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Buckhorn Access Project

Final
Environmental Impact Statement
Volume 2: Appendices C-G

Tonasket Ranger District
Okanogan and Wenatchee National Forests
1 West Winesap
Tonasket, WA 98855

Marias Creek Road

Volume 2
Appendices C-G
Final Environmental Impact Statement
Buckhorn Access Project
Okanogan County, WA
January 2007

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Abstract: The Buckhorn Access Project final Environmental Impact Statement describes the purpose and need for an access project over and on National Forest System lands, the proposed action, issues raised regarding the proposal, alternatives to the proposed action, mitigation and monitoring measures, affected resources and effects to those resources.
The Responsible Official has identified Alternative B1, with modifications, as the preferred alternative, which will allow Crown Resources/Kinross Gold Corporations to utilize the Marias Creek route to construct and reconstruct roads, build a pipeline to a water infiltration gallery and water augmentation sites, construct a project fence, drill wells, construct livestock management features (fences, cattle guards, gates, well, water troughs) and construct utilities across National Forest System lands to facilitate Crown's plan to mine an ore body on their private lands that are surrounded by Federal lands. Alternative B1 will reconstruct approximately 5.2 miles of existing road and construct approximately 1.5 miles of new road, and would close approximately 2.6 miles of existing road in Bear Trap Canyon. Other alternatives considered a variation on Alternative B1, or other access routes up to the private lands. All alternatives include the project fence, water infiltration gallery and pipeline, water augmentation sites, monitoring well and water monitoring, wildlife guzzlers and utility construction. Alternative B considers the same Marias Creek route as Alternative B1, but has fewer mitigation measures. Alternative C considers the Nicholson Creek route, with 12.4 miles of reconstruction and 0.6 miles of new road construction. Alternative D considers the Cow Camp route, with 2.1 miles of reconstruction and 0.6 miles of new road construction. None of the other alternatives include closures in Bear Trap Canyon. Each alternative also has different mixes of mitigation measures. Comments on the draft EIS, and its preceding preliminary EA were considered and resulted in alternative and analysis modifications presented in the final EIS. Response to comments on the draft EIS and preliminary EA are located in Appendix F. Changes between draft and final EIS are highlighted at the end of Chapter I of the final EIS.

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Appendix C
References
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References are ordered by their resource appearance in the EIS.

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Appendix D
Water Monitoring
Buckhorn Access Project

Buckhorn Road Impact Monitoring
(Toroda Creek road generated turbidity levels from Marias Creek)

Background: Road related activities, construction and reconstruction activities, maintenance, and road prism overland flow, have been identified as a major source of stream sedimentation considering all forest management activities. Roads closest to streams or have stream crossings of roads are the most likely to contribute to elevated levels of stream sedimentation. Water turbidity is an indicator of stream sedimentation and can be measured in water samples easily. Turbidity has a state water quality criterion of 5 NTUs (see Buckhorn Water Resource report). Stream sediment is likely to be transported from Marias Creek to Toroda Creek during some periods following road work in Marias Creek.

Problem: Approximately 2.8 miles of constructed and reconstructed road lies along Marias Creek in the RHCA (within 300 feet of the stream or closer) and has several stream crossings of Marias Creek or tributaries to Marias Creek. Road generated stream sedimentation from Marias Creek will eventually get to Toroda Creek. Water turbidity in Toroda Creek must also meet turbidity state water quality criterion, as a result of the road work in Marias Creek.

Objective: Determine if water turbidity levels in Toroda Creek meets WA state water quality criterion during the construction and reconstruction of the Marias Creek Road for up to five years following the road work for the Plan of Operations and Road Use Permit.

Past Work: No known past turbidity information is available in Toroda Creek at the confluence with Marias Creek.

Collected Data: Water samples will be processed to determine turbidity values in NTUs.

Turbidity information will be determined for each sample the first year of monitoring. During the second and third years of monitoring, samples will be analyzed for turbidity once every seven days, unless visual observation of the collected samples or precipitation events of .25 inches or more in a 24-hour period occurs at the site or at a nearby weather station, such as Republic, Tonasket or Omak. Samples immediately proceeding, during and immediately following the precipitation will be processed to determine turbidity. Timing will apply to both stations in Toroda Creek (monitoring locations above).

Sampling Locations: The “above” sampling location will be in Toroda Creek in Section 2 or 11, Township 39 North, Range 31 East, W.M. (just above the confluence of Toroda Creek and Marias Creek). The “below” sampling location will be located on Toroda Creek in Section 2, Township 39 North, Range 31 East or Section 36, Township 40 North, Range 31 East, W.M. or other suitable locations (just below the confluence of Toroda Creek and Marias Creek after a complete mixing occurs).

Sampling Procedure: Collect daily water samples with an automatic water sampler. Samples will be individual samples (not composite samples in a single collection container).

Sampling Frequency: Samples will be collected daily during daytime in mid afternoon.

Sampling would begin when the construction and reconstruction of the Marias Creek Road begins.

Data Analysis: Collected information will be analyzed used a student t test to determine if there is a significant difference at the .05 probability level of the in Toroda Creek turbidity levels above and below the confluence with Marias Creek.

Quality Control: Sample collection methods will follow the WA DOE procedures currently used to collect background water samples in Marias Creek.

Responsibility for Monitoring: The Project Proponent will be responsible for setting up the monitoring equipment, keeping it in operating condition and collecting the samples on a regular basis.

Report Completion, Location and Responsibility: Collected information will be sent to the Forest Service monthly. Information will be provided in an EXCEL spreadsheet, and will contain date of sample collection and turbidity.

