

**Statement of Reasons for Determination of Completeness
for the New River Lands Unsuitable for Mining
Petition**

January 13, 2006

Introduction

On November 10, 2005, the Office of Surface Mining's (OSM) Knoxville Field Office received a petition to designate the New River watershed and adjacent lands as unsuitable for surface coal mining operations. The petition was submitted by the National Parks Conservation Association, Warioto Chapter of the National Audubon Society, and one citizen. Notices announcing the petition's receipt were published in the Lafollette Press on November 23, 2005, The Oak Ridger on November 18, 2005, Scott County News on November 24, 2005, Morgan County News on November 23, 2005, Tennessee Register on December 15, 2005, and The Knoxville News Sentinel on November 18, 2005.

The New River lands unsuitable for mining petition (New River LUM) covers 283,834 acres (443.5 square miles) of private and public lands.

Criteria for Designating Lands Unsuitable for Mining

Section 522(c) of the Surface Mining Control and Reclamation Act of 1977 (SMCRA or the Act) allows any person having an interest which is or may be adversely affected to petition the regulatory authority to have an area designated as unsuitable for surface coal mining operations. Since a Federal program exists in Tennessee, the Secretary of the Interior is responsible for designating lands as unsuitable. The specific procedures for processing a petition to designate lands as unsuitable in Tennessee are in 30 CFR 764 and 769.

Section 522(a)(2) of SMCRA states that an area shall be designated as unsuitable for all or certain types of surface coal mining operations if it is determined that reclamation pursuant to the requirements of SMCRA is not technologically and economically feasible. Section 522(a)(3) of SMCRA states that an area may be designated as unsuitable for all or certain types of surface coal mining operations if such operations will: (A) be incompatible with existing state or local land-use plans or programs; or (B) affect fragile or historic lands in which such operations could result in significant damage to important historic, cultural, scientific, and esthetic values and natural systems; or (C) affect renewable resource lands in which such operations could result in a substantial loss or reduction of long-range productivity of water supply or of food or fiber products, and such lands to include aquifers and aquifer recharge areas; or (D) affect natural hazard lands in which such operations could substantially endanger life and property, such lands to include areas subject to frequent flooding and areas of unstable geology.

The petitioners have requested that the New River watershed and adjacent areas in Anderson, Campbell, Morgan, and Scott Counties, Tennessee, be designated as unsuitable for surface coal mining operations based on the five criteria in Section 522(a)(2) and (3) of SMCRA.

Completeness Review

OSM has conducted a completeness review of the New River LUM in accordance with 30 CFR 764.13, 764.15 and 769. OSM is required to determine whether the New River LUM is: (1) complete, (2) incomplete, or (3) frivolous. OSM defines a complete petition as one that meets the minimum requirements set forth in 30 CFR 764.13(b)(1). An incomplete petition is, therefore, one that does not meet the minimum requirements. OSM defines a frivolous petition as one in which the allegations of harm lack serious merit.

The completeness review is based on the requirements set forth in 30 CFR 764.13(b)(1)(i)(ii)(iii)(iv) and (v) and, therefore the review sequentially follows this section.

- I. In accordance with 30 CFR 764.13(b)(1)(i), the petition shall include the petitioners' names, addresses, telephone numbers, and notarized signatures.

OSM has determined that the petitioners have provided the required information.

- II. In accordance with 30 CFR 764.13(b)(1)(ii), the petition shall include the identification of the petitioned areas, including its location and size, and a U. S. Geological Survey topographic map outlining the perimeter of the petitioned area.

OSM has determined that the petitioners have provided the required information.

- III. In accordance with 30 CFR 764.13(b)(1)(iii), the petition shall include the identification of the petitioners' interest which is or may be adversely affected by surface coal mining operations, including a statement demonstrating how the petitioners satisfy the requirements of 30 CFR 764.13(a).

OSM has determined that the petitioners have provided the required information.

- IV. In accordance with 30 CFR 764.13(b)(1)(iv), the petition shall include a description of how mining of the area has affected or may adversely affect people, land, air, water, or other resources, including the petitioners' interests.

OSM has determined that the petitioners have provided the required information.

- V. In accordance with 30 CFR 764.13(b)(1)(v), the petition shall include allegations of fact and supporting evidence, covering all lands in the petition area, which tend to establish that the area is unsuitable for all or certain types of surface coal mining operations, pursuant to specific criteria of Sections 522(a)(2) and (3) of the Act, assuming that contemporary mining practices required under applicable regulatory programs would be followed if the area were to be mined. Each of the allegations of fact should be specific as to the mining operation, if known, and the portion(s) of the petitioned area, and petitioners' interests to which the allegation applies, and be supported by evidence that

tends to establish the validity of the allegations for the mining operation or portion of the petitioned areas.

OSM's review pursuant to 30 CFR 764.13(b)(1)(v) consists of a Review, Analysis, and Determination. The section entitled Review restates the allegation and/or sub-allegation and summarizes the petitioners' statements in support of the allegation. This section also summarizes the information submitted by the petitioners for each of the regulatory criteria specified in 30 CFR 764.13(b)(1)(v) as follows: (a) evidence submitted by the petitioners that tends to establish the validity of the allegation and/or sub-allegation, (b) evidence that is specific to a mining operation(s) or for all or certain types of surface coal mining operations, (c) evidence that is specific to a portion of the petition area or covers all lands in the petition area, (d) petitioners' interest to which the allegation applies, and (e) petitioners' assumption that contemporary mining practices required under the Act and the Tennessee Federal Program would be followed if the area were to be mined.

The section entitled Analysis presents OSM's evaluation of the information the petitioners submitted for each of the regulatory criteria stated above.

The section entitled Determination is OSM's conclusion as to whether the petitioners have completely or incompletely addressed all the regulatory criteria stated above, or whether the allegation of harm lacks serious merit.

Allegation I – Under Section 522(a)(2), OSM must designate the petition area as unsuitable for surface coal mining operations because reclamation is not technologically and economically feasible.

Sub-allegation – I (A) – Reclamation is not feasible because sediment-retention measures are ineffective on the steep slopes of the petition area.

Review

The petitioners allege “that regardless of compliance with regulatory requirements, excessive sedimentation will occur in the petition area because reclamation strategies that seek to limit the amount of sediment loading in receiving waters are highly ineffective on the steep terrain that characterizes the petition area.” The petitioners submitted as evidence an unpublished paper by W.P. Carey, hydrologist, U.S. Geological Survey entitled “Sediment Characteristics of the New River Tennessee” dated 1979. The study notes that sediment retention basins are ineffective on the steep slope terrain of the New River watershed because such basins could not retain the runoff long enough for the suspended solids to drop out of the water prior to the water entering the receiving streams. The study is cited to support the statement that sediment is transported downstream into the Big South Fork National River and Recreation Area (BSF or NRRA or National Area) since “the New River serves as “a conduit for fine-grained sediment (silt and clay) which are kept in suspension and transported out of the basin.” The petitioners also indicate that impacts related to sediment have occurred in the Valley Creek, Bennett's Fork, and Little Elk Creek watersheds which verify that surface coal

mining operations cannot be conducted within this watershed without discharging sedimentation into the streams. In conclusion, the petitioners state that “SMCRA-imposed strategies cannot effectively control the sediment in the runoff from mining sites that reaches the waterways in the petition area”. Evidence submitted in support of this statement is personal observations made a petitioner.

Analysis

The petitioners rely upon a study that was written in 1979 and based on data collected in 1977 and 1978 within the watershed prior to the enactment of a SMCRA regulatory program in Tennessee. Furthermore, the area studied was surfaced mined prior to the enactment of SMCRA. The petition includes statements of personal observations by a petitioner concerning surface coal mining operations in the Valley Creek, Bennett’s Fork, and Little Elk Creek watersheds. The petition states that, like the New River watershed, these watersheds were adversely impacted by pre-SMCRA mining activities, but each had begun to exhibit a trend of recovery as mining activities decreased over the past two to three decades. The petitioners further state that mining activities have recently recommenced to a varying degree in each of the three watersheds, and the recovery trends appear to have been reversed in all three watersheds despite the fact that current mining operations are being conducted pursuant to the requirements of SMCRA. The petitioners state that the impacts of mining in these three watersheds shows that SMCRA regulations are unlikely to prevent degradation in the petition area in the event that renewed mining takes place. The petitioners provided no evidence to support their statements or conclusions that SMCRA regulations are unlikely to prevent degradation in the petition area in the event that renewed mining takes place. Observations of sediment flowing in a stream(s), without having baseline data or determining the source of the sediment, does not constitute supporting evidence to support the conclusion that surface mining under the Tennessee Federal Program cannot be conducted without preventing degradation to the receiving stream(s).

