CLEAN WATER ACT 404/401 ALTERNATIVES ANALYSIS

INTRODUCTION

This document provides an analysis of three potential alternatives for proposed mining activities on behalf of Oxford Mining Company, LLC., for the proposed Lafferty-Kaczor Mining Area in Belmont County, Ohio. Alternatives considered biological and physical impacts, technical feasibility, cost effectiveness, water quality conservation projects, water pollution control costs, human health impacts, social and economic benefits and losses, environmental benefits and losses, and are described herein.

PROJECT OVERVIEW

Oxford Mining Company, LLC. is planning to impact the area (including surface waters) by surface mining and conventional auger operations in order to recover the #9 to meet market demands. Oxford Mining Company, LLC. is proposing the minimal degradation alternative to conduct surface and auger mining activities on a 178.2-acre site to meet contractual obligations to deliver coal. The applicant has estimated that the proposed project would result in the recovery of approximately 254520 tons of coal. Mining of the proposed permit area is developing the Meigs Creek Coal seam by contour mining using the box cut method, and auger mining using a conventional auger for both coal seams. Dozers, scrapers, loaders and trucks will be used to mine and reclaim this area. The #9 coal is found, ranging in elevation between 1,040 and 1,160 feet msl feet msl respectively feet M.S.L., as represented by the submitted test holes. Fill is required for the construction of the staging area, equipment crossing, coal loading, coal extraction, haul road construction, hauling and reclamation. These constructive uses are required for the intended purpose of obtaining and maximizing coal resources.

The site lies within Sections Section 35 of Richland Township, 5 of Union Township and 36 of Wheeling Township and of Richland, Union & Wheeling Township, in Belmont County, Ohio. Please refer to the Project Location Map included as Appendix A of the Compensatory Mitigation Plan.

DESCRIPTION OF ALTERNATIVES

No alternate sites were considered in the following analysis because the selected site provides economical recovery of coal, an opportunity to reclaim abandoned mine lands, and because there is no reason to believe that an alternate site would result in decreased impacts to water quality. The proposed site also has the benefit of being located in an area of Belmont County with a relatively low population density.

Oxford Mining Company, LLC. will use best management practices in an effort to minimize impacts onsite. They have revised the original permit limits to avoid and eliminate impacts to at least 2507 linear feet of jurisdictional stream and approximately 1.20 acres of jurisdictional wetlands within the original delineation area. The remaining impacts reflect the least environmentally damaging area needed to mine this site efficiently without compromising the general purpose and need associated with this project. Further minimization of impacts to water resources that are proposed onsite have been evaluated but may not be economically feasible for this project. The minimal degradation and avoidance alternatives were developed and are illustrated in the attached exhibits.

PROJECT BENEFITS

Social and economic benefits form the preferred alternative are significant. The continued successful operation of Oxford Mining Company, LLC. will allow them to maintain approximately 100 jobs. The current market value for coal is $30-34/ton depending on the quality and cleanliness. Under the preferred alternative, mining will produce approximately 254520 tons of coal. The "coal value" of the proposed alternative is therefore approximately $7635600 - 8653680. It is also important to realize that the vast majority of this coal value will be directly invested in the local and state economies for salaries, fuel, equipment, equipment maintenance, shipping, and materials, including seed and vegetation purchased for reclamation of the site. This coal value will secondarily be invested in local restaurants, gas stations, mechanic shops, hardware stores, grocery stores, car dealerships and housing. Oxford Mining Company, LLC. is clearly a vital industrial component to the region as well as the State of Ohio. Lost energy production may also seem inconsequential, but consider the impact of a 3-day power outage in a major metropolitan area. Every day of energy production is vital to our State. The Ohio Coal Industry currently pays a combined total of $1.15 of State and Federal tax per ton of coal. The expected total production of coal will generate approximately $143919 of tax revenue under the preferred alternative.

The proposed project would enable future coal recovery, which is utilized on a local, regional, and national basis to produce electricity. The proposed project would meet the needs and welfare of the people relative to the establishment of employment and through the continued delivery of coal. The proposed mining activity will not have a disproportionate impact on low-income or minority populations. Belmont County had an unemployment rate of 7.9% in October, 2011, while the State average unemployment rate was 9.0%. The jobs provided by the proposed project will offer higher than average salaries and better benefits than most in the region.