Costs: The costs will be borne by the Project Proponent and will include the cost of the continuous water collection and stage recording equipment, site visits to collect the samples or maintain the equipment and determining the turbidity values for the collected water samples. Costs are expected to be the highest the first year, because of the equipment purchases and processing of all water samples for turbidity. Costs are expected to be much lower the second through fifth years because there will likely be no equipment purchases and substantially fewer water samples processed for turbidity.

Trigger: If the turbidity state water quality criterion is exceeded, field examination will be started as soon as practicable to determine where the source of increased turbidity is located. Actions to repair the source of the sediment creating the turbidity will begin as soon as possible (through FS permit administration enforcement procedures).

Buckhorn Road Impact Monitoring
(Marias Creek road generated magnesium levels)

Background: Road use and maintenance activities may contribute to elevated magnesium,. Roads closest to streams or having stream crossings are the most likely to contribute to elevated levels of magnesium and sodium. Magnesium not have state water quality criteria. There is no drinking water criterion for magnesium.

Problem: Approximately 2.8 miles of constructed and reconstructed road lies along Marias Creek in the RHCA (within 300 feet of the stream or closer) and there are several stream crossings of Marias Creek or tributaries to Marias Creek. Road maintenance includes application of magnesium chloride for dust abatement during the summer and sand and salt applications during the winter for traction aid on snowy and icy roads. Magnesium is soluble and are likely to eventually be transported to Marias Creek.

Objective: Determine the trend of magnesium levels in Marias Creek during the next five years of the Plan of Operations and Commercial Road Use Permit.

Past Work: Recently collected water samples from Marias Creek shows magnesium averages 13 ppm, varying from 7-17 ppm.

Collected Data: Water samples will be processed to determine values in ppm. Collection and testing will meet the same standards as presently used for water monitoring at other locations.

Sampling Locations: The "above" sampling location will be in Marias Creek in Section 31, Township 40 North, Range 31 East, W.M., above Forest Road 3550 (just above the upper crossing of Marias Creek, SW-2). A second sample location will be in Marias Creek in Section 4, Township 39 North, Range 31 East, W.M. just prior to Bat Canyon Creek entering Marias Creek. The "lower" sampling location will be located in Marias Creek in Section 2, Township 39 North, Range 31 East, W.M., near where Marias Creek crosses the Forest boundary but above the area where Marias Creek flows sub-surface most of the year.

Sampling Procedure: Water samples will be collected manually at the selected locations following procedures established by the WA DOE for collecting and analyzing background water quality samples in Marias Creek.

Sampling Frequency and duration: Samples will be collected every three months during the year when the stream is flowing for a period of at least 5 years.

Sampling would begin two months prior to the construction and reconstruction of the Marias Creek Road.

Data Analysis: Collected information will be analyzed by plotting the collected data in a time series in an EXCEL spreadsheet for each sample location. An analysis of covariance will be performed on the slope of each regression line slope to determine if the slopes are the same or different at the .1 probability level. Analysis of the data will be done by the Forest Service.

Quality Control: Sample collection methods will follow the WA DOE procedures currently used to collect background water samples in Marias Creek.

Responsibility for Monitoring: The Proponent will be responsible for conducting all monitoring.

Report Completion, Location, and Responsibility: The Proponent will be responsible for providing collected data in a EXCEL spreadsheet containing the sample concentration of magnesium and the date the sample was collected. A final report will be submitted in five years, with informal written interim reports annually.

Costs: All costs will be borne by the Proponent.

Trigger: If the trend to higher magnesium levels in the affected section of Marias Creek exceeds the trend of the salts above the road in the RHCA field examination will be begin as soon as practicable to determine where the source of increased salts are located. Actions to change the application of the salts will begin as soon as possible (through FS permit administration enforcement procedures).

Buckhorn Road Turbidity Monitoring
(Marias Creek road generated turbidity)

Background: Road related activities, construction and reconstruction activities, maintenance, and road prism overland flow, have been identified as a major source of stream sedimentation considering all forest management activities. Roads closest to streams or have stream crossings of roads are the most likely to contribute to elevated levels of stream sedimentation. Water turbidity is an indicator of stream sedimentation and can be measured in water samples easily. Turbidity has a state water quality criterion of 5 NTUs above background if background is less than 50 NTUs. Otherwise, less than 10% increase if background is grater than 50 NTUs. (see Buckhorn Water Resource report).

Problem: Approximately 2.8 miles of constructed and reconstructed road lies along Marias Creek in the RHCA (within 300 feet of the stream or closer) and has several stream crossings of Marias Creek or tributaries to Marias Creek. The first three years following construction or reconstruction have the greatest potential to increase turbidity levels the most, with the first year following road work generating 80-90% of the accelerated sediment and having the most impact on turbidity levels in Marias Creek.

Objective: Determine if WA State Water quality criterion for turbidity are met in Marias Creek during and three years following road reconstruction and construction beginning in June 2006 as allowed in the Plan of Operations and Road Use Permit.

Past Work: No past turbidity work has been done in Marias Creek.

Collected Data: Water samples will be processed to determine turbidity values in NTUs. Discharge at the upper and lower sampling sites will also be collected to determine when streams flows increased in relation to precipitation events.

Sampling Locations: The “above” sampling location will be in Marias Creek in Section 31, Township 40 North, Range 31 East, W.M., above Forest Road 3550 (just above the upper crossing of Marias Creek). A second sample location will be in Marias Creek in Section 4, Township 39 North, Range 31 East, W.M. just prior to Bat Canyon Creek entering Marias Creek. The “lower” sampling location will be located in Marias Creek in Section 2, Township 39 North, Range 31 East, W.M., near where Marias Creek crosses the Forest boundary but above the area where Marias Creek flows sub-surface most of the year).