Determination

OSM has determined that this allegation is incomplete and lacks serious merit because: (1) the supporting evidence is either pre-SMCRA or prior to OSM implementing the Tennessee Federal Program; (2) the petitioners fail to assume that contemporary mining practices required under the Tennessee Federal Program would be followed if the area were to be mined. In the preamble to the 1983 rulemaking OSM clearly stated that “any petition based upon such preventable impacts would have no merit” 48 FR 41312 (September 14, 1983). The submission of reports based on coal mining that occurred prior to regulation under SMCRA violates the regulatory criteria that “allegations of fact and supporting evidence (must assume) that contemporary mining practices required under the Tennessee Federal Program would be followed if the petition area were to be mined” [30 CFR 764.13(b)(1)(v)]; (3) the petition does not include evidence of impacts from surface coal mining operations that are not preventable under the Tennessee Federal Program; and (4) the allegation is not specific to the petitioners’ interests.

Even though there is no specific size limit for a petition area, a basic regulatory criterion is that the petitioner must present “allegations of fact and supporting evidence, covering all lands in the petition area, which tend to establish that the area is unsuitable for all or certain types of surface coal mining operations” [30 CFR 764.13(b)(1)(v)]. Therefore, the large size of the petition area means that it is unlikely that the evidence presented can relate to the criteria for designation throughout the entire petition area. This is consistent with OSM’s comments in the 1983 preamble that “OSM has found that under the previous regulation, very large areas for which no evidence was presented were included in petitions (Alton petition, Tongue River petition), thus requiring significant efforts by OSM and other interested parties on issues of questionable merit, 48 FR 41329 (September 14, 1983).

Sub-allegation – I (B) – Reclamation is not feasible because reclaimed mining operations on the steep slopes of the petition area are prone to landslides.

Review

The petitioners indicate that “conducting mining operations on such steep terrain poses a significant risk of landslides, threatening public safety, and severe environmental degradation of the receiving waters. Importantly, compliance with reclamation requirements does not alleviate this threat.” The petitioners further state that “as demonstrated by recent slides in the area, reclamation performed in accordance with SMCRA requirements does not assure stability of the backfill on the precariously steep slopes characteristic of much of the petition area”. The petitioners cite the High Point Mountain landslide that occurred in February 2005 in the Sundquist Wildlife Management Area (WMA) in Scott County. The petitioners state that this slide occurred on a reclaimed surface mine that had been granted SMCRA bond release in 1993 in accordance with the Tennessee Federal Program. The petitioners also state that they have personally observed “a number of slides in the Fork Mountain area of the Sundquist WMA (West). The petitioners also indicate that current mining operations at the Zeb Mountain Mine, operated by National Coal Corporation, located near the Royal Blue WMA has had problems associated with slides related to a coal haul road. The petitioners conclude that “most of the landslides referenced above, including the High Point Mountain slide, appear to have occurred at mining operations that are either undergoing contemporaneous reclamation or have already been reclaimed under the backfilling and grading performance standards of SMCRA. Thus reclamation that protects public safety and water quality is not feasible on these steep slopes”.

Analysis

The steep slopes within the petition area are not unique from other areas throughout Appalachia that have been mined and successfully reclaimed. The High Point Mountain landslide area was initially permitted, mined, backfilled and re-graded under the State’s interim and permanent regulatory program and subsequently re-permitted after implementation of the Tennessee Federal Program in 1984, however, the site was not mined under the Tennessee Federal Program. Other examples cited by the petitioners

were either pre-SMCRA or mine sites not yet reclaimed. In any event, one or two or a few land slides in steep slope areas do not support the allegation that reclamation of mine sites on steep slopes is not technologically and economically feasible. There have been thousands of mines successfully reclaimed in steep slope areas throughout Appalachia during the past 28 years, since enactment of SMCRA.

Determination

Incorporated by reference Sub-allegation I (A).

Sub-allegation – I (C) – Reclamation is not feasible because increased surface mining operations will increase the likelihood of catastrophic failures in the petition area.

Review

The petitioners allege that catastrophic failures of coal mining operations and auxiliary facilities are inherent in mining. The petitioners also state that when structures such as coal slurry impoundments and underground mine outcrop barriers or mine seals fail, large stretches of aquatic habitat are destroyed and public safety can be threatened. The petitioners conclude that reclamation and other regulatory controls cannot preclude such occurrences or their impacts to safety and the environment. The petitioners state that a slurry impoundment in proximity to underground mine workings has potential to release slurry because of subsidence or outcrop barrier failures at underground mine workings. The petitioners also state that underground mine seals and barriers are more prone to failure when new surface mining operations are conducted in close proximity to underground mine workings. The petitioners submit as evidence academic papers and newspaper articles that were written regarding coal slurry impoundment failures in Kentucky, Virginia, West Virginia, and Tennessee.

Analysis

Any proposed mining operation must comply with 30 CFR 780.27 that requires a surface mine to identify a distance of at least five hundred feet from an active or abandoned underground coal mine for health and safety concerns. The petitioners offer no evidence why the permitting requirements, the performance standards, and the reclamation requirements in SMCRA for regulating coal slurry impoundments and requiring an active surface mine to maintain a 500 foot zone around abandoned or active underground mines are not adequate in preventing catastrophic failures.

Determination

OSM has determined that this allegation is incomplete and lacks serious merit because: (1) the supporting evidence is either pre-SMCRA or prior to OSM implementing the Tennessee Federal Program; (2) the petitioners fail to assume that contemporary mining practices required under the Tennessee Federal Program would be followed if the area

were to be mined. In the preamble to the 1983 rulemaking OSM clearly stated that “any petition based upon such preventable impacts would have no merit” 48 FR 41312 (September 14, 1983). The submission of reports based on coal mining that occurred prior to regulation under SMCRA violates the regulatory criteria that “allegations of fact and supporting evidence (must assume) that contemporary mining practices required under the Tennessee Federal Program would be followed if the petition area were to be mined” [30 CFR 764.13(b)(1)(v)]; (3) the petition does not include evidence of impacts from surface coal mining operations that are not preventable under the Tennessee Federal Program; (4) the petitioners do not indicate the specific type of mining operation and/or the location of the operation that would justify the petition area to be declared unsuitable for surface coal mining operations; (5) the allegation is not specific to the petitioners’ interests; and (6) the evidence is not specific to a portion of the petition area or does not cover all lands in the petition area.

Even though there is no specific size limit for a petition area, a basic regulatory criterion is that the petitioner must present “allegations of fact and supporting evidence, covering all lands in the petition area, which tend to establish that the area is unsuitable for all or certain types of surface coal mining operations” [30 CFR 764.13(b)(1)(v)]. Therefore, the large size of the petition area means that it is unlikely that the evidence presented can relate to the criteria for designation throughout the entire petition area. This is consistent with OSM’s comments in the 1983 preamble that “OSM has found that under the previous regulation, very large areas for which no evidence was presented were included in petitions (Alton petition, Tongue River petition), thus requiring significant efforts by OSM and other interested parties on issues of questionable merit, 48 FR 41329 (September 14, 1983).

Sub-allegation – I (D) – Reclamation is not feasible in the densely-forested areas of the petition area.

Review

The petitioners indicate that the current regulatory program does not require an operator to reclaim the land to forest because of difficulties associated with the cost, soil compaction, vegetation competition, and grazing wildlife. To support this allegation the petitioners refer to statements from the draft Mountaintop Mining EIS that indicate “there is no evidence that native forest ecosystems will ever re-colonize large mountaintop mining sites given the limits of current reclamation technology.” The petitioners then cite a statement from a study conducted for the Mountaintop Mining EIS that “few mine owners voluntarily undertake reforestation programs because of the added expense and challenges posed by compacted soil, competition from grasses planted to control erosion, the damage caused by grazing wildlife, and the loss of native topsoil”. The petitioners then opine that previous reclamation, which did not include reforestation, has failed because of limited topsoil availability on steep slope areas, the difficulty to recover the soils, and the use of topsoil substitutes.

Analysis

The petitioners submitted no evidence to support the allegation that surface coal mining operations cannot be successfully reclaimed to a forestry land use. In fact, the petitioners' statement referencing the draft Mountaintop Mining EIS is not accurate since the final Mountaintop Mining EIS in Chapter IV.C.1 concludes that forest ecosystems comprised largely of native species can be re-established, with the exception that in some cases the re-established ecosystems will not be identical to those that existed prior to mining. The petitioners also indicate that it would take "as long as 120 years to attain mature forest conditions." If this conclusion is accepted, then it does not support the allegation that reclamation is not technologically and economically feasible in the petition area since in 120 years a forest would have been re-established. The petitioners' statements are not supported by evidence and are not reflective of actual on-the-ground conditions at operations permitted under the Tennessee Federal Program.

