss of jobs when an existing area facility closes or moves to another area. Recovery of the coal reserves, located along Raccoon Branch and Salyers Branch of Saltlick Creek, will yield approximately 379,000 tons of coal. This will generate over $1 million in severance taxes, of which the surrounding counties will receive a total of over $151,000 (15 percent). Additional revenue will be given to local businesses, generated through increased employment to handle support services catering to the mining operation directly and to the needs of the employees on a daily basis. Local income taxes, property taxes, and sales taxes will also add to revenue brought in by the mining facility.

II. Socioeconomic Demonstration- continued

5. The effect on an existing environmental or public health in affected community:
(Discuss how the proposed project will have a positive or negative impact on an existing environmental or public health.)

Recovery of the coal reserves, located along Raccoon Branch and Salyers Branch of Saltlick Fork, will yield approximately 379,000 tons of coal. This will generate over $1 million in severance taxes, of which the surrounding counties will receive a total of over $151,000 (15 percent). This money can be used for environmental protection such as sewage disposal, sanitation, and solid waste disposal, which will have beneficial effects on the existing environment and public health.

With the conclusion of mining, the permit area will be reclaimed, including existing ponds and structures. Any temporarily impacted streams will be stabilized, restored, and a riparian buffer will be established. These rehabilitated streams will curb sedimentation and provide a habitat for aquatic species and wildlife. Until final bond release, various sediment and treatment ponds will remain. Discharge will be treated as necessary and practicable, to ensure that the water leaving the permit is within effluent limits of its KPDES permit.

During the remediation of the project site, all existing dumps will cleaned up and the garbage disposed of at a proper facility.

Upon final closing of the project site, it is possible that an increase in flora and fauna will occur compared to the original land use and could increase the natural habitat as well as increase tourism.

6. Discuss any other economic or social benefit to the affected community:
(Discuss any positive or negative impact on the economy of the affected community including direct and or indirect benefits that could occur as a result of the project. Discuss any positive or negative impact on the social benefits to the community including direct and indirect benefits that could occur as a result of the project.)

This facility will not only provide mining jobs but will also provide jobs that help support the mining industry. Equipment salesmen and repairmen, mining and engineering consultants, fuel and transportation providers will be needed as a result of the mine. The creation or maintenance of as many as 75 more jobs in the surrounding community, will spur community development, thus creating even more employment opportunities in the local area.

The increased payment of property taxes will benefit schools so that they have funding to purchase better equipment, improve their facilities, and increase salaries for the teachers. In addition, the increased tax payments will provide additional money for government services to better serve the local area citizens.

This money will be returned to the community, providing funds to help establish alternative industries for additional local employment opportunities, as well as providing funding for public safety, environmental protection, public transportation, vocational training, local health/recreational/ educational facilities, social services, industrial/economic development, workforce training, and the secondary wood industry. Property values increase when land is active. Therefore, when mining is being conducted, the land has an increased value requiring increased property taxes to be paid in to the county operating fund.

Surface mining is the most efficient and economical plan for recovery of the coal associated with this project. This allows for maximum removal of coal reserves, increasing the amount of tax dollars that contribute to the state and local economy.

III. Alternative Analysis

1. Pollution prevention measures:
(Discuss the pollution prevention measures evaluated including the feasibility of those measures and the cost. Measures to be addressed include but are not limited to changes in processes, source reductions or substitution with less toxic substances. Indicate which measures are to be implemented.)

Several alternatives were evaluated for prevention of water pollution in this project area. Evaluated alternatives include:

a) Avoidance of the project (short-term)

Avoiding this project would mean that the advantages of economic development in the Floyd County community area would not be realized. At a minimum, 75 local jobs would be lost, the tax base would diminish, $1 million in taxes would not be collected and local businesses would not prosper to the same extent.

b) Additional Levels of Separation

Further prevention could include covering or treating chemically of reactive materials, reducing the disturbed surface area at any one time, or the separation of normal storm runoff and active site runoff.

c) Preventive Design

Preventive design could include creating only moderate gradients and inclines to slow down runoff or diverting waterways and drainage. With these methods, the amount and frequency of flow through active mining sites can be minimized. All the water that does leave the site will be treated with a system of sediment and treatment ponds. Each will store any runoff leaving the site and provide an adequate time to settle the sediment. As necessary and practicable, flocculants and chemicals will be added to treat the water if higher levels of certain chemicals and compounds are observed.

2. The use of best management practices to minimize impacts:
(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

Such BMPs could include creating only moderate gradients and inclines to slow down runoff or diverting waterways and drainage. With these methods, the amount and frequency of flow through active mining sites can be minimized. All the water that does leave the site will be treated with a system of sediment and treatment ponds. Each will store any runoff leaving the site and provide an adequate time to settle the sediment. As necessary and practicable, flocculants and chemicals will be added to treat the water if higher levels of certain chemicals and compounds are observed.

Additionally, an undisturbed natural barrier could be maintained throughout mining at the lowest disturbed elevation and extend from the out slope. This vegetative buffer could serve the function of improving water quality by the collection of sediment and the reduction of erosion.