Sampling Procedure: Collect daily water samples with an automatic water sampler. Samples will be individual samples (not composite samples in a single collection container). Discharge will collected with a portable water stage recorder at the above and below site. Stream discharge data would be collected each time the automatic water samplers were emptied and refilled with empty bottles. A rating curve would be developed at each location to estimate discharge.

Sampling Frequency: Samples will be collected daily during daytime in mid afternoon throughout the period when the automatic samplers do not require heating to keep the samplers operating. Sampling will occur for at least five years.

Sampling would begin one month prior to the construction and reconstruction of the Marias Creek Road.

Data Analysis: Collected information will be analyzed used a student t test to determine if there is a significant difference at the .05 probability level of the above station to the stations downstream for turbidity levels.

Turbidity information will be compared to stream discharge information to determine if changes in turbidity are related to changes in stream flow. This will be especially true during years two and three of the sampling.

Turbidity information will be determined for each sample the first year of monitoring. During the second through fifth years of monitoring, samples will be analyzed for turbidity once every seven days, unless visual observation of the collected samples or precipitation events of .25 inches or more in a 24-hour period occurs at the Buckhorn site. Samples immediately proceeding, during and immediately following the precipitation will be processed to determine turbidity. Timing will apply to all stations in Marias Creek (monitoring locations above).

Quality Control: Sample collection methods will follow the WA DOE procedures currently used to collect background water samples in Marias Creek. Sampling equipment will be maintained to the manufacturer's specifications.

Responsibility for Monitoring: The Project Proponent will be responsible for setting up the monitoring equipment, keeping it in operating condition, collecting the samples on a regular basis.

Report Completion, Location and Responsibility: Collected information will be sent to the Forest Service monthly via e-mail or CD. Information will be provided in an EXCEL spreadsheet, and will contain date of sample collection, discharge (measured and from the developed rating table), daily water level stage (down to one-tenth of a foot) and turbidity. The rating table will also be provided to the Forest Service.

Costs: The costs will be borne by the Project Proponent and will include the cost of the continuous water collection and stage recording equipment, site visits to collect the samples or maintain the equipment and determining the turbidity values for the collected water samples. Costs are expected to be the highest the first year, because of the equipment purchases and processing of all water samples for turbidity. Costs are expected to be much lower the second and third years because there will likely be no equipment purchases and substantially fewer water samples processed for turbidity.

Trigger: If the turbidity state water quality criterion is exceeded, field examination will be started as soon as practicable to determine where the source of increased turbidity is located. Actions to repair the source of the turbidity will begin as soon as possible (through FS permit administration enforcement procedures).

Buckhorn Road Erosion Stabilization Monitoring
(Marias Creek Silt Fence Monitoring)

Background: Road related activities, construction and reconstruction activities, maintenance, and road prism overland flow, have been identified as a major source of stream sedimentation considering all forest management activities. Roads closest to streams or have stream crossings of roads are the most likely to contribute to elevated levels of stream sedimentation. It is difficult to get effective total ground cover immediately following road construction and reconstruction, so other methods of containment are being used to prevent or minimize the sediment movement into the stream. Techniques designed to prevent sediment from reaching Marias Creek include placing a silt fence, re-enforced with straw bales at the outlet of each relief culvert which is located inside the RHCA. A rock apron will be placed at the outlet of each culvert to minimize erosion and dissipate sediment. A silt fence will be placed below any road fill located within 100 feet of Marias Creek. Waddles will be placed in the road ditch to dissipate energy and trap sediment.

Problem: Approximately 2.8 miles of constructed and reconstructed road lies along Marias Creek in the RHCA (within 300 feet of the stream or closer) and has several stream crossings of Marias Creek or tributaries to Marias Creek and numerous relief culverts are drained toward the stream. The first three years following construction or reconstruction have the greatest potential for accelerated sediment movement into the stream. Keeping road generated sediment from reaching the stream is the most effective way to protect water quality. The mitigation is effective when in good operating condition. Frequent monitoring, evaluation and maintenance of the structures is required for effective mitigation.

Some road fill locations are located within five feet of the stream. The erosion control structures will be placed closer to the road fill, and the sediment capacity will be reduced. Structures at these locations will need to be monitored more frequently and maintained more quickly than other protection structures.

Longer cut and fill slopes are more difficult to get vegetation re-established. These slopes may need to treated or covered with erosion control materials more that one time to have cover that protects the soils. Fill slopes longer than 30 feet long and cut slopes longer than 35 feet should be monitored more frequently for adequate vegetative cover.

Objective: Determine if the erosion control structures are functioning properly, located in the right location and are in good operating condition (or need maintenance).

Past Work: No past work has been done because there is no construction or reconstruction work completed.

Collected Data: Information collected will be based on visual observation of each relief culvert and sediment control structure, road ditch, fill and cut slope cover, and the entire length of silt fence where the road fill is within 100 feet of the stream. Comparison with water quality monitoring for salts and turbidity may also be used to help evaluate the effectiveness of preventing sediment from reaching the stream.

Sampling Locations: The sampling locations will be the length of road inside the RHCA along Marias Creek, cut slopes over 35 feet long and fill slopes over 30 feet long.

Sampling Procedure: Field surveys will be made visually and a written record will be kept on all findings.

Sampling Frequency: If the surveys are done in Marias Creek, they would be completed every three months and immediately following any substantial precipitation event (defined as more than .25 inches in 24 hours at the Buckhorn precipitation station) or where there is obvious evidence of sediment movement from road fills, cut slopes or ditch erosion that would accumulate at the erosion control structures. If the surveys are done in Nicholson Creek, they would be done weekly during the domestic livestock grazing period (to ensure silt fences and any straw bales are in good operating condition), and following a substantial precipitation event.