Implementation of the forestry reclamation approach (FRA) has been shown by reforestation researchers to have a dramatic effect on the rate of tree growth, the value of a forest, and the products and services it provides (Burger, 1999; Graves, et al., 2000, Angel, et al., 2005). Research has also shown that forest land quality in both the Eastern and Midwestern coalfield regions can be greatly enhanced by the use of the FRA on most sites compared to the productivity of average undisturbed sites (Ashby, 1998; Kelting et al, 1997). The petitioners offer no evidence why the permitting requirements, the performance standards, and the reclamation requirements in SMCRA for establishing a post-mining land use of forestry are not adequate to achieve reforestation of a mine site.

Determination

Incorporated by reference Sub-allegation I (C).

Sub-allegation – I (E) – Reclamation is not feasible due to the presence of acid producing coal seams and overburdens within the petition area.

Review

The petitioners have stated that acid and iron drainage has frequently occurred in the New River watershed from the following coal seams: Popular Creek, Coal Creek, Joyner, Big Mary, and Grassy Springs. The petitioners indicate this acid drainage has impacted the watersheds of Indian Creek, Straight Fork, and Brimstone Creek. The Indian Creek watershed does not appear to have any mining in it (the petitioners are probably referring to Indian Fork) and there are three separate Straight Forks within the petition area. The petitioners also reference Bear Creek and the ongoing efforts to reclaim sources of sediment and acid mine drainage (AMD) in this watershed, however; this watershed is not within the petition area. To support their allegation, the petitioners reference the U.S. Army Corps of Engineers (Corps) New River Comprehensive Study and Environmental Assessment dated 1983, which documents the presence of acid and iron drainage within the watershed. However, this study relies on data and sampling from 1976 and 1977 which is pre-SMCRA. The petitioners also submitted a paper prepared by Shoup and

Peyton entitled “Collections from the Drainage of the Big South Fork of the Cumberland River in Tennessee” from the Journal of Tennessee Academic Science, volume 15, pages 106-116 that presents the results of an aquatic assessment in the Big South Fork River. The petitioners also reference a paper by Ahstedt which addresses mussel recovery in the Big South Fork River and historic impacts to the mussels from mining, timbering, oil and gas development, and private development. The petitioners also cite the Water Resources Management Plan (WRMP) for the BFS. The petition references these documents, along with a number of other papers, in support of their allegation that predicting mine drainage and the amount of mine drainage is uncertain and that this uncertainty poses an unacceptable risk to the watersheds within the petition area. The petitioners have not specifically identified what portions of the petition area that this allegation applies.

Analysis

OSM is aware of the fact that surface coal mining operations within the petition area, conducted prior to 1977 and 1984, resulted in adverse impacts to the watersheds within the petition area. Nevertheless, there are many seams within the petition area that have been mined and the sites reclaimed without the production of AMD. OSM’s review of the evidence submitted to support this allegation concludes that the evidence identifies the impacts of surface coal mining operations before the Tennessee Federal Program was implemented in 1984. OSM has determined that the presence of acid- and toxic-forming materials is non-uniform and discontinuous in both geographical distribution and intensity throughout the petition area. OSM’s experience indicates that this is typical for all major coal mining areas throughout Appalachia and is not unique to the petition area. More importantly, the petitioners offer no evidence why the SMCRA permitting requirements, the performance standards, and the reclamation requirements for protecting the hydrologic balance and sedimentation control on an active mine site are not adequate.

Determination

Incorporated by reference Sub-allegation I (C).

Allegation II – The criteria set forth in Section 522(a)(3) warrant designation of the petition area as unsuitable for surface coal mining operations (the allegations set forth in Part I are hereby incorporated by reference).

Sub-allegation – II (A) – OSM should designate the petition area as unsuitable for surface coal mining operations because such operations would affect fragile or historic lands, resulting in significant damage to important historic, cultural, scientific, and esthetic values and natural systems, within the meaning of Section 522(a)(3) of SMCRA.

Sub-allegation – II (A) (1) – Surface mining in the petition area would significantly damage important fish and wildlife habitat.

Sub-allegation - II (A) (1) (a) – Threatened, endangered and sensitive species.

Sub-allegation – II (A) (1) (a) (i) – Endangered Freshwater Mussel Species.

Sub-allegation – II (A) (1) (a) (ii) – Threatened and Endangered Fish Species.

Review

The petitioners allege that surface coal mining operations within the New River watershed would impact threatened mussels and fish species within the National Area. The petitioners present as supporting evidence statements from the Big South Fork General Management Plan and Environmental Impact Statement prepared by the National Park Service and finalized in 2005, that “National Area waters provide habitat for a world-class freshwater mussel assemblage and are an important refuge for many endangered mussel species. Few other river systems support this level of mussel diversity”. The petitioners present information that twenty six species of mussels have been identified in the Big South Fork River and some of its larger tributaries, this includes five that are included on the Federal list of endangered species. The petitioners also rely upon research conducted in 1996 by Evans (exhibit 13) where they quote his research that “He found that, although water quality and fish assemblages have improved in the New River over the past two decades, the major negative effects of coal mining – siltation and AMD – are ongoing”. The petitioners further cite Evans’ findings that “With respect to siltation, Evans cites several research studies indicating that siltation is the major form of mine pollution currently affecting fauna in the New River system. In addition to Evans, the petitioners reference Bakaletz who performed a mussel survey within the National Area in 1991 (exhibit 11). The petitioners indicate that his research shows that the “Big South Fork River was devoid of mussels as a result in part to heavy mining in the watershed”. Other forms of supporting evidence include a December 20, 2002, letter from the Fish and Wildlife Service (FWS), a written statement from Steven Ahlstedt on mussel populations, recent Ahlstedt surveys, the BSF Water Resource Management Plan (WRMP), 1997, the FWS Recovery Plan for the Cumberland Elktoe, Oyster Mussel, Cumberlandian Combshell, Purple Bean, and Rough Rabbitsfoot, May 4, 2004; the Layzer and Anderson study on Impacts of the Coal Mining Industry or Rare

and Endangered Aquatic Organisms of the Upper Cumberland River Basin, the Fern Lake LUM, a Penn State study; a statement of Dr. David A. Etnier entitled “Fish Fauna for the Big South Fork of the Cumberland River and Upper Cumberland River Drainage, Tennessee and Kentucky”; T.A. Haines Paper (1981); statements from a U.S. EPA document on surface mining, and water pollution research series 1971.

Analysis

With the exception of one study, all the numerous studies referenced in the text of the petition discussion on mussels and fish were conducted post SMCRA, however there are many references in the contexts of these studies that relate to pre-SMCRA mining effects.

The evidence submitted in support of the petitioners’ position that any surface mining conducted in the petition area under the Tennessee Federal Program could “significantly damage” important or valuable fish habitats, in fact did not demonstrate that these resources could be significantly damaged. There is ample evidence in the petitioners’ submittals that document the fact that pre-law and possibly even pre-permanent program SMCRA mining, when evaluated in concert with other land use activities that occurred in the New River watershed, significantly damaged valuable fishery resources in the New River and BSF. The petitioners’ own studies show that in spite of the post-SMCRA permanent program surface mining that has occurred in the watershed in the past two decades, fishery resources in the New River and BSF have begun a slow recovery.

The FWS has on at least two occasions, evaluated the impact of mining on protected species. When listing the blackside dace in 1987 (Fed. Reg. Notice dated June 12, 1987, pg 22581), the FWS stated that “...The blackside dace is presently able to coexist with current coal mining regulations. Therefore the Service believes that the species will continue to survive in watersheds where coal mining will occur as long as existing regulations which protect water quality are adhered to.” Also, in September 1996, the FWS issued a Biological Opinion on the continuing State and Federal SMCRA regulatory programs. This opinion concluded that “surface coal mining operations conducted in accordance with properly implemented Federal and State regulatory programs under SMCRA are not likely to jeopardize the continued existence of the listed or proposed species, and are not likely to result in destruction or adverse modification of designated or proposed critical habitats. The FWS has essentially concluded that coal mining conducted in compliance with existing statutes and regulations will protect listed aquatic species. The petitioners’ evidence provides little information to refute that conclusion and thus little support for a determination that aquatic resources within and downstream from the petition area are fragile resources that can only be protected by designation of the petition area as unsuitable for surface coal mining operations.