PREFERRED ALTERNATIVE

The preferred alternative is to extract the Meigs Creek No. #9 coal seam from approximately 178.2 acres as described in the Ohio DNR Permit Application (see site map). Conventional surface and auger mining methods would be used to extract coal, which requires removal of covering soil and rock (overburden), extraction of coal, and replacement of rock and spoil approximately to original contours. This alternative considered impacts to cultural and natural resources and includes only those areas for which there is substantial economic justification. The process of removing the coal, construction of the sediment ponds, and the transport of mine runoff will result in the impact of approximately 0.63 acres of jurisdictional wetlands and 4487 linear feet of jurisdictional streams.

Description of Construction or Placement of Fill

The preferred alternative would impact 4 jurisdictional wetlands totaling 0.63 acres and 11 jurisdictional streams totaling 4487 linear feet. These waters are associated with the Wheeling Creek watershed (05030106-040-030). More specifically, the impacts would result from coal removal and the reclamation of site according to ODNR guidelines. In addition, the process of removing the coal, construction of sediment ponds, and the transport of mine runoff will result in stream impacts. General characteristics of these resources can be found in the General Descriptions of the Aquatic Environment Directly Affected. A comprehensive compensatory mitigation plan has been developed for the preferred alternative.

Table 1 –Stream Descriptions						
Stream ID	Description	Jurisdictional	Length Delineated	Channel Development	Riparian Width	HHEI Score
4	Ephemeral	Yes	343	Poor/Fair	Wide	14
5	Ephemeral	Yes	28	Poor/Fair	Wide	28
6	Ephemeral	Yes	14	Poor/Fair	Moderate	47
7	Ephemeral	Yes	22	Stable	Moderate	37
7A	Ephemeral	Yes	76	Poor/Fair	Moderate	No Score
11	Ephemeral	Yes	583	Poor/Fair	Wide	15
14	Ephemeral	Yes	30	Poor/Fair	Moderate	25
15	Ephemeral	Yes	15	Stable	Moderate	26
Stream ID	Description	Jurisdictional	Length Delineated	Channel Development	Riparian Width	HHEI Score
1	Intermittent	Yes	1,204	Stable	Wide	50
2	Intermittent	Yes	35	Stable	Wide	38
3	Intermittent	Yes	368	Stable	Narrow	24
5	Intermittent	Yes	517	Fair	Moderate	28
6	Intermittent	Yes	96	Fair	Moderate	47
7	Intermittent	Yes	367	Stable	Moderate	37
8	Intermittent	Yes	382	Stable	Moderate	31
9	Intermittent	Yes	3,128	Stable	Moderate	37
10	Intermittent	Yes	108	Fair	Wide	19
12	Intermittent	Yes	282	Stable	Wide	26
13	Intermittent	Yes	533	Stable	Wide	26
14	Intermittent	Yes	316	Fair	Wide	25
15	Intermittent	Yes	280	Stable	Wide	26

Four (four temporary and zero permanent) sediment ponds would be required to trap sediment resulting from construction and refuse disposal activities. Dams for sediment ponds will be covered with topsoil, mulched, and seeded. The ponds are meant to reduce the transport of sediment and other substances while maintaining water quality standards in the watershed. The proposed project is expected to improve the water quality within the watershed. Diversion ditches will also be constructed and maintained to assure that all runoff from the permit area is directed to the sediment ponds as designed.

For detailed information concerning the sediment ponds proposed for the project please refer to the Pond Sheets and Engineering Design Sheets attached with this application package. Reclamation costs for the entire project site are estimated at $445500.