In Marias Creek, where the road fill is closer than ten feet from the stream, surveys would be done monthly and following precipitation events of .25 inches or more at the Buckhorn precipitation station in a 24 hour period. In Nicholson Creek, surveys following precipitation events of .25 inches at the Buckhorn precipitation station would be done. The weekly surveys would continue in Nicholson Creek.

Sampling would begin when the erosion control structures and protection measures were installed.

Data Analysis: Collected information will determine if and where follow-up work is required (new structures installed or maintenance of existing structures).

Quality Control: Information collection methods will be reviewed and approved by the Forest Service engineer and hydrologist.

Responsibility for Monitoring: The Project Proponent will be responsible for collecting the information on a regular basis.

Report Completion, Location and Responsibility: Collected information will be sent to the Forest Service quarterly. Information will be provided on field sheets.

Costs: The costs will be borne by the Project Proponent and will include work force, transportation and compilation of the field surveys. Costs may be lower in following years as cut slopes, fill slopes and the road ditch stabilize.

Trigger: If the structures and measures are not functioning, require maintenance or are not in the proper location, the project proponent will take action to repair, move or supplement the sediment reduction measures within 7 days of the survey.

Buckhorn Road Impact Monitoring
(Marias Creek road generated chloride levels)

Background: Road maintenance activities may contribute to elevated chloride levels. Roads closest to streams or have stream crossings of roads are the most likely to contribute to elevated levels of chlorides. Chloride levels can be measured in water samples easily. Chloride has a state water quality criterion of 230 parts per million (see Buckhorn Water Resource report).

Problem: Approximately 2.8 miles of constructed and reconstructed road lies along Marias Creek in the RHCA (within 300 feet of the stream or closer) and has several stream crossings of Marias Creek or tributaries to Marias Creek. Road maintenance includes application of magnesium chloride for dust abatement during the summer and sand and salt applications during the winter for traction aid on snowy and icy roads. These chlorides are soluble and are likely to eventually get to Marias Creek.

Objective: Determine if water chloride levels in Marias Creek meets WA state water quality criterion of 230 ppm during the maintenance and use of the Marias Creek Road during the life of the Plan of Operations and Road Use Permit.

Past Work: The measured range in past baseline surface samples for chlorides at SW-2 has been <1 – 9 mg/l with a mean value of 2 (Crown Jewel Mine, 1997).

Collected Data: Water samples will be processed to determine chloride values in ppm. Collection and testing will meet the same criterion as presently used for water monitoring at other locations.

Sampling Locations: The "above" sampling location will be in Marias Creek in Section 31, Township 40 North, Range 31 East, W.M., above Forest Road 3550 (just above the upper crossing of Marias Creek, SW-2). A second sample location will be in Marias Creek in Section 4, Township 39 North, Range 31 East, W.M. just prior to Bat Canyon Creek entering Marias Creek. The "lower" sampling location will be located in Marias Creek in Section 2, Township 39 North, Range 31 East, W.M., near where Marias Creek crosses the Forest boundary but above the area where Marias Creek flows sub-surface most of the year.

Sampling Procedure: Water samples will be collected manually at the selected location following procedures established by the WA DOE for collecting background water quality samples in Marias Creek.

Sampling Frequency:
Samples will be collected every two weeks during the year. Samples will be taken from the turbidity water samples immediately following intense rain storms of more than .4 inches per 24 hours if manual sampling didn't occur during that time. P

Sampling would begin two months prior to the construction and reconstruction of the Marias Creek Road.

Data Analysis: Collected information will be analyzed used a student “t” test to determine if there is a significant difference at the .05 probability level of the Marias Creek chloride levels.

Quality Control: Sample collection methods will follow the WA DOE procedures currently used to collect background water samples in Marias Creek.

Responsibility for Monitoring: The Proponent will be responsible for conducting all monitoring.

Report Completion, Location, and Responsibility: The Proponent will be responsible for submitting collected information. The information of chloride levels in ppm and the date when the sample was collected will be submitted in an EXCEL spreadsheet. Information will be submitted annually.

Costs: All costs will be borne by the Proponent, and would consist of personnel costs and transportation to collect each sample laboratory processing of the sample and preparing the information for submission to the Forest Service.

Trigger: If the chloride state water quality criterion is exceeded, field examination will be started as soon as practicable to determine where the source of increased chloride is located. Actions to adjust the application of the chloride compounds will begin as soon as possible (through FS permit administration enforcement procedures).

Appendix E
Distribution List for FEIS
Buckhorn Access Project

Postcards were mailed to people who had provided comments on the preliminary EA and DEIS asking whether they wanted a paper, CD or web copy of the final EIS. The following individuals, organizations, agencies, or companies received either a summary, or full copies of the final EIS via CD, paper copy, or the web:

Organization/Company	LAST NAME	FIRST NAME	Summary, Website, CD or Paper Copy
	Accord	Jack	Summary
	Ackerson	Lori & Bill	Summary
The Doe Run Company	Adams	Glen	Website
	Adams	Wayne & Cleta	CD
	Albrecht	Jack	Summary
	Alexander	Julie	Summary
Republic Chamber of Commerce	Anderson	Jerri	Summary
	Andrews	Eli	Summary
	Ankron	James	Website
	Anthes	Russel & Steve	CD
Colville Indian Env. Protection Alliance	Aripa	Barbara	Website
	August	P. St.	Summary
Hecla Mining Company	Baker, Jr.	Phillips	Summary
	Baldwin	Marion and Ida	Paper
Okanogan County Citizens Coalition	Barnes	Jerry	Summary
Boart Longyear Company	Barnwell	Steve	Website
	Beardslee	Larry	Website
	Belzer	Patrice	Paper
	Bertrand	Dan & Claudine	Summary
Office of the General Counsel, USDA	McLam Black	Val J.	Paper
Washington State House of Representatives	Blake	Brian	Summary
U.R.S Corporation	Blakeshee	Julie	CD
Ferry County Commissioners	Blankenship	Mike	Summary
	Brannon	Jim & Wanda	Website
	Bray	Billie Jo	CD
	Bray	Jonnie	Website
	Brazle	Warren F.	Summary
Association Of Washington Business	Brunell	Don C	Summary
Washington State House of Representatives	Buck	Jim	CD
	Buddington	Andrew	Summary
Burk GeoConsult	Burk	Bob	Website
	Butler	Ben	Website
	Butler	Sheral	Website
	Butterfield	Paul	Website
Ash Grove Cement Co.	Calder	Craig	Website
The Chronicle	Camp	Dee	Summary
	Carter	Dorothy E.	Summary
	Caton	Tomas	Summary
	Certain	J.D.	Summary
Chamberlin & Associates	Chamberlin	Paul	Summary

	Charlson	Rick & Carol	CD
Oroville Chamber of Commerce	Chinn	Raleigh	Summary
	Christensen	Greg	Website
PUD #1 of Ferry County	Ciais	Kathryn L.	Summary
	Clitherow	Peter	Website
	Cochran	Carleen	Summary
	Conner	Michelle	Summary
Confederated Tribes of the Colville Reservation	Cooley	Skye	Summary
Coeur d'Alenes Company	Coulson	Jimmie	Website
Couse's Sanitation and Recycle	Couse	Cliff and Shirley	CD
City of Republic, Mayor	Couse	Shirley	Summary
	Crampton	Susan	Website
	Cribby	Paul	Website
	Crist	Dulane	Website
	Cummins	Joseph	CD
Dumplingdale Organic Farm	Cursons	Debi & Dave	Summary
	Darling	Dale & Pat	Summary
Kettle River Operations	Darnton	Byron	Website
Ferry County Noxious Weed Board	Davidson	Jim	Summary
PCE Pacific, Inc.	Davis	Scott	CD
Crown Resources/Kinross	Davisson	Jody	Summary
WA State Environmental Council	Donho	Janine	CD
	Donley	Elaine & Dan	Website
The Chronicle	Donner	Roberta	Summary
	Dunham	Don E.	Summary
Good Seed Co,	Dunkelberger	Harris	Summary
	Edwards	Craig	Summary
M-N-M Sanitary	Ellingson	Michael	Summary
	Ellison	Richard	CD
	Engel	Deja	Summary
	Engel	Mary & Reed	Website
	Engstrom	Karin	CD
	Enzensperger	Joseph	Summary
Crown Resources/Kinross	Eppers	Kevin	Website
Corps of Engineers	Erkel	Tim R	CD
	Evans	Susan	Summary
E. J. Bartells	Farnsworth	Harold	Summary
	Farnun	Katrina	Summary
	Finkle	Sam	Summary
	Flynn	Roger	Paper
Blue Ribbon Coalition	Foster	Richard	CD
	Frey	Carla	Summary
	Funk	Bob & Mary	Summary
	Gensil	Michael	Paper
	George	Peter (Sonny)	Website
Earthworks/Mineral Policy Center	Gestring	Bonnie	Summary
	Gillespie	Geri	CD
Hecla Mining Co.	Glader	Paul	Summary
	Gladfelter	Mike	Website
	Goede	Marva	Website
	Goytowski	Ervin	Summary
	Greder	Nova	Summary
	Green	Gerald	Summary

	Green	Stuart	Summary
	Groncznack	Robert P	CD
Hahman & Associates Geological Consultants	Hahman	W. Richard	Summary
Okanogan Resource Council	Hahn	Bruce	Summary
Constellation Copper Corporation	Hahn	Gregory	Summary
	Hallauer	Wilbur	Summary
Washington State Deptartment of Ecology	Hallinan	Patrice	Summary
	Halsey	Dr. Yadviga D.	Website
	Halsted	Myrtle	Website
Hamilton Farm Equipment Center	Hamilton	Greg	Summary
Formation Capital Corporation	Hamilton	Jerry	Summary
	Harpur	Bill	Summary
	Harvey	Greg	Summary
	Herschbach	Steve	Summary
Colville Tribal Archaeologist	Hess	Sean	Paper
	Hicks	G.W.	Summary
	Hightower	Ken & Jae	Summary
Common Sense Resource League	Hirst	Robert C.	Summary
	Hobson	Richard	Website
	Howell	Roy	Summary
	Hoyte	Eric W.	Website
	Hurtz	John	Summary
	Ianniello	Su	Summary
Washington Department of Fish & Wildlife	Iten	Connie	Summary
Law Office of Cleveland O. Ives	Ives	Cleveland	Summary
Jacobsen Transportation	Jacobsen	Kirk	CD
	Jensen	Elmer	Summary
B.C. Ministry of Environment	Jensen	Vic	Summary
U.S. Stone LLC.	Jewett	Robert	Summary
	Jockisch	Danny & Charlotte	Summary
D & D Tire	Johnson	Britt	Website
	Johnson	Carolyn	Summary
	Johnson	Craig	Summary
	Johnson	E. A.	Website
	Johnson	Geri Ann	Website
	Johnson	Grady	Summary
(Silvermoon)	Johnson	P. A.	Paper
	Johnson	Tom & Sherry	Paper
	Jones	Laura	Summary
	Jones	Paul	Paper
	Kaufman	M. A.	Website
	Kidwell	Samuel	Summary
Western States Equipment Company	King	J.D.	Summary
Okanogan Highlands Alliance	Kliegman	David	Paper/CD
Okanogan Highlands News	Kocol	Jeff	Summary
Washington State House of Representatives	Kretz	Joel	Paper
Kettle River Pottery	Kroupa	Chris	Summary
	Kurtz	John	Paper
	Kurtz	Monte	Summary
Constellation Copper Corporation	Labate	John	Website
	Labriola	Madeline	Website
	Lacquiee	Sally	Website
Kinross Gold Corporation	Leep	Richard	Website