As to the concern for protected mussel species, the fact that each of the five mussel species identified in the petitioners’ evidence is listed as endangered, as compared to threatened, confirms the fact that the mussel species are at greater peril for extirpation than are the fishery resources identified in the petition area. Petitioners’ evidence and the Tennessee Division of Natural Heritage database information confirm that one species of

protected mussel species is present in the New River. All five species of protected mussel species are present and more likely dispersed in the BSF downstream of the petition area. Although the evidence may arguably tend to establish the likelihood that the mussel species are perhaps more sensitive to stressors that are the fish species, the evidence still must be viewed in the light of the same facts discussed in the previous discussion. The fact that the New River system has been slowly recovering over the past two decades with surface mining on-going during that period of time, and the FWS's 1996 Biological Opinion concluding that surface coal mining operations conducted in the compliance with SMCRA are unlikely to jeopardize listed species or critical habitats, shows that surface coal mining operations conducted pursuant to the Tennessee Federal Program can protect aquatic-listed species.

Determination

OSM has determined that this allegation is incomplete and lacks serious merit because: (1) the supporting evidence is either pre-SMCRA or prior to OSM implementing the Tennessee Federal Program; (2) the petitioners fail to assume that contemporary mining practices required under the Tennessee Federal Program would be followed if the area were to be mined. In the preamble to the 1983 rulemaking OSM clearly stated that "any petition based upon such preventable impacts would have no merit" 48 FR 41312 (September 14, 1983). The submission of reports based on coal mining that occurred prior to regulation under SMCRA violates the regulatory criteria that "allegations of fact and supporting evidence (must assume) that contemporary mining practices required under the Tennessee Federal Program would be followed if the petition area were to be mined" [30 CFR 764.13(b)(1)(v)]; (3) the petition does not include evidence of impacts from surface coal mining operations that are not preventable under the Tennessee Federal Program; (4) the petitioners do not indicate the specific type of mining operation and/or the location of the operation that would justify the petition area to be declared unsuitable for surface coal mining operations; and (5) the allegation is not specific to the petitioners' interests.

Even though there is no specific size limit for a petition area, a basic regulatory criterion is that the petitioner must present "allegations of fact and supporting evidence, covering all lands in the petition area, which tend to establish that the area is unsuitable for all or certain types of surface coal mining operations" [30 CFR 764.13(b)(1)(v)]. Therefore, the large size of the petition area means that it is unlikely that the evidence presented can relate to the criteria for designation throughout the entire petition area. This is consistent with OSM's comments in the 1983 preamble that "OSM has found that under the previous regulation, very large areas for which no evidence was presented were included in petitions (Alton petition, Tongue River petition), thus requiring significant efforts by OSM and other interested parties on issues of questionable merit, 48 FR 41329 (September 14, 1983).

Sub-allegation – II (A) (1) (a) (iii) – Cerulean Warbler Habitat.

Sub-allegation – II (A) (1) (a) (iii) a. – Habitat for Cerulean Warbler and Other Interior Forest Birds.

Sub-allegation – II (A) (1) (a) (iii) b. – The Imperiled Status of the Cerulean Warbler.

Sub-allegation – II (A) (1) (a) (iii) c. – The Cumberland Mountains of Eastern Tennessee, are Critical Cerulean Habitat for the Cerulean Warbler and Other Interior Forest Species.

Sub-allegation – II (A) (1) (a) (iii) d. – Surface mining in the Cumberland Mountain will Devastate Populations of Cerulean Warblers and Other Interior Forest Songbirds.

Review

Although the petitioners refer to a number of songbirds in support of their sub-allegation, the petitioners' primary focus and evidence is on the Cerulean Warbler. In summary, the petitioners allege that surface mining in the Cumberland Mountains will devastate populations of these songbirds in the core of their breeding ranges and compromise what has been a critical refuge from the logging, development, and mining that are destroying their habitat throughout their ranges and that these birds are sensitive to landscape level forest fragmentation caused by surface mining. The petitioners further state that the Cumberland Mountains, which are characterized by large tracts of forested landscape, are essential to the continued survival of the species and that publicly owned land like Royal Blue WMA, Sundquist WMA, and Frozen Head State Park and Natural Area which conserve large, unfragmented tracts of Cerulean Warbler habitat under state stewardship are insulated from development and other landscape-level fragmentation. In addition, the petitioners state that for the Cerulean Warbler, deforestation caused by surface mining in the heart of their breeding range is a substantial threat because: (1) these species avoid the fragmented forest landscape left by surface mining, (2) these species avoid the forest/grassland edge created by surface mining, and (3) surface mining targets the steep slope and ridge top habitat most favored by the Cerulean Warbler. The petitioners conclude that the Cerulean Warbler is the most imperiled and the most threatened by surface mining because of its preference for the steep slope and ridge top forest habitat destroyed by surface mining and its sensitivity to the landscape fragmentation and hard edges created by surface mines and associated fills. The petitioners conclude that because of the cumulative threat to the Cerulean Warbler from surface mining throughout its breeding range, surface mining in the core breeding habitat within the Cumberland Mountains of eastern Tennessee will threaten the viability of this species.

In summary, the petitioners have submitted several exhibits and referenced several documents in support of their statements concerning species decline and habitat

destruction. The petitioners cite Hamel (2000) in stating “dramatic habitat loss to logging, development, and mining throughout the Cerulean’s range has contributed significantly to this decline”. In addition, the petitioners cite Villard and Maurer (1996) in stating that “the Cerulean Warbler’s breeding range has contracted significantly as a result of habitat destruction, especially in the 1970s and 1980s”. The petitioners submitted a letter by Rosenberg (exhibit 15) that states the “most serious threat, by far, within the breeding range of the Cerulean Warbler is the practice of mountaintop removal mining...As much as 10 percent to 20 percent of the known Cerulean population may be directly impacted by proposed and permitted mountaintop mines alone”. The petitioners cite a study by Weakland and Wood (2002) that in intact forests Ceruleans were found in plots with ridge tops at 7 times the density of plots without ridges. Similarly, Ceruleans were 2.5 times more common in fragmented forests with ridges than in fragmented forests without ridges. The study concluded that this preference for ridges could result in significant impacts on Cerulean Warbler populations in the mountaintop mining/valley fill region. The petitioners also cite a letter by the Southeast Partners in Flight (exhibit 17) stating that the decline in Cerulean populations has accelerated in recent years on a time scale that coincides with increased use of surface mining in the bird’s range. The petitioners also cite a study (Buehler et al 2005) that predicts impacts of surface coal mining on Cerulean Warbler habitat on the Royal Blue WMA which concludes that an estimated 25 percent of the Cerulean population on the Royal Blue WMA will be displaced by coal mining.

Analysis

As identified above, the petitioners have submitted a number of exhibits and referenced several papers to support their conclusion that the New River watershed and geographical areas outside the New River watershed must be designated as unsuitable for surface mining in order to preserve these critical refuges for the Cerulean Warbler from the threats of development and other landscape-level fragmentation. The petitioners fail to recognize that the publicly-owned land of the Royal Blue and Sundquist WMAs are not insulated from landscape level fragmentation since both areas include timbering in their management plans. Also, the petitioners did not provide evidence to demonstrate the magnitude of the impacts that surface coal mining operations specifically conducted pursuant to the Tennessee Federal Program have had on the Cerulean population in the Cumberland Mountains. The petitioners cite a study (Buehler et al 2005) that predicts the impacts of surface coal mining on Cerulean Warbler habitat. More specifically, the study suggests that coal mining may displace about one-quarter of the Cerulean population on the Royal Blue WMA. The authors further state that, “Because coal mining is occurring at similar rates elsewhere in the Cumberlands, we expect about 25 percent of the overall Cerulean population is in jeopardy or over 10,000 breeding pairs”. The authors assume that the surface coal reserves on Royal Blue WMA will be mined in the near future (3 to 5 years) through cross-ridge mining. The petitioners erroneously apply the author’s conclusion of the worse-case scenario, maximum coal extraction over 3 to 5 years as a basis not to allow any mining to occur in the petition area. The petitioners, in citing this study, did not consider the permitting requirements of SMCRA and assessment of cumulative impacts required under the National Environmental Policy Act (NEPA) as

part of the decision making process. As part of the permitting process, the applicant is to identify habitats of unusually high value such as reproduction areas and NEPA requires an assessment of cumulative impacts on resources potentially impacted by the proposed surface coal mining operation. Implementation of these requirements allows OSM to assess potential impacts to Cerulean habitat on a continual basis and make permitting decisions accordingly.

With respect to reclaiming mined areas to a forestry land use, refer to the analysis under Sub-allegation I (D).