Table 2 - Jurisdictional wetlands within delineation area avoided under preferred alternative.				
Wetland Name	Avoided Area	Wetland Type	ORAM Score	ORAM Category
Wetland B	0.07	PEM	17	1
Wetland E	0.30	PEM	46	2
Total	**0.37**			

Table 3 - Streams within delineation area avoided by preferred alternative.			
Ephemeral & Intermittent Streams			
Stream Name	Length Avoided	Flow Regime	HHEI Score
1	827	Intermittent	50
2	0	Intermittent	38
3	164	Intermittent	24
4	120	Ephemeral	14
5	28	Ephemeral	28
5	517	Intermittent	28
6	0	Ephemeral	37
6	0	Intermittent	47
7	0	Ephemeral	37
7	0	Intermittent	37
7A	0	Ephemeral	24
8	124	Intermittent	31
9	924	Intermittent	37,58
10	108	Intermittent	19
11	583	Ephemeral	15
12	282	Intermittent	26
13	233	Intermittent	26
14	30	Ephemeral	25
14	0	Intermittent	25
15	0	Ephemeral	26
15	0	Intermittent	26
	3,940	**Total Length of Delineated Streams Avoided**	

Description of Magnitude of Lowering Water Quality

Proposed impacts to jurisdictional waters will be permanent. However, the lowering of water quality will not be permanent as water quality and ecological function is restored during construction of mitigation streams and wetlands and the remaining portion of the site is reclaimed. The physical and biological features of the wetlands and streams to be impacted are described in the General Descriptions of the Aquatic Environment Directly Affected and the Compensatory Mitigation Plan. The proposed impact, if permitted, will reclaim the entire site (178.2 acres) including 100 acres previously affected by pre-law mining.

There are no records of endangered or threatened species in the vicinity of the project area. Therefore, none of the alternatives is likely to adversely affect endangered or threatened species. No high quality

streams or wetlands are proposed for impact therefore, no impact to commercial or recreational fishing is expected to result from this project under any alternative.

Preferred Alternative Avoidance

Upon reviewing the locations of streams and wetlands within the project area in relation to the location of coal reserves, the applicant has taken great care to revise the permit area. As a result, approximately 2507 linear feet of jurisdictional streams and 1.20 acres of jurisdictional wetland will be avoided as compared to the resources identified within the original delineation area. Table 3 lists the streams identified in the Preliminary Jurisdictional Determination Report that will be avoided under the minimal degradation alternative.

Discussion of Technical Feasibility

As stated earlier, the preferred alternative considered impacts to waters of the United States, as well as other concerns and constraints. This alternative addressed the cost-effectiveness and technical feasibility of extracting the No. #9 coal and was oriented toward extraction from those areas that could be efficiently obtained. This preferred alternative would maximize coal recovery to the greatest extent possible at the expense of less than half of the aquatic resources within the permit area. One consideration is determining cost-effectiveness is the cost of moving equipment around objects (such as streams). While some small areas may not contain adequate coal reserves, it is sometimes more cost-effective to continue mining though the area to the next reserve. As proposed in the ODNR Mining Permit Application, the preferred alternative is the most technically feasible and cost-effective method of coal extraction for the project area.

Description of Social and Economic Benefits

Social and economic benefits form the preferred alternative are significant. The continued successful operation of Oxford Mining Company, LLC. will allow them to maintain approximately 100 jobs. The current market value for coal is $30-34/ton depending on the quality and cleanliness. Under the preferred alternative, mining will produce approximately 254520 tons of coal. The “coal value” of the proposed alternative is therefore approximately $7635600 – 8653680. It is also important to realize that the vast majority of this coal value will be directly invested in the local and state economies for salaries, fuel, equipment, equipment maintenance, shipping, and materials, including seed and vegetation purchased for reclamation of the site. This coal value will secondarily be invested in local restaurants, gas stations, mechanic shops, hardware stores, grocery stores, car dealerships and housing. Oxford Mining Company, LLC. is clearly a vital industrial component to the region as well as the State of Ohio. Lost energy production may also seem inconsequential, but consider the impact of a 3-day power outage in a major metropolitan area. Every day of energy production is vital to our State.

The Ohio Coal Industry currently pays a combined total of $1.15 of State and Federal tax per ton of coal. The expected total production of coal will generate approximately $292698 of tax revenue for this project. The proposed lowering of water quality is necessary to accommodate important economic development and to meet a demonstrated public need as defined in rule 3745-1-50 of the Ohio Administrative Code:

3745-1-50(11)

> “Public Need” means an activity or project that provides important tangible and intangible gains to society that satisfy the expressed or observed needs of the public where accrued benefits significantly outweigh reasonable foreseeable detriments.