	Levensky	Mark	Summary
Washington Department of Ecology	Lewis	Jeff	Paper, CD
Confederated Tribes of the Colville Reservation	Louie	Deb	Summary
	Love	Laura	Website
Lyntek Incorporated	Lynn	Nicholas	Summary
	MacLean	Bruce	CD
	Madrigal	Vivian	Summary
	Maeyawa		Summary
Confederated Tribes of the Colville Reservation	Marchand	Mike	Paper
	Maronick	James	Website
	Massimillar	Anthony & Janett	Summary
Washington Environmental Council	Mayer	Michael	Website
	Mazzetti	Michael "Buffalo"	Paper
	McDougal	Mark	Summary
	McFarland	Cole	Website
McGuire Bearing Company	McGuire	Timothy	Website
U.S. House of Representatives	McMorris	Cathy	CD, Paper
	McNamara	Jessica	Summary
Environmental Protection Agency	McWhorter	Lynne	Summary
	Meier	Michelle B.	Website
Cash Merritt Trucking	Merritt	Cash	CD
North Central Petroleum, Inc.	Michelsen	Don	Summary
Ferry County Commissioners	Miller	Commissioner	Summary
	Moore	James	Summary
	Moores	Alan	Website
Geomatrix Consultants Inc.	Morrice	Joe	Website
	Morris	Arvia E.	Website
Washington State Senate	Morton	Bob	Summary
	Mote	Karl	Summary
Washington Department of Fish and Wildlife	Mudd	David	CD, Summary
	Muerhoff	Charles	Summary
	Munson	Ms. Patricia	Summary
U.S. Senate	Murry	Senator Patty	Summary
	Nelson	Brian E	Summary
	Nelson	Dirk	Summary
Ferry County Public Hospital District #1	O'Halloran	Ron	CD
Washington State Senate	Oke	Bob	Summary
Okanogan Valley Land Council	Olson	Christine	Website
	Orvera	Ervin	Summary
Tamarac Press	Padilla	Martin & Julie	Paper
	Palmer	Sam	Website
Washington Department of Fish & Wildlife	Parsons	Chris	CD
Univar USA Inc	Partch	Tom	Summary
Confederated Tribes of the Colville Reservation	Passmore	Gary	Paper
The Lands Council	Petersen	Mike	CD, Summary
	Petersen	Virginia	Summary
	Pfister	Jan	Summary
	Piekaar	Ron	Summary
Confederated Tribes of the Colville Reservation	Pleasants	Camille	Paper
	Quire	Mark	Summary

	Regan	Jeff & Darlene	Summary
	Reichard	Deborah	Summary
Common Sense Resource League	Reichel	Maurice	Summary
RTR	Richins	Robert T. (Rick)	Paper
Starlite Kieko Mining Co.	Ring	Jeanne	Summary
Roberts Family	Roberts	Lauren	Paper
Crown Resources/Kinross	Roberts	Lauren	Paper
	Robinson	David L.	CD
Atlas Copco, CMT	Rosamond	Gilles	Website
	Sabold	Dave & Marilyn	Website
	Sager	Richard	Website
	Sanderson	Julia	Summary
Washington Department of Ecology	Sandison	Derek	Paper
	Santerre	Gay & David	Website
	Schaaf	Wolfe	Website
	Seal	Thom	Summary
Confederated Tribes of the Colville Reservation	Seymour	Doug	Summary
	Shannon	Bob	Paper
Northwest Mining Association	Skaer	Laura	CD
Sandvik Mining & Construction	Skantel	Lonnie	Summary
GSE Fabrications	Skinner	Matt	Website
USDI Office of the Secretary	Sleeger	Preston	Summary
	Sletten	Ken	CD, Summary
Yakama Nation	Smartlowit	Johnny	Summary
	Smith	Ben	Summary
	Smith	Bonnie	Paper
CSU Library	Smith	Judy	Paper
Smith Contruction	Smith	Justin	Website
	Smith	Wanda M	Website
	St. August	Patricia	Summary
Energy Laboratories, Inc.	Standish	John	Summary
	Stolp	George	Paper
Stotts Construction and Pre-Mix	Stotts	John	Summary
	Stotts	Roy	Summary
	Stringfellow	Susan	CD
Teck Cominco American Inc	Suda	Cathy	CD
Washington House of Representatives	Sullivan	Brian	Summary
Eco Depot	Sullivan	Nadine	Website
Washington House of Representatives	Sump	Bob	Summary
	Susan	Richard	Website
	Swanson	Harvey	Summary
	Swanson	John	Summary
National Mining Association	Sweeny	Katie	Summary
	Sweetland	Virginia	CD, Summary
The Chronicle	Thew	Chris	CD
	Thompson	Medaine	CD
	Thompson	Margo	Summary
	Thorn	Todd	CD
Environmental Trust Program	Thorn	Tom	Summary
	Todd	John	Summary
	Tollefson	Bob & Ronna	Summary
	Tollefson	Richard	Summary
	Toso	Gail	Summary