Determination

OSM has determined that this allegation is incomplete because: (1) the petitioners fail to assume that contemporary mining practices required under the Tennessee Federal Program would be followed if the area were to be mined. In the preamble to the 1983 rulemaking OSM clearly stated that “any petition based upon such preventable impacts would have no merit” 48 FR 41312 (September 14, 1983). The submission of reports based on coal mining that occurred prior to regulation under SMCRA violates the regulatory criteria that “allegations of fact and supporting evidence (must assume) that contemporary mining practices required under the Tennessee Federal Program would be followed if the petition area were to be mined” [30 CFR 764.13(b)(1)(v)]; (2) the petition does not include evidence of impacts from surface coal mining operations that are not preventable under the Tennessee Federal Program; (3) the petitioners do not indicate the specific type of mining operation and/or the location of the operation that would justify the petition area to be declared unsuitable for surface coal mining operations and (4) the allegation is not specific to the petitioners’ interests.

Even though there is no specific size limit for a petition area, a basic regulatory criterion is that the petitioner must present “allegations of fact and supporting evidence, covering all lands in the petition area, which tend to establish that the area is unsuitable for all or certain types of surface coal mining operations” [30 CFR 764.13(b)(1)(v)]. Therefore, the large size of the petition area means that it is unlikely that the evidence presented can relate to the criteria for designation throughout the entire petition area. This is consistent with OSM’s comments in the 1983 preamble that “OSM has found that under the previous regulation, very large areas for which no evidence was presented were included in petitions (Alton petition, Tongue River petition), thus requiring significant efforts by OSM and other interested parties on issues of questionable merit, 48 FR 41329 (September 14, 1983).

Sub-allegation – II (A) (2) – Mining in the petition area would significantly damage the natural systems of the Big South Fork National River and Recreation Area.

Review

The petitioners cite a number of studies in support of this allegation, but primarily rely upon the enabling legislation which established the Big South Fork National River and

Recreation Area [16 USC 460ee]. The petition also includes a reference to a U.S. Geological Survey paper by Carey published in 1979 which concludes that the BSF is impacted from upstream activities since the New River serves as conduit for transporting effects of those activities into the BSF. The petitioners also cite the Corps' study of 1974 that concludes mining activities within the New River watershed adversely affects the river and under certain flow conditions impacts the BSF. The Corps' report also indicates that the major water quality problem within the New River is turbidity associated with total suspended solids and that 51 percent of sediment in the New River is from mining operations and that this is ten times more than the amount in watersheds without mining operations.

Additionally, the BSF WRMP, dated May 10, 1997, is referenced, as it relates to sedimentation impacts within the petition area. The petitioners conclude, based on the cited legislation and studies that the BSF qualifies as a fragile land and should be designated unsuitable for mining. Additionally, since the New River is a major tributary and primary water source for the BSF that direct, indirect, or cumulative impacts from surface coal mining operations threatens the natural systems within the BSF. In addition, the petitioners refer to the various designations by the States of Tennessee and Kentucky for the Big South Fork River as an Outstanding National Resource Water.

Analysis

Evidence submitted by the petitioners does not tend to establish that mining within the New River watershed using contemporary mining practices would significantly damage the natural systems of the BSF. Most mining-related impacts referenced by the petitioners are related to pre-SMCRA activities identified by the Corps' New River Comprehensive Study or from pre-SMCRA watersheds outside the petition area draining into the BSF. The BSF's WRMP references, but does not quantify post-SMCRA AMD effects in New River and Paint Rock Creek, nor does it identify the source. Likewise, the WRMP references various post-SMCRA reports and studies regarding sediment impact originating from within the petition area but does not specifically quantify the impact or identify the source.

Sediment sources, referenced in the WRMP, are listed as abandoned and active mines, roads and trails, timbering, and oil and gas operations. But again, there is no attempt at determining how much sediment is being contributed by which land use. This is indicative of the National Park Service acknowledging that there is no ongoing comprehensive water quality monitoring program in the area that could accurately monitor the conditions of the water quality and to identify the source(s) of pollution. Thus, one of their identified recommendations in the WRMP is to establish such a program.

Determination

Incorporated by reference Sub-allegation I (C).

Sub-allegation – II (A) (3) – Surface mining in the petition area would damage important esthetic and recreational values.

Review

The petitioners allege that surface coal mining operations will impact the National Area which is an “environmental corridor containing a concentration of ecologic and esthetic features.” The petitioners allege that surface mining impacts will affect the water quality, thus adversely affecting recreational opportunities for visitors to the area. The petitioners also allege that adverse impacts from surface coal mining operations would affect the Cumberland Trail and State Park, the Royal Blue and Sundquist WMAs, Frozen Head State Park, and Cove Lake State Park. The petitioners allege that surface coal mining operations will significantly diminish the esthetic and recreational values of these areas because mining will obscure vistas, impair water quality, create danger from blasting, and increase the potential for landslides. Evidence to support the petitioners’ allegation include: photographs of the confluence of Clear Fork and New River and of Leather wood Ford; Letter from the Superintendent of BSF to OSM dated July 1, 2005; Corps’ New River Study; Statement of Reasons on Fall Creek Falls LUM petition; Scott Barker’s Knoxville News Sentinel article March 9, 2005; and Statement of Reasons for the Flat Fork LUM petition.

Analysis

The petitioners have submitted no evidence to indicate that surface coal mining operations, conducted in compliance with the Tennessee Federal Program, within the watersheds upstream of the National Area would significantly damage important esthetic and recreational values in the National Area. Sediment laden water in viewsheds can not be specifically attributed to surface mining activities since other land uses, such as timbering, can produce sedimentation.

The boundary area of the Cumberland Trail and its associated buffer zone are already Congressionally designated as unsuitable for surface coal mining operations pursuant to Section 522(e)(1) of SMCRA and its associated 300 foot buffer zone pursuant to Section 522(e)(5) of SMCRA. The petitioners indicate that the 300 foot buffer zone does not afford the protection required for the Cumberland Trail. The provisions for buffer zones in SMCRA are minimal buffer zones. If an application was submitted for an area adjacent to the Cumberland Trail, either within or outside the petition area, OSM would review the permit application and determine if the buffer zone would need to be expanded to protect the values of the Cumberland Trail.

For those areas within the boundaries of the Royal Blue and Sundquist WMAs, the petitioners do not provide evidence to support that these areas should be considered “fragile lands” as important esthetic and recreational values. The Tennessee Wildlife Resources Agency’s (TWRA) management plan includes multiple land uses including coal mining and timbering. Anticipated activities and uses are not restricted to just

recreation in these areas. In any event, through the provisions of SMCRA, surface coal mining operations can occur within these areas without a long-term impact to these areas, thus assuring the esthetic and recreational values of these areas will be available after mining and reclamation as recognized by the management plan.

The petitioners allege that the entire New River watershed is fragile lands because of important esthetic and recreational values adjacent to Frozen Head State Park. The evidence provided to support this allegation was the Statement of Reasons for the Flat Fork LUM petition. While it is correct that OSM made such a finding in the Statement of Reasons for the Flat Fork petition, the basis for that finding was that the viewshed from certain overlooks in the Park were “the last unmined views of the Cumberland Mountains”. The petitioners have failed to provide evidence that the entire New River watershed contains such equal pristine, unmined vistas from the park.

OSM concludes that the petitioners provided no evidence that the provisions of SMCRA’s permitting requirements, the performance standards, and the reclamation requirements for protecting these resources are not adequate in preventing impacts to esthetic and recreation values.

Determination

OSM has determined that this allegation is incomplete and lacks serious merit because: (1) the supporting evidence is either pre-SMCRA or prior to OSM implementing the Tennessee Federal Program; (2) the petitioners fail to assume that contemporary mining practices required under the Tennessee Federal Program would be followed if the area were to be mined. In the preamble to the 1983 rulemaking OSM clearly stated that “any petition based upon such preventable impacts would have no merit” 48 FR 41312 (September 14, 1983). The submission of reports based on coal mining that occurred prior to regulation under SMCRA violates the regulatory criteria that “allegations of fact and supporting evidence (must assume) that contemporary mining practices required under the Tennessee Federal Program would be followed if the petition area were to be mined” [30 CFR 764.13(b)(1)(v)]; (3) the petition does not include evidence of impacts from surface coal mining operations that are not preventable under the Tennessee Federal Program; (4) the petitioners do not indicate the specific type of mining operation and/or the location of the operation that would justify the petition area to be declared unsuitable for surface coal mining operations; and (5) the evidence is not specific to a portion of the petition area or does not cover all lands in the petition area.

Even though there is no specific size limit for a petition area, a basic regulatory criterion is that the petitioner must present “allegations of fact and supporting evidence, covering all lands in the petition area, which tend to establish that the area is unsuitable for all or certain types of surface coal mining operations” [30 CFR 764.13(b)(1)(v)]. Therefore, the large size of the petition area means that it is unlikely that the evidence presented can relate to the criteria for designation throughout the entire petition area. This is consistent with OSM’s comments in the 1983 preamble that “OSM has found that under the previous regulation, very large areas for which no evidence was presented were included

in petitions (Alton petition, Tongue River petition), thus requiring significant efforts by OSM and other interested parties on issues of questionable merit, 48 FR 41329 (September 14, 1983).