The people of Ohio require coal for the production of electric power. The coal provided by this project would meet the public need. Nine thousand (9,000) tons of coal/day will generate 1,000 megawatts of electricity. A 1,000-megawatt generator, operating at 60% capacity (i.e., at 600 megawatts) will generate enough electricity in a day to serve 1 million people. Under this alternative, the 254520 tons of coal would be enough to generate over 30554 megawatts, which is enough electricity for 1 million people for approximately 46 days.

Environmental Benefits

The preferred alternative, if permitted, would allow the impact of up to 178.2 acres for the purpose of mining coal. As required under the SMCRA permit, reclamation of the site will include all areas impacted under the permitted activity. All jurisdictional streams impacted by the project will be reconstructed with buffer zones to ensure the protection of water quality. The entire area will be re-vegetated with grasses and legumes that are ultimately beneficial for wildlife.

Justification of Selection of the Preferred Alternative

Social and economic benefits from the preferred alternative are significant. The continued successful operation of Oxford Mining Company, LLC. will allow them to maintain 100 jobs in the region. It is also important to realize that the vast majority of the coal value (approximately $7635600 – 8653680) will be directly invested in the local and state economies for salaries, fuel, equipment, equipment maintenance, shipping, and materials, including seed and vegetation purchased for reclamation of the site.

MINIMIZATION ALTERNATIVE

Impacts proposed with the project are necessary in order to recover the coal reserve in a cost effective and technically feasible manner. Efforts to minimize impacts to water resources on the site often reach a point of diminishing return for the applicant. In most scenarios this means that as the number of impacts increase, the amount of coal recovered increases dramatically.

Upon receiving the jurisdictional determination from the ACOE, the applicant made great efforts to minimize impacts to wetlands and streams on site. The resulting minimal degradation alternative would cause primary impacts to 3 jurisdictional wetlands totaling 0.57 acres and 7 jurisdictional streams totaling 2033 linear feet of streams. The tables below list the resources avoided by the minimal degradation alternative.

Under the minimal degradation alternative, two sediment ponds (two temporary and zero permanenet) will trap sediment resulting from construction and refuse disposal activities. Diversion ditches will also be constructed and maintained to assure that all runoff from the permit area is directed to the sediment ponds as designed. The ponds are meant to reduce the transport of sediment and other substances while maintaining water quality standards in the watershed. Dams for sediment ponds will be covered with topsoil, mulched, and seeded. Pond outlets have been designed to minimize the velocity of water exiting the pond using a low gradient straight pipe and rock lined spillways. This best management practice is intended to protect downstream designated life uses as listed by the Ohio EPA. The proposed project is expected to improve the water quality within the watershed.

For detailed information concerning the sediment ponds proposed for the project please refer to the Engineering Design Sheets in the ODNR Permit Application. Reclamation costs for the minimal degradation alternative are estimated at $255250.

Description of Magnitude of Lowering Water Quality

Proposed impacts to jurisdictional waters will be permanent. However, the lowering of water quality will not be permanent as water quality and ecological function is restored during construction of mitigation streams and wetlands and the remaining portion of the site is reclaimed. Because the minimal degradation alternative is a reduced version of the preferred alternative, descriptions of the resources are the same. No new resources are included as part of the minimal degradation alternative.

The proposed impact, if permitted, will reclaim the entire area affected by mining (102.1 acres). In addition, the applicant is bound by the parameters of Section 402 of the Clean Water Act (NPDES Permit). As such the applicant is obligated to control all surface water onsite. All surface drainage is required under the Clean Water Act to meet standard effluent limits set by the Ohio EPA prior to discharging.

Minimal Degradation Alternative Avoidance

Upon reviewing the locations of streams and wetlands within the project area in relation to the location of coal reserves, the applicant has taken great care to revise the permit area. As a result, an additional 611 linear feet of jurisdictional streams and 0.06 acres of jurisdictional wetland will be avoided under the minimal degradation alternative as compared to the preferred alternative. Table 3 lists the streams identified in the Preliminary Jurisdictional Determination Report that will be avoided under the minimal degradation alternative.

Table 4 - Wetlands within delineation area avoided under minimal degradation alternative.