	Turner	Wayne	Website
	Vaughn	Sandy	Website
	Waisman	Dave	Summary
Oxarc, Inc.	Walmsley	Greg	Website
Yakama Nation	Washines	Lavina	Paper
	Welch	Vicky	Summary
PUD #1 of Ferry County	Weller	Roberta	Summary
Kinross Gold Corporation.	White	Amy	Summary
	Willmore	Graham	Website
	Wilson	Doug	Website
Okanogan County Farm Bureau	Wilson	Mike	Summary
	Windsor	Ed and Stella	Paper
	Wisdom	Leslie	Summary
	Wood	Linda	Website
Conservation Northwest	Wooten	George	Summary
Washington Trucking, Inc	Wright	Kris	Website
Ferry County Commissioners			CD
Growth Management Svc.			Summary
Western Mining Action Proj.			Summary
CTED			Summary
Okanogan County Commissioners			CD, Paper
Okanogan County Public Works			CD
Advisory Council on Historic Preservation	Director Planning & Review		Website
USDA APHIS PPD/EAD	Deputy Director		Website
Natual Resource Conservation Service	National Environmental Coordinator		Website
USDA, National Agricultural Library	Acquistions & Serials Branch		Website, CD, Paper
National Marine Fisheries Service	Northwest Region		Website
U.S. Army Corp of Engineers	Northwestern Division		Website
Environmental Protection Agency (Seattle)	EIS Review Coordinator		Paper
Environmental Protection Agency (Wash. D.C.)	EIS Filing Section		Paper
USDI, Office of Env. Policy and Compliance	Director		Website, Paper
Northwest Power Planning Council			Website
U. S. Coast Guard	Environmental Management		Website
Federal Aviation Administration	Regional Administrator		Website
Federal Highway Administration			Website
Department of Energy, Office of NEPA Policy and Compliance	Director		Website
NOAA Office of Policy & Strategy	NEPA Coordinator		Website
The Mountaineers	Conservation Division		Website

Appendix F
Response to Comments on Preliminary EA and DEIS
Buckhorn Access Project

A preliminary Environmental Assessment was sent to the public and agencies on December 8, 2005 for a 30-day comment period. 116 timely letters and several untimely letters were received. The Interdisciplinary Team spent several days in January 2006 considering all comments and documenting responses. Additional time was spent clarifying, editing and supplementing the analysis prior to publication of this draft Environmental Impact Statement. The Forest Service decided to convert the EA to an Environmental Impact Statement because enough questions had been raised both internally and externally about possible significant impacts that an EIS was appropriate. Scoping was reinitiated with the filing of the Notice of Intent to file an EIS in the Federal Register in July 2006; 14 additional letters were received during the additional scoping period, resulting in two new issues, although only one was determined to be a key issue (see below). A draft Environmental Impact Statement was published in August 2006 for a 45-day comment period. Forty-two letters, and several untimely letters, were received in response to the DEIS. Because a few individuals and organizations were missed during the mailing of the DEIS, those individuals were also given a separate 45-day comment period on the DEIS, and one letter was received.

Of the timely letters received on the preliminary EA and DEIS, 109 of the comment letters received were in support of the project, 45 letters either raised concerns or were opposed to the project, and 8 letters were from agencies either suggesting improvements to analysis or stating they had no comments. The first part of this Appendix responds to comment letters received from Okanogan Highlands Alliance and Earthworks on the preliminary EA, which were substantively the same letters.

The Council on Environmental Quality's implementing regulations permit summarization of comments where a large number of letters are received in response to the DEIS. The second section of this appendix responds to other comments received on the preliminary EA and all comments received on the DEIS, including those from Okanogan Highlands Alliance and Earthworks. This second section summarizes, paraphrases and combines comments and responses for similar comments. All letters received, plus database information on how each were combined is contained in the project file. Comment letters received from elected officials, and Federal, State and local agencies are published as part of Appendix G of this FEIS.

Buckhorn Access Project
Consideration of Comments on Preliminary Environmental Assessment from Okanogan Highlands Alliance and Earthworks

Comments 1-197 below are from Okanogan Highlands Alliance, letter #95. The Earthworks letter, #96, is essentially a duplicate of the OHA letter, although it is shorter and contains some difference in grammar. All substantive comments in the Earthworks letter are also found within the OHA letter, except two comments on page 17, which are responded to in the response to all other comments in the separate "discrete comments" document.

Comment 1

Unfortunately the current EA fails to include relevant information and therefore calls into question the value of the document as a decision making tool. The public has the right to know what the impacts would be before an action is approved or undertaken.

The EA does not provide an objective examination of the connect between the proposed mine and the activities proposed on National Forest System (NFS) lands. Indeed, it is not clear that the project proponent is lawfully entitled to the lands at issue, given the serious and outstanding issues raised in OHA's Protest to the patent application submitted by Crown Resources for the mining claims that cover portions of the Buckhorn Mountain mine project. Regardless, the Forest Service must identify and analyze all of the environmental impacts associated with the mine development, regardless of whether it occurs on private lands adjacent to Forest Service lands or on Forest Service lands themselves. Only in this way can the Forest Service meet its obligations under NEPA and its substantive mandate to "minimize" impacts to National Forest resources as required by law. For instance, the proposed pipe line and the water coming out of the pipe cannot be separate from the water going into the pipe. Where the water is coming from and why cannot be isolated from the environmental impacts to NFS land. The actions that the FS is responsible for and the subject of this EA are integral parts of a large-scale development project which would have significant and cumulative environmental impacts for which an environmental impact statement (EIS) is required. Incorporating the Draft Supplemental EIS (DSEIS) does not release the FS from its responsibility to apply its measure and fully review the significant environmental impacts by doing an EIS under NEPA. To the extent any of the mine development occurs on public lands, the federal agency has an obligation to fully review the entire mine development, and not piecemeal its analysis or unreasonably limit that analysis to the impacts associated only with activities on public lands.