Sub-allegation – II (A) (4) – Surface mining in the petition area would damage important historic and cultural values.

Review

The petitioners allege that historic and cultural sites would be adversely impacted by surface coal mining operations within the petition area. The petitioners allege that the Cumberland Trail, the aquatic habitat of the area, and the cultural significance of the area would be adversely impacted by surface coal mining operations. The petitioners offer evidence related to impacts to water quality in support of their allegation (presented earlier in the petition) as well as the Tennessee Greenways and Trail Plan; Scott Barker's, Knoxville News Sentinel article, March 9, 2005; and 30 CFR 762.5.

Analysis

Most of the discussion under this sub-allegation refers to the Cumberland Trail State Park; however, as indicated in our previous responses, the Cumberland Trail State Park is already protected under Section 522(e) of SMCRA. As for the impacts to the aquatic habitat of the New River and Big South Fork River, the analysis in Sub-allegation II (A) (1) is incorporated by reference. In response to the allegation that the "broader Cumberland Plateau region has been proposed for federal designation as a National Heritage Area" should justify designating the entire petition area as unsuitable for surface mining, fails to consider the protections afforded these lands under SMCRA. Prior to issuing any SMCRA permit, we must find that the operation has taken into account the effects on any properties listed on and eligible for listing on the National Register of Historic Places pursuant to 30 CFR 773.15(k). The permit applicant must also comply with 30 CFR 780.31 which requires, in the permit application, a description of measures to prevent adverse impacts to such properties. Finally, prior to issuing a SMCRA permit, OSM is required to consult with the State Historic Preservation Officer pursuant to 30 CFR 773.5. OSM has determined that the petitioners offer no evidence why the permitting requirements, the performance standards, and the reclamation requirements for protecting cultural resources are not adequate in preventing impacts to important historic and cultural resources.

Determination

Incorporated by reference Sub-allegation II (A) (3).

Allegation – II (B) – The petition area should be designated unsuitable for surface coal mining operations because mining the area would be incompatible with existing state or local land use plans or programs.

Sub-allegation – II (B) (1) – General management plan (GMP) and authorizing legislation for Big South Fork NRRRA.

Sub-allegation – II (B) (1) (a) – GMP: Improving water quality in New River Watershed.

Review

The petitioners state that surface mining within the New River watershed is incompatible with the authorizing legislation and GMP of the NRRRA because it will seriously degrade water quality and aquatic habitat in the Big South Fork River and impact outdoor recreation in the NRRRA.

To support this sub-allegation, the petitioners cite the authorizing legislation for the BSF under 16 USC §460ee(h) which requires the Secretary of the Interior, in cooperation with the Secretary of Agriculture, the heads of other Federal departments and agencies involved, and the State of Tennessee, to develop a plan specific to the New River for minimizing siltation and AMD. The petitioners also cite §460ee(i) and the BSF GMP which encourages and requires Federal and State agencies to consult and cooperate in developing plans and programs to protect and enhance water quality within the BSF and to insure that such programs for the protection and enhancement of water quality do not diminish other values that are to be protected. The BSF GMP plan specifically states that “Water quality will be protected and enhanced in cooperation with others, with special emphasis on the New River watershed”.

The petitioners cite previous supporting statements and references which state that the New River is a conduit through which mining impacts are transported to the BSF. The petitioners also reference the Corps’ Comprehensive New River Study and Environmental Assessment which states that turbidity and suspended solids under high flow conditions were reaching the BSF and that the major water quality problem affecting the BSF was associated with turbidity from suspended solids. The study concluded that mining accounted for approximately 51 percent of the sediment discharging from the New River. The study also concluded that sediment loads were 10 times that of an unmined watershed and that AMD from several highly acidic tributaries in the New River watershed pose a threat to the BSF.

The petitioners also reference the BSF WRMP which states that the water resources of the BSF are threatened by current and future intensive land uses. This report indicates that AMD from active and abandoned coal mines is the primary cause of water quality impacts in the NRRRA’s watershed and notes that impacts from sulfates and total dissolved solids are significantly elevated above unmined watersheds. The WRMP also states that sediment in the New River is visually significant at the confluence with Clear

Fork with the New River being notably more turbid and that sediment can remain in the system long after land uses have ceased.

The petitioners conclude, based on these exhibits and supporting statements, that surface mining operations within the New River watershed, would plainly be inconsistent with the Congressional mandate to Federal agencies and the Secretary of the Interior's requirements to cooperate and develop programs and plans to improve water quality in the New River watershed.

Analysis

The original comprehensive plan for the New River required under 16 USC §460ee(h) was to be completed within one year of March 7, 1974, which predates the enactment of SMCRA. The water quality data, including sediment loading, evaluated under the Corps' comprehensive New River Study was collected prior to the enactment of SMCRA and, therefore, does not reflect contemporary mining practices conducted pursuant to the Tennessee Federal Program.

There does not appear to be anything in the authorizing legislation that precludes mining in areas outside the gorge area of the BSF. In fact, it specifically recognizes coal recovery in areas of the BSF from areas of non-Federal mineral outside the gorge. However, there is language regarding conserving and minimizing impacts along with coordinating plans and programs. In addition, the BSF WRMP and the GMP do discuss water quality impacts attributable to mining and other land-use activities. However, the locations and magnitude of these impacts are not clearly identified in the plan nor do they specifically distinguish between pre- and post-SMCRA activities.

None of the relevant management plans cited by the petitioners prohibit surface coal mining operations although they emphasize the importance of water quality protection and coordination while recognizing potential impacts from mining and other land use activities. OSM currently coordinates with all appropriate agencies with jurisdiction related to water quality and protection of fish and aquatic resources as part of the SMCRA-permitting process. Likewise, OSM notifies the National Park Service of all surface coal mining applications it receives for areas that drain to the BSF and the Obed Wild and Scenic River. Mine site visits and permit review activities are coordinated and provide a forum for cooperation and implementation of measures to protect and enhance the water quality within the Big South Fork River and its tributaries.

Determination

Incorporated by reference Sub-allegation II (A) (1) (a) (i-ii).

Sub-allegation – II (B) (1) (b) – GMP: Preserving aquatic habitat.

Review

The petitioners state that mining would significantly degrade water quality and have an adverse impact on the rare mussel and fish species in the NRAA, undermining the BSF GMP and one of the main purposes of its establishment. The petitioners support this statement with cites from the GMP which states that the BSF provides habitat for a world-class mussel assemblage and important habitat for several rare fish species including refuge for species that have been devastated by mining impacts of the past, including “sensitive native indicator species”.

The petitioners cite studies by the USGS (1979) which showed significant suspended sediment and bedload impacts from mining in the New River watershed which is transported into the BSF. The petitioners also reference various studies that state that sediment deposition results in reduction in benthic populations which affects spawning success and recruitment in many aquatic species. The petitioners also state that suspended solids result in increased turbidity, reducing light penetration and decreasing oxygen availability to aquatic life. The petitioners further state that suspended solids also serve as a host for nutrients, fertilizers, pesticides, heavy metals which are harmful to aquatic species.

The petitioners also make numerous general statements relating to AMD causing decreased pH and increased levels of harmful metals. The petitioners state that such changes affect the biological aspects of function and life stage development. Furthermore, the petitioners state that removal of riparian vegetation increases the temperature and eliminates organic detritus that many species rely on for food. Various citations are footnoted in association with these statements.

Finally, the petitioners cite the Corps’ New River Comprehensive Study and Environmental Assessment that states that if suspended sediment is reduced, aquatic life would improve. The petitioners conclude that some improvement has recently begun in the New River because of lack of mining but that new mining would likely reverse this trend. To support these statements, they cite the Ahlstedt study (2003-2004) which states that New River provides a source of silt and coal fines to the BSF and that increased oil/gas/and mining could reverse positive gains observed for mussels and other imperiled species in the BSF.

Analysis

The BSF GMP acknowledges that approximately 25,000 acres of abandoned mine sites exist in the counties adjacent to the BSF, with most draining into the National Area. Based on the review of the evidence, most impacts described by the petitioners are based on studies that are primarily pre-SMCRA in origin (Carey, 1979 and Corps of Engineers, 1982). Other studies contain general research data related to effects of sediment and AMD on life cycle development and habitat alterations which would be applicable to

almost any watershed. Studies by Ahlstedt within the New River watershed document historical impacts and recent improvements in mussel populations within the BSF. Although it states that increases in mining and oil and gas could reverse these improvements, it also recognizes that SMCRA and the BSF have probably attributed to the survival of the existing mussel species.