With the conclusion of mining, the area will be reclaimed. Any temporarily impacted streams will be stabilized, restored, and a riparian buffer will be established. These rehabilitated streams will curb sedimentation and provide a habitat for aquatic species and wildlife. Until final bond release, various sediment and treatment ponds will remain. Discharge will be treated as necessary and practicable, to ensure that the water leaving the permit is within KPDES permit effluent limits.

III. Alternative Analysis - continued

3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:
(Discuss the potential recycle or reuse opportunities evaluated including the feasibility of implementation and the costs. Indicate which of these opportunities are to be implemented)

Water does play a key part in mining operations as far as misting/spraying the area to help alleviate airborne coal dust. However, the amount of water required for dust suppression is minimal compared to the discharge generated. Total watershed drainage area for discharge from the pond and dugouts and respective hollow fills is over 136 acres, with a peak discharge of over 70,682 gallons per minute. Water used for dust suppression in a day might be 15,000 gallons. Dust suppression is generally only required during dry times when the flow of the surface discharge is low or non-existent. No other water is needed for recycling or reuse with this operation.

A small portion (approximately 155,700 gallons) of the total discharge generated (approximately 603 million gallons over the life of the project) will be used for hydro-seeding when grade work is completed on this project. This will require approximately 51 loads (3,000 gallons per load), with a cost of $38,900 ($750/load).

Construction of a lake for recreational purposes was also evaluated as a possible alternative. This would involve acquisition of the land, environmental and engineering surveys, and construction of a dam, at the very least. The estimated cost of this alternative is $2.6 million.

Laurel Mountain will use conservation practices to the extent practicable. Water will be used by the project for dust suppression during dry times only. Surface mining is not a water dependent activity. Therefore, water use and conservation is not an applicable alternative.

Coal mining is not a water dependent operation, so recycling or reuse of water would not be beneficial.

4. Application of water conversation methods:
(Discuss the potential water conservation opportunities evaluated including the feasibility of implementation and the costs. Indicate which of these opportunities are to be implemented)

Water collected in sediment ponds before being discharged will regularly be used for dust suppression. While only a small fraction of total discharge, reusing this water will prevent possible withdrawals from other natural streams and wells.

When practicable, the proposed project may reuse discharges containing high concentrations of solids for irrigation to reclaimed land.

Upon closing of the site, the water required for remediation, including hydro-seeding may also be provided by on-site detained water. Reusing this water will prevent possible withdrawals of other natural streams and wells.

Mining is not a water dependent operation; so conservation of water is a major concern for mining operations.

5. Alternative or enhanced treatment technology:

(Compare feasibility and costs of proposed treatment with the feasibility and costs of alternative or enhanced treatment technologies that may result in more complete pollutant removal. Describe each candidate technology including the efficiency and reliability in pollutant removal and the capital and operational costs to implement those candidate technologies. Justify the selection of the proposed treatment technology.)

Several alternatives to treating water from the project area and discharging it to streams and rivers in the area have been evaluated. These alternatives include construction of a water treatment facility, construction of physical filter barriers, chemical treatment of drainage, and construction of wetlands.

Water Treatment Facility Construction of a small water treatment facility (500,000 gallons per day) on the project site would cost over $1.6 million, plus an additional cost of approximately $50,000 for a containment reservoir. This water treatment facility would not be able to manage the large amount of water required at this site (over 70,682 gallons per minute peak discharge). It would require 204 of these small facilities or one large facility (over $325 million) to handle this amount.

Physical Filter Barriers Silt fences and straw bales are designed for use with small discharges, and would not be able to handle the large discharge flow generated nor would they meet requirements of Commonwealth of Kentucky's Surface Mine Regulations as stated in 405 KAR 16:070.

Chemical Treatment Chemical treatment of drainage was also considered. The primary treatment required at this site is the removal of sediments, which requires the use of ponds or dugouts to hold the water while the soil and debris settles out. Chemicals may be used to augment this process, but sediment removal is not possible using chemical treatment alone. It would cost at least $302,000 to treat the entire volume of discharge at this site (approximately 603 million gallons over five years).

Wetland Construction Constructed wetlands have traditionally been used for biological treatment. However, the discharge generated by this operation will require sedimentation control measures, and wetlands are not effective for treating sediment. Additionally, wetlands used for water treatment would require additional property (approximately 2.1 acres), which is not available in this particular project area. It would cost approximately $37,000 to construct these wetlands.

Hydrologic Releases No hydrologic release will occur into a stream with less than 0.1 cfs of flow, unless no other practicable alternative exists.

6. Improved operation and maintenance of existing treatment systems:

(Discuss improvements in the operation and maintenance of any available existing treatment system that could accept the wastewater. Compare the feasibility and costs of improving an existing system with the feasibility and cost of the proposed treatment system.)

There are no areas in the proposed project area of existing sewage waste water discharge or that need to be treated for pollution. Should any unmitigated areas be encountered during mining operations, Laurel Mountain proposes to mitigate for these effects. Following the conclusion of mining, the area will be reclaimed, which will provide an enhanced habitat and environment.