Wetland Name	Avoided Area	Wetland Type	ORAM Score	ORAM Category
Wetland B	0.07	PEM	17	1
Wetland E	0.30	PEM	46	2
Wetland F	0.06	PEM	37	2
Total	**0.43**			

Table 5 - Streams within delineation area avoided by minimal degradation alterntative.			
Ephemeral & Intermittent Streams			
Stream Name	Length Avoided	Flow Regime	HHEI Score
1	827	Intermittent	50
2	0	Intermittent	38
3	164	Intermittent	24
4	120	Ephemeral	14
5	28	Ephemeral	28
5	517	Intermittent	28
6	0	Ephemeral	37
6	0	Intermittent	47
7	0	Ephemeral	37
7	0	Intermittent	37
7A	0	Ephemeral	24
8	124	Intermittent	31
9	924	Intermittent	37,58
10	108	Intermittent	19
11	583	Ephemeral	15
12	282	Intermittent	26
13	233	Intermittent	26
14	30	Ephemeral	25
14	316	Intermittent	25
15	15	Ephemeral	26
15	280	Intermittent	26
	4,551	**Total Length of Delineated Streams Avoided**	

Discussion of Technical Feasibility

The minimal degradation alternative considered impacts to waters of the United States, as well as other concerns and constraints. Impacts to wetlands and streams were minimized to only those places required for responsible coal removal. This alternative addressed the cost-effectiveness and technical feasibility of extracting the No. #9 coal seams and was oriented toward extraction from those areas that could be efficiently obtained. In areas where overburden is too great, the cost-effectiveness of coal extraction decreases and the coal is left behind. One consideration is determining cost-effectiveness is the cost of moving equipment around objects (such as streams). While some small areas may not contain adequate coal reserves, it is sometimes more cost-effective to continue mining though the area to the next reserve. As proposed in the ODNR Mining Permit Application, the minimal degradation alternative is not the most technically feasible and cost-effective method of coal extraction for the project area.

Description of Social and Economic Benefits

The current market value for coal is $ 30-34/ton. The minimal degradation alternative will produce approximately 125147 tons of coal. The associated "coal value" of this alternative is approximately $3754410 to $4254998.

The expected production of coal under the minimal degradation alternative will generate approximately $292698 of tax revenue for this project.

Under this alternative, the 125147 tons of coal would be enough to generate over 15023.65 megawatts, which is enough electricity for 1 million people for approximately 23 days.

Environmental Benefits

The minimum degradation alternative, if permitted, would allow the impact of up to 102.1 acres for the purpose of mining coal. As required by the SMCRA permit, reclamation of the site will include all areas impacted under the permitted activity in addition to approximately 100 acres incurring impacts occurring prior to the existence of mining laws.

AVOIDANCE ALTERNATIVE

The avoidance alternative requires that no damage (i.e., no excavation or fill) occurs to reduce surface water quality. This alternative was very carefully examined to determine if any mining could occur on the proposed site without impacting water quality. A plan under this alternative would extract only the coal reserves located outside of stream buffer zones and other waters of the state.

On the proposed site, numerous streams are located in the areas previously mined. Many of these areas would benefit from post-mining reclamation, however, the avoidance alternative would not allow for these resources to be impacted. Therefore, these areas could not be mined under this alternative. Under the non-degradation alternative, approximately 30.1 acres could be mined. Still, the necessity to avoid all aquatic resources limits the placement of drainage ditches and sediment ponds. As a result, avoiding these resources would further limit the amount of coal that could be recovered as well as dramatically increasing the cost of recovery.

It has been determined that avoiding all of the wetlands streams on the site would result in the applicant not being to gain access to enough coal reserves to make the project economically feasible. Therefore, an avoidance alternative should be considered a no-action alternative.

Description of Construction or Placement of Fill

Under the avoidance alternative, no fill would be placed in waters on the site. Water resources would be protected from runoff by diversion ditches that direct runoff to constructed sediment ponds. To maintain a negative drainage gradient, the sediment ponds would be constructed near existing streams. It is important to keep in mind that while coal could be recovered under this alternative, the costs associated with mining will likely make this alternative not feasible.

Description of Magnitude of Lowering Water Quality

Under the avoidance or no-action alternative, there would be no lowering of water quality..