The petitioners have not demonstrated that contemporary mining practices conducted pursuant to the Tennessee Federal Program would not preserve aquatic habitat and would therefore be incompatible with existing land use plans and programs.

Determination

Incorporated by reference Sub-allegation II (A) (1) (a) (i-ii).

Sub-allegation – II (B) (1) (c) – GMP: Protecting Recreational Value.

Review

The petitioners state that the BSF's primary goal is to provide healthful outdoor recreation and this benefits the local economy citing the BSF GMP as a reference. They provide some estimates on the economic benefits of the BSF on the local economy. They state that recreational uses of BSF would be severely undermined by renewed surface mining in the New River watershed. They state that surface mining impacts on water quality deter hikers from using the BSF as a source of water and that sediment on the boat launch causes the area to be closed frequently because of safety concerns. They also cite the Corps' New River Comprehensive Study which states that if the levels of suspended sediment were reduced, the scenic and recreational values of BSF would improve.

Analysis

It is clearly stated in the GMP and the enabling legislation under 16 USC §460ee that recreational values are to be protected. The supporting statements are general in nature and do not specifically address how contemporary mining practices in the petition area would affect the recreational uses within the BSF. References cited by the petitioners, as stated previously, were developed primarily from data collected prior to the enactment of SMCRA. The sources of sediment that are currently affecting the BSF are largely attributable to abandoned mine lands and other land use activities such as roads and timbering. Likewise, the potability of water in the BSF is affected by numerous influences outside the scope of surface coal mining activities. Therefore, the petitioners have not demonstrated how contemporary mining practices and environmental controls in SMCRA would affect the recreational values of the BSF and that such impacts would make mining within the petition area incompatible with local land use plans or programs.

Determination

OSM has determined that this allegation is incomplete and lacks serious merit because: (1) the supporting evidence is either pre-SMCRA or prior to OSM implementing the Tennessee Federal Program; (2) the petitioners fail to assume that contemporary mining practices required under the Tennessee Federal Program would be followed if the area were to be mined. In the preamble to the 1983 rulemaking OSM clearly stated that “any petition based upon such preventable impacts would have no merit” 48 FR 41312 (September 14, 1983). The submission of reports based on coal mining that occurred prior to regulation under SMCRA violates the regulatory criteria that “allegations of fact and supporting evidence (must assume) that contemporary mining practices required under the Tennessee Federal Program would be followed if the petition area were to be mined” [30 CFR 764.13(b)(1)(v)]; (3) the petition does not include evidence of impacts from surface coal mining operations that are not preventable under the Tennessee Federal Program; and (4) the petitioners do not indicate the specific type of mining operation and/or the location of the operation that would justify the petition area to be declared unsuitable for surface coal mining operations.

Even though there is no specific size limit for a petition area, a basic regulatory criterion is that the petitioner must present “allegations of fact and supporting evidence, covering all lands in the petition area, which tend to establish that the area is unsuitable for all or certain types of surface coal mining operations” [30 CFR 764.13(b)(1)(v)]. Therefore, the large size of the petition area means that it is unlikely that the evidence presented can relate to the criteria for designation throughout the entire petition area. This is consistent with OSM’s comments in the 1983 preamble that “OSM has found that under the previous regulation, very large areas for which no evidence was presented were included in petitions (Alton petition, Tongue River petition), thus requiring significant efforts by OSM and other interested parties on issues of questionable merit, 48 FR 41329 (September 14, 1983).

Sub-allegation – II (B) (2) – Big South Fork’s designation as Outstanding National Resource Water.

Review

The petitioners state that Kentucky’s and Tennessee’s designation of the Big South Fork River as an Outstanding National Resource Water provides anti-degradation controls that are incompatible with mining in the New River watershed. They make several generalized statements without providing any supporting evidence. These include statements that: (1) even complete adherence to regulations, surface mining in the New River watershed would result in sediment loading and AMD that would reach the BSF; (2) cross-ridge mining and mountaintop removal are particularly damaging because they disturb large areas of steep slope terrain that is prone to landslides and high erosion rates; and (3) catastrophic failures of slurry impoundments and underground mine pools pose a direct threat on the BSF because they can discharge low pH water, metals, and other

contaminants directly to surface waters, which can have significant adverse effects on water quality and aquatic communities.

Analysis

The petitioners failed to submit evidence to support this sub-allegation. The petitioners make statements about steep-slope mining, landslides, catastrophic events and AMD, which are addressed under Allegation I. The analyses under Sub-allegation I (A), (B), (C) and (E) are incorporated by reference.

Determination

Incorporated by reference Sub-allegation II (A) (1) (a) (i-ii).

Sub-allegation – II (B) (3) – Critical habitat designation and recovery plan for mussels.

Review

The petitioners allege that surface coal mining operations would be incompatible with the designation and recovery plan adopted for the protection of five endangered mussel species which exist in the BSF and the New River. To support this, the petitioners reference statements from the recovery plan that discusses minimizing and eliminating threats to these species and the reasons for historical declines being metal-rich drainage and sedimentation. The petitioners state that mining within the New River watershed will produce these same types of impacts that have affected the mussels in the past.

Analysis

The petitioners assume that the mussel recovery plan and critical habitat designation are a type of or functionally equivalent to “land use plans or programs”. Development of recovery plans are essentially a part of the FWS’s responsibilities under the Endangered Species Act. Recovery plans are not prepared as a tool to regulate, limit, or control the use(s) of land. As indicated on pg. ii of the plan “Recovery plans delineate reasonable actions that are believed to be required to recover and/or protect listed species.” “Recovery plans do not obligate other parties to undertake specific tasks” As recovery plans do not limit or restrict the use of land and in fact make no mention of acceptable or planned uses for land, they can not reasonably be considered “State or local land use plans or programs.” Likewise, there is a regulatory process in place for Federal actions that provides adequate protection for listed species.

Determination

Incorporated by reference Sub-allegation II (A) (1) (a) (i-ii).

Sub-allegation – II (B) (4) – New River comprehensive study and environmental assessment.

Review

The petitioners allege that surface coal mining operations would “be inconsistent with the New River Comprehensive Study and Environmental Assessment performed by the U.S. Army Corps of Engineers. The petitioners cite several statements from the study which state that reduction in sediment loading would greatly enhance the aquatic environment and enhance the recreational experience within the National Area. The study also stated that AMD and turbidity from suspended solids was the primary problem affecting the National Area. The petitioners conclude that increased surface mining within the New River watershed would be clearly incompatible with the goal of the study which was to improve water quality.

Analysis

Although the Corps’ study was not published until 1982, the data and information upon which the study was based was collected in 1976 and 1977 and thus could not be considered applicable to mining under the Tennessee Federal Program. In the description of the scope of the study (pg. I-1) the document indicates that the New River drainage basin is the primary focus of study, but further states that “the effects of orphan mine lands on the water quality of the Big South Fork is the focal point of this study”. Nowhere in the discussion of the scope of the study was there any indication that this study was intended to influence future land use plans or programs beyond the need to reclaim certain orphan mine lands in the watershed of the BSF. Thus the petitioners’ evidence provides little or no support for the allegation that surface mining in the petition area would be incompatible with existing land use plans or programs or with the New River Comprehensive Study and Environmental Assessment.

Determination

Incorporated by reference Sub-allegation II (A) (1) (a) (i-ii).

Sub-allegation – II (B) (5) – Royal Blue Wildlife Management Area Management Plan.

Review

The petitioners allege that surface coal mining operations would be incompatible with the wildlife management plan for the Royal Blue WMA. The petitioners state that mining would destroy and fragment habitat for the Cerulean Warbler and other migratory songbirds. The petitioners also state that mining will create AMD and sediment which is incompatible with the management plan which documents such occurrences in the watersheds of the management area. In addition, the petitioners state that mining will affect the recreation, safety, and wildlife opportunities which currently exist within the

management area. The petitioners allege that forest removal will affect bird watching sites, while blasting and landslides could potentially affect safety to hikers, hunters, and campers. The petitioners also allege that mining would affect the area streams used as a drinking water supply.

Analysis

As the petitioners indicate, the management plan for the Royal Blue WMA states that “mining has occurred and is envisioned to continue in the future. The management plan also makes clear that mining must be environmentally sound and compatible with the wildlife-centered uses for which the Royal Blue WMA was created.” Therefore, it is specifically within the management plan that mining is not incompatible with the operation of the Royal Blue WMA although it is recognized that it should be conducted in an environmentally sound manner. The water quality impacts identified within the Royal Blue WMA are primarily caused by pre-SMCRA, abandoned mine sites which did not use contemporary mining and reclamation practices. The petitioners have not provided any documentation or evidence that would demonstrate that contemporary mining practices conducted under the Tennessee Federal Program would generate similar results or adversely affect the wildlife management area. Likewise, the petitioners have not provided supporting information which would demonstrate that mining would result in recreational and safety hazards within the management area.