Pumping or trucking the runoff to the nearest wastewater treatment plant will require significant changes to the Prestonsburg City Utilities Commission Prestonsburg Water Treatment Plant. That plant cannot receive sediment-laden water and would have to construct a sediment basin to serve a similar function to on-site sediment ponds. Furthermore the treatment plant can only handle approximately 5.0 million gallons a day (mgd). However, the discharge could approach 101 mgd. (101 mgd is a calculated daily average of the peak discharge per minute flow.) In order to treat this amount of runoff, the county would be forced to increase the capacity of this treatment plant. Increasing the capabilities of the treatment plant would be costly and burdensome to the county.

7. Seasonal or controlled discharge options:

(Discuss the potential of retaining generated wastewaters for controlled releases under optimal conditions, i.e. during periods when the receiving water has greater assimilative capacity. Compare the feasibility and cost of such a management technique with the feasibility and cost of the proposed treatment system.)

The proposal for this project would include the construction of a sediment pond and dugouts to ensure controlled release of generated runoff under optimal conditions. The sediment pond and dugouts reduce the velocity of storm water, thus enhancing sedimentation and reducing its deposition within the stream. In this way a controlled volume and quality of water is released, in order to not overwhelm a natural system. The ponds are designed for a 25-year, 24 hour storm event. Discharge to streams with less than 0.1 cfs will not occur when other practicable alternatives exist.

Additionally, the construction of a lake for physical detention of the water and later recreational purposes was evaluated as a possible alternative. This would involve acquisition of the land, environmental and engineering surveys, and construction of a dam, at the very least. The estimated cost of this alternative is $2.6 million.

Another alternative is on-site storage in 50,000-gallon septic tanks, and eventual release into the surrounding area. In order to store the amount of discharge generated at this site in one year, 4,528 storage tanks would be required, with a potential cost of over $542 million for the tanks alone. 24" diameter HDPE pipe ($67/foot) would be required to transport the discharge to the tanks, with a cost of over $326,000 for over 13,585 feet of pipe. This would require the excavation of at least 121 acres of land (111 acres for the tanks and 10 acres for the leach field) to a depth of 15 feet. Because of the amount of sediment in the discharge, the tanks would have to be cleaned out at least once per year, at a cost of approximately $151 million ($6700 per tank per year). After excavation in order to install the tanks and after each cleaning, the extra dirt and sediment would have to be added to the existing hollow fill, or used to create another hollow fill, resulting in greater disruption of the natural contours of the area.

8. Land application or infiltration or disposal via an Underground Injection Control Well

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of .proposed treatment system.)

An alternative to surface discharge from the project area is sub-surface disposal. The sub-surface disposal of drainage from the project area would present safety concerns for any present deep mining operations, and the cost would be high, due to a lifting station ($218,000), 24" dia. HDPE pipe (~$3 million), and possibly drilling an injection well, which could cost up to $50,000 per well, depending on depth. Injecting this discharge underground would increase the potential of an outcrop blow-out or blow-out from an old adit and would require a UIC Permit. A suitable place to inject, within 0.5 miles of this site, has not been found. In addition to potential safety impacts associated with subsurface disposal, this alternative would reduce the quantity of water available to support downstream aquatic communities.

III. Alternative Analysis - continued

9. Discharge to other treatment systems

(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

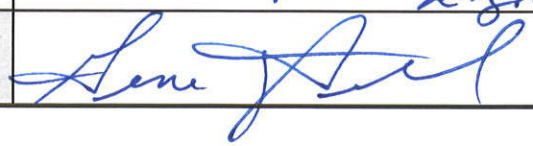
Alternative treatment works have been investigated, including piping and trucking the discharge to the nearest water treatment plant.

- It would take approximately $57 million (863,891 feet of 24" diameter HDPE pipe at $67/ft.) to run 24" diameter HDPE pipe to the nearest municipal water treatment plant, which is the Prestonsburg City Utilities Commission Prestonsburg Water Treatment Plant, in Prestonsburg, Kentucky. The Prestonsburg Water Treatment Plant would then require a sedimentation basin to remove the silt before allowing the water to enter their plant.

- It would require 4 trucks with a capacity of 5,000 gallons each, working 24 hours a day, to haul the discharge to the treatment plant. The trucks would cost over $920,000 ($230,000 per truck), and maintenance and gas would cost over $3,000 per day ($5.4 million over the 5-year life of the project), for a total cost of nearly $6.3 million.

- Additionally the Prestonsburg Water Treatment Plant cannot handle sediment-laden water and require the construction of a large sedimentation basin. Currently, it can only handle 5.0 million gallons a day (mgd) of wastewater, but the site discharges 101 mgd. In order to treat this amount of runoff, the county would be forced to increase the capabilities of this treatment plant. Increasing the capabilities of the treatment plant would be costly and burdensome to the county.

IV Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	GENE Campbell Chief Engineer	**Telephone No.:**	(606)874-7725
Signature:		**Date:**	1-29-2010