Discussion of Technical Feasibility

The technical feasibility of the avoidance alternative is limited due to the loss of coal recovery required in order to avoid all of the aquatic resources on the site. At most, 30.1 acres (reduced 83% from the preferred alternative) could be mined while avoiding all streams and wetlands. In order to accomplish this, the coal seam would need to be exposed from a higher elevation resulting in more earthwork and spoil. In addition, as the size permit area decreases so does the available area to store spoil and

overburden resulting in drainage issues. This conflict is the primary factor limiting the feasibility of this alternative.

Description of Social and Economic Benefits

The avoidance alternative would result in the project not being technically or economically feasible and thus not being pursued. Without successful operation of the site, it is likely that up to 100 jobs provided by Oxford Mining Company, LLC. could be jeopardized.

Under the avoidance alternative, 23848 tons of coal would be recovered. The coal value under this alternative is approximately $715440 to 810832. In addition, approximately $27425 total tax dollars would be paid to the State of Ohio. Ultimately, the coal recovery realized under the non degradation alternative would be reduced by 148.1 acres as compared to the preferred alternative.

Environmental Benefits:

Under the avoidance alternative, the entire area disturbed by mining would be reclaimed and no jurisdictional waters would be impacted.

ALTERNATIVES ANALYSIS SUMMARY

Oxford Mining Company, LLC., while obligated to deliver coal resources that provide necessary energy for local communities, is dedicated to the preservation and enhancement of natural resources and water quality within the watershed. Mining reclamation activities, including wetland mitigation, are geared towards protecting surface waters outside the permit area and their associated functions and habitats within the permit area. By adhering to Ohio's Wetland Water Quality Standards, reclaiming habitat previously impacted by surface mining; and replicating existing conditions of the impacted wetland, Oxford Mining Company, LLC. will enhance surface water function at the Lafferty-Kaczor Mine site. The applicant will also be responsible for success of the mitigation areas during the monitoring period. Long-term maintenance of the site will be the responsibility of the property owner. The reconstructed wetland area will be under the same protection afforded to those watercourses prior to the mining and reclamation of the permit area. As such, the applicant will make every attempt to preserve and protect the reconstructed streams and wetland areas in perpetuity. Any future impacts to jurisdictional waters will require a permit from the U.S. Army Corps of Engineers, Huntington, WV District.

Metric	Preferred Alternative	Minimization Alternative	Avoidance Alternative
Coal Tonnage	254520	125147	23848
Coal Value	$7635600 – 8653680	$3754410 – 4254998	$715440 - $810832
Megawatts of Electricity Produced	30,544	15,023	2,862
# of Days of Power for 1 million People	46	23	4
Total Tax Revenue	$292,698	$143,919	$27,425
# of Existing Jobs Supported	100	100	100
# of Acres	178.2	102.1	30.1
County Unemployment Rate	7.2% (September 2008)		
County Poverty Rate	10.1% (2004)		
Environmental Benefits	Reclamation of existing minelands and highwalls at no cost to the State.	Reclamation of project area.	Reclamation of project area.
Social Benefits	Generation of $$292,698 of total tax revenue, support of 100 jobs, electricity production for 1 million people for 46 days.	Generation of $143,919 of total tax revenue, support of 100 jobs, electricity production for 1 million people for 23 days..	Generation of $27,425 of total tax revenue, support of 100 jobs, electricity production for 1 million people for 4 days.
Recreational Benefits	Enhancement of wetland value and function, improvement of local watersheds, wildlife viewing, waterfowl breeding habitat, and passerine bird habitat.	Enhancement of wetland value and function, improvement of local watersheds, wildlife viewing, waterfowl breeding habitat, and passerine bird habitat.	N/A
Other	Reducing safety risks onsite. (i.e. reclamation of existing highwalls)	N/A	N/A