Potential mining-related impacts to the Cerulean Warbler and other song birds were discussed previously in Sub-allegation II (A) (1) (a) (iii) (a-d).

Potential mining-related impacts associated with landslides in steep slope mining areas were discussed previously under Sub-allegation I (B).

Determination

Incorporated by reference Sub-allegation II (B) (1) (c).

Sub-allegation – II (B) (6) – Cumberland Trail State Scenic Trail and Park.

Review

The petitioners allege that surface coal mining operations would be incompatible with the management plan for the Cumberland Trail State Scenic Trail and Park. The petitioners allege that noise, water and air pollution, blasting, and landslides would significantly diminish the esthetic, recreational, and historic values of the Trail. The petitioners cite the existence of landslides in adjacent areas as their supporting evidence.

Analysis

The petitioners have not provided evidence to support the allegations relative to the impacts to the Cumberland Trail other than general statements. In particular, the

petitioners offer no evidence why the park is not protected from adverse impacts afforded under 30 CFR 761.11 (c) and (f) and 761.17 (d). Should it be determined that surface coal mining operations will adversely affect a publicly owned park or historic place, joint approval with the Division of Parks, Tennessee Department of Environment and Conservation (TDEC) is required.

Determination

Incorporated by reference Sub-allegation II (A) (3).

Sub-allegation – II (B) (7) – Tennessee’s comprehensive wildlife conservation strategy.

Review

The petitioners allege that surface coal mining operations are incompatible with Tennessee’s “Comprehensive Wildlife Conservation Strategy” (CWCS) adopted in 2005 by TWRA. This study ranks habitat value throughout the State and it assesses priority problems for the greatest conservation need species. The petition area is classified as “very high importance” to the first tier of terrestrial conservation need species. The plan recognizes “much of the damage to the Cumberland River Drainage region has come from historic mining and from abandoned mines that are leaching acidic water into streams.” The petitioners then indicate the strategy for Tennessee to address these issues is to: (1) propose State legislation urging OSM to designate critical units of aquatic, subterranean, and terrestrial habitats as unsuitable for mining; and (2) encourage OSM to designate critical units of aquatic, subterranean, and terrestrial habitats as unsuitable for mining under current Federal policy guidelines. The petitioner’s believe that declaring the petition area as unsuitable for surface coal mining operations would agree with this conservation strategy.

Analysis

The CWCS is a state-wide plan that addresses all activities that could impact the State’s terrestrial, aquatic, and subterranean species. The plan discusses the different habitat areas of the State, identifies activities that would threaten species within these areas, and list a number of proposed alternatives to address those activities and their related impacts. Impacts related to coal mining operations is one of twenty-six activities that are listed in Tables 62 and 63 which address terrestrial and aquatic species. Table 65 lists the proposed actions to address these activities. Under “Statewide Specific Action Description” the list includes proposed actions to address impacts from coal mining operations. The proposed actions are: “(1) Propose legislation to designate priority habitats as unsuitable for mining; and (2) Encourage OSM to designate priority habitats as lands unsuitable for mining.” The petitioners’ statement that the State’s strategy is to “propose legislation urging OSM to designate critical units of aquatic, subterranean, and terrestrial habitats as unsuitable for mining” is a misstatement of what the CWCS proposes. As OSM cited from Table 65, the recommendation is to “propose legislation to

designate priority habitats as unsuitable for mining”. If the State adopted legislation to achieve this, then the State agency with the authority to implement the legislation could apply the unsuitability criteria to the planning process and designate lands unsuitable, in a similar manner as the Bureau of Land Management applies the unsuitability criteria to Federal lands under the agency’s management. As for the second recommendation, TWRA would have to petition OSM to designate certain lands as unsuitable for surface coal mining operations.

Determination

Incorporated by reference Sub-allegation II (A) (1) (a) (i-ii).

Sub-allegation – II (C) – Surface coal mining operations in the petition area would affect renewable resource lands, resulting in a substantial loss or reduction of long-range productivity of a public water supply.

Review

The petitioners allege that surface coal mining operations would adversely affect the Huntsville Utility District’s use of the New River as a public water source. The petitioners state that the previously cited data and information under other allegations demonstrated that surface coal mining operations would alter the chemical and physical characteristics of the water and affect the water quality resulting in increased treatment costs to the utility. They also contend that the utility is continually growing and its dependence on the New River will only increase in the future. Their primary supporting evidence for this allegation is a letter from the Utility District manager to OSM (exhibit 26) expressing concern over further degradation to the New River and a copy of the public water system data sheet (exhibit 27) showing increased demand for the Utility’s water.

The petitioners further allege that failure of slurry impoundments could result in substantial loss or reduction of long-range productivity of Huntsville’s water supply as demonstrated by various slurry impoundment failures in Kentucky and Virginia. They provide references to slurry impoundment failures and safety legislation resulting from such failures in Kentucky and Virginia.

Analysis

The Huntsville Utility District’s New River intake is rated as having a “moderate” susceptibility to upstream influences including oil, gas, mining, and other land use or industrial activities by the Tennessee Division of Water Supply’s source water assessment. However, water supply intakes in streams draining mining areas are common in the Appalachian coalfield and are typically located and operated downstream from active and abandoned surface coal mining operations without adverse operational problems. Tennessee has approximately 20 such intakes within the coalfield and numerous other intakes which are located outside of the coalfield but are supplied by

streams which drain from surface mined watersheds within the coalfield. Several of these surface water intakes in Tennessee are actually located in abandoned mine pits which include the Flat Creek intake for the Huntsville Utility District (the primary water source for this utility) and the intake for the Jellico Water Department. Likewise, the Huntsville Utility District operated the New River intakes between 1985 and 1992 without reporting any mining-related affect on their ability to treat the water despite the significantly greater mining activity which was occurring during this period. Therefore, it cannot be concluded based on the information provided by the petitioners that surface coal mining would affect renewable resource lands in such a way that it would result in a substantial loss or reduction to a public water supply.

Likewise, the petitioners have not demonstrated that surface coal mining operations using contemporary mining practices would result in increased levels of iron, manganese, and turbidity at levels that would affect the ability of the Huntsville Utility District to treat water. SMCRA permits would not be issued if the proposed operation would adversely affect the hydrologic balance outside the permit area. New River is currently classified by TDEC as a domestic water supply which requires that water quality in the stream be maintained at a level which would not result in pollutants being elevated to concentrations which could not be readily removed through conventional water treatment technologies. Statements by the petitioners regarding catastrophic failure of slurry impoundments are based on the assumption that either the one existing impoundment within the petition area will fail or that future impoundments will be permitted and that such future permitted impoundments will fail. The petitioners must provide evidence that contemporary mining practices conducted pursuant to the Tennessee Federal Program would not afford adequate protection to the Huntsville Utility District.

Determination

Incorporated by reference Sub-allegation I (C).

Sub-allegation – II (D) – Surface mining would affect natural hazard lands in a way that could substantially endanger life and property.

Review

The petitioners allege that the petition area should be considered as a natural hazard land as defined under 30 CFR 762.5. The petitioners also state that surface coal mining operations pose a threat to the health, safety, welfare of people, property and the environment. The petitioners state that reclaimed steep slopes in the petition area are likely to cause landslides and that the existence of abandoned mine sites (both surface and underground) create a greater likelihood for the failure of coal slurry impoundments or interception of underground mine workings. The petitioners contend that such failures could release contaminated material that destroys property and threatens public safety and the environment.

All of the specific supporting statements, exhibits, and reference materials used by the petitioners in this allegation are identical to the material provided and reviewed under Sub-allegations I (B) and I (C).

Analysis

The analyses under Sub-allegations I (B) and (C) are incorporated by reference.

Determination

Incorporated by reference Sub-allegation I (C).

Allegation III – Surface coal mining in the petition area is inconsistent with the protections afforded to the NRRA under Section 522(e)(3) as a “publicly owned park”.

Section 522(a)(2) and (3) of SMCRA specifies the five criteria under which OSM must or may designate an area unsuitable for surface coal mining operations. Whereas, Section 522(e) identifies Congressionally-designated areas for which no surface coal mining operations shall be permitted, subject to valid existing rights. The petitioners have inappropriately cited Section 522(e)(3) and therefore, OSM dismissed considering this allegation during the completeness review.

Categories of Information

Categories of information needed to make the petition complete, are numbered in the Determination section for each allegation or sub-allegation.