In this document, the FS attempts to extricate itself from the process and produce a minor review of a small piece of a larger project and fails to address the purpose of an environmental assessment which is to determine whether a proposal will have significant environmental impacts. The road access and other related facilities are integral parts of a larger project. The amended Plan of Operations for which this preliminary Environmental Assessment is written is the "proposed Buckhorn Mountain Project on lands administered by the Forest Service" not the access road and related activities project as the title of this document suggests. When the EA uses the phrase "project activities" it should clarify whether it relates to the mine or the road and

infiltration area or other activity on National Forest System (NFS) land.

The ability to proceed with mine development is dependent on addressing a number of permitting issues, including obtaining road access. The actions of developing a mine and securing road access are clearly interconnected. This EA inadequately addresses the impacts of mine development in many resource sections when analyzing cumulative effects.

Please consider and explain how this project and the Methow Transmission Project administratively differ and why that project is currently undergoing NEPA/SEPA review. In both instances new and reconstructed access is needed through federal land and a special use permit would be required. Both projects would have significant environmental impacts. Why is the FS as co-lead agency producing in an EIS for one and only doing an EA in the other? The FS should join with Ecology and prepare a comprehensive document that reviews the significant impacts of this proposal in an EIS under NEPA/SEPA.

Response

The mine, mill, and other activities on private lands are not Federal connected actions. The Forest Service has no authority over activities on private or State lands, except in Forest Service road easements. The mine and facilities are included in the cumulative effects sections for resources *where they have overlapping effects* with effects of project activities under Forest Service authority. If mine activities on private or State lands have no overlapping effects with a particular resource, they are appropriately not discussed, because effects are not cumulative to effects caused by Forest Service actions. For example, the Buckhorn mine itself would have no overlapping effects with the effect on the soils affected from clearing the road right-of-way. Project activities are those being considered for approval under the EIS, and are clearly described in the proposed action in Chapter 1 of the EIS. As noted above, the amended Plan of Operation (POO) is for the "Proposed Buckhorn Mountain Project *on lands administered by the Forest Service.*" Only the access road, infiltration gallery, and several other activities are on lands administered by the Forest Service.

Additionally, in 2004, the United States Supreme Court found in *Department of Transportation et al. v. Public Citizen et al.* that where an agency has no ability to prevent a certain effect, the agency cannot be considered a legally relevant "cause" of the effect. In this case, the Forest Service is obligated under ANILCA to provide reasonable access to the private lands where the mine is located. Hence, under NEPA and the implementing CEQ regulations, the agency need not consider these effects in its EA when determining whether its action is a "major Federal action."

The Methow Transmission Project has no relationship to the Buckhorn project. The transmission project was much further along when information was disseminated regarding the Supreme Court decision and the patenting of the lands on Buckhorn Mountain provided a logical place to consider the direct and indirect impacts to National Forest System (NFS) lands. The Methow Transmission Project has no requirements for access under ANILCA. At his discretion, the Forest Supervisor decided that the Forest Service would remain a joint-lead agency with the Okanogan PUD in order to lend the PUD expertise they might not otherwise have, as was not the case with the Buckhorn project.

Comment 2

Since the DSEIS has already concluded that mine development is a significant action, how can the Forest Service conclude that the inter-connected action of developing road access for the mine is somehow insignificant, especially when incorporating cumulative effects.

Response

NEPA requires the consideration of cumulative effects where the effects of the proposed action have overlapping effects with other activities not related to the proposed action. However, it is the incremental effect of the proposed action that is analyzed over the effects of other activities. The Forest Service decided in the summer of 2006 to disclose the impacts on NFS lands and cumulative effects with the mine (and other actions) in an EIS.

Comment 3

In general, many sections in the Environmental Consequences dealing with mitigation fail to describe whether the proposed mitigation completely or partially offset the expected impacts. Most sections stating that mitigation only partially offsets the impact, do not describe what the remaining unmitigated impacts would be, or thoroughly address the 'So What' question of significance. The absence of clarity on this issue makes it difficult for the reader to determine unmitigated impacts.

Response

The commenter is apparently confusing Forest Service mitigation with the way the State of Washington considers mitigation. Impacts are acceptable within the sideboards set by the Okanogan National Forest Land and Resource Management Plan, which sets out multiple use mandates. The Forest Service does not consider 1 to 1 compensatory mitigation like the State because activities are planned under the sideboards set by the Okanogan National Forest Land and Resource Management Plan (1989). The Forest Service considers mitigation to be an integral part of each alternative and all effects are disclosed with mitigation in place. The effects described in Chapter 3 of the EA and EIS are the mitigated effects, so any effects listed are those that remain after mitigation.

Comment 4

The EA and available supporting documents fail to acknowledge, fail to mitigate, and/or downplay the long-term significance to the environment and quality of life. This includes impacts to ground and surface water (quantity and quality), downstream water users, residents and tourists (health and safety, air quality, noise, transportation and scenic beauty), and fish and wildlife and their habitat.

Response

This comment does not give any specifics regarding how the analysis failed to provide this information. Effects on the environment are described in Chapter 3. The effects on quality of life and residents are described in the air quality, noise, recreation, and scenery sections. The effects on ground and surface water quantity and quality in the hydrology sections and how these

changes effect humans and wildlife in the hydrology, aquatic, and wildlife sections. The effects on tourists are described in the recreation and scenery sections. The effects on health and safety are described in the transportation, air quality, and accidents and spills sections. The effects on fish and wildlife, and their habitat are described in the aquatic and wildlife sections. The effects on air quality, noise, transportation, and scenic beauty are described