USACE NEPA REVIEW REQUIREMENTS

CONSERVATION

The applicant has made an effort to minimize impacts to jurisdictional waters of the U.S. to the extents practical, as significant area is needed to efficiently mine the site. These project proposes the use of sediment control structures to prevent the contribution of solids to stream located downstream of the project. During construction, the temporary sediment control structures may include temporary silt basins, ditches, straw bale fencing, and cloth filter fences. Measures proposed to be taken to control drainage around, over, and through the mining operation would include the construction of appropriately designed sediment ditches, diversion ditches, culverts, flumes and drains. Timely construction and maintenance of the sediment control structures combined with concurrent reclamation and revegetation of all disturbed areas will also minimize any downstream impacts. Monitoring of all outlets where water is discharged form the permit area would take place according to the approved Section 402 permit issued for this project. It is unlikely that the project would result in any long term adverse effects on human use characteristics such as municipal and private water supplies, recreational and commercial fisheries, water related recreation, aesthetics, or local, state, or national parks. In addition, no human health effects would result as a result of the proposed project.

ECONOMICS

The proposed project is anticipated to last five years from the original permit starting date. The project is necessary for Oxford Mining Company, LLC. to continue to provide approximately 100 jobs in Tuscarawas, Stark, Coshocton, and Carroll counties. The project would also generate approximately $292698 of taxes through the recovery of approximately 254520 tons of coal.

AESTHETICS

It is anticipated that temporary adverse impacts to visual aesthetics will occur as a result of construction, coal extraction, loading, and hauling. The waters proposed to be adversely impacted as a result of this project are located in relatively remote areas that are nearly all outside of public view. It is anticipated that the surrounding tree cover, in addition to the proposed reclamation activities would lessen visual impacts. The impacts to aesthetics are considered to be temporary and only be of issue while the project is under construction. As the reclamation and mitigation efforts are completed and mature the visual impacts will become increasingly less apparent.

WETLAND AND OTHER HIGH QUALITY AQUATIC SITES

Primary impacts would occur to approximately 4487 linear feet of jurisdictional stream under the preferred alternative as a result of the mining operation at this location. Information concerning the location, size, quality and composition of the individual resources is discussed in the General Descriptions of the Aquatic Environment Directly Affected. Material which would be discharged to surface waters includes small, medium, and large coarse clean fill material. These materials are further described in Part 2, Drilling Reports – Surface, located in the ODNR Coordinated Mining Permit Application. In addition, 4 jurisdictional wetlands (0.63 acres) are proposed to be impacted under the preferred alternative.

HISTORIC PROPERTIES

Potential impacts to historic properties were evaluated as part of the mining application review. ODNR concluded that no known historical, architectural or archaeological site list on or eligible for the National Register of Historic Places are located with the immediate vicinity of the project.

FLOOD HAZARDS

No flood hazards are associated with this project. Measures have been incorporated into the project to ensure safety of workers and public. These include the inspection and certification of all ponds to be constructed on the site to guarantee the integrity of any downstream land use.

FLOODPLAIN VALUES

The project is not located within any mapped floodplains. Impacts to floodplains of existing streams will be temporary. Erosion and sediment control measures will moderate any peak storm discharges from the site, thereby replacing this floodplain function temporarily. Site reclamation will restore floodplain functions and values.

LAND USE

The historical land use for the majority of the project site is undeveloped and agriculture. Mining was preformed on approximately 100 acres within the area delineated for the projects and in addition to the surrounding area. Underground mining for coal was initiated in the 1920's while surface mining began in the mid 1900's. Currently under the preferred alternative, the land use of the proposed site (178.2 acres total) includes undeveloped (48 acres), pasture land (130.2 acres). A majority of the undeveloped area and riparian areas are comprised of woodland and scrub/shrub vegetation.

NAVIGATION

No navigable waterways are located within the permit area. None of the impacts proposed under the preferred alternative are expected to have any downstream effects including any effects that would impact navigable waterways. No impacts to navigation are anticipated to occur as a result of the proposed project.

RECREATION

The Lafferty-Kaczor mine area is located on private land and serves a recreational function only to the owners and individuals with permission to use the properties. The primary recreational use is hunting. The post-mining site with continue to provide this function.

ENERGY AND MINERAL NEEDS

Oxford Mining Company, LLC. estimates that the proposed project will result in the recovery of 254520 tons of coal. This makes up approximately 1.1% of the coal used in Ohio.

SAFETY

The applicant will comply with all state and federal regulations. Measures incorporated into the project designed to ensure workers and public safety include: inspection and certification of the ponds and fills during and after construction, blasting plan that requires a minimum distance of 500 feet from any active or abandoned underground mine, and compliance with the GWPP. Workers safety issues would be administered by the Mine Safety and Health Administration (MSHA). Proposed haulage and access roads have been designed in accordance with the issued SMCRA permit. Overall this project should not result in any notable increase in truck traffic, nor should it result in any adverse effects on local road safety.

WATER QUALITY

The proposed project would result in temporary adverse impacts to these waters. Measures proposed to be implemented that would protect the wetlands and streams located on the site include the construction of sediment control ponds, diversion ditches, adherence to the approved SMCRA permit,

adherence to the NPDES permit issued for the project, implementation of a materials handling plan, and reclamation of the site to a post-mining land use of grazing area and fish and wildlife habitat. Slightly increased turbidity as a result of increases in total suspended solids (TSS) and total dissolved solids (TDS) would likely occur during project construction. It is anticipated that these impacts would be temporary and limited in nature. Provided the applicant adheres to the terms and conditions of each of the necessary permits, as proposed, the project and required compensatory mitigation should not result in any long term adverse effects on water quality.

FISH AND WILDLIFE VALUES

Due to the temporary loss of habitat, adverse impacts to fish and wildlife would occur. These effects would be minimized through the implementation of successful site reclamation following coal extraction. The applicant will use native plants throughout the mitigation areas associated with the site. However, in accordance with the SMRCA permit a mix of several species including native species, as well as several non-native species would be planted on the site.

During active mining, essentially all wildlife habitats would be eliminated form the site. Upon reclamation and successful revegetation, areas suited for various types of wildlife would again be recolonized. Since restoration of a diverse mature forest requires many years to achieve, this habitat type would not return to the site for approximately 20 – 30 years. As a result, the project would have temporal losses of habitat for species requiring mature forests for all or part of their development.

The project was also evaluated for potential effects to threatened and endangered species. Based on a review of all available information, it was determined that the proposed project would not affect any threatened or endangered species.

SHORE EROSION AND ACCRETION

No effect to shore erosion and accretion are expected to occur as a result of this proposed project.

WATER SUPPLY AND CONSERVATION

There are no users of surface water within or near the permit area. In the unlikely event the project would affect any water users, the applicant would be required to mitigate these effects, in accordance with the issued SMCRA permit.

FOOD AND FIBER PRODUCTION

The project site had no pre-mining food or fiber production uses. Therefore, there would be no impact on food and fiber production as a result of the proposed mining activity. Marketable timber from the site will be harvested and utilized.

CONSIDERATIONS OF PROPERTY OWNERSHIP

All areas proposed to be utilized by the project are either owned by or are leased to the applicant for use as a coal mining operation. No lands contained in the permit area would require additional leased or acquisition before mining operation could commence.

GENERAL ENVIRONMENTAL CONCERNS

General environmental concerns associated with this project include blasting, noise and fugitive dust. These issues have been addressed by the ODNR through the SMRCA permit process.

BLASTING

To minimize off-site damage and/or provide public safety, the applicant will provide residents or owners of each dwelling or other structure within one-half mile of the permit area with a blasting notice at least 30 days prior to the first blast. In addition, personnel will be checking high wall face and the shot pattern for cracks, mud seams or any other means that would cause flyrock and airblast.

NOISE

There are no environmental concerns related to noise that would result from the proposed project.

DUST

Oxford Mining Company, LLC. will keep all supervisory personnel advised of all the rules and regulation of the Clean Air Act, and will act accordingly so no violations will occur. Dust will be minimized by spreading water on the roads as needed.

NEEDS AND WELFARE OF THE PEOPLE

The proposed project would enable future coal recovery, which is utilized on a local, regional, and national basis to produce electricity. The proposed project would meet the needs and welfare of the people relative to the establishment of approximately 100 jobs and through the continued delivery of coal. The proposed mining activity will not have a disproportionate impact on low-income or minority populations. Belmont County had an unemployment rate of 7.9% in October, 2011. The State average unemployment rate at that time was 9.0%. Unemployment increased during the previous 12 months in each of Ohio's 88 counties. The jobs provided by the proposed project will offer higher than average salaries and better benefits than most in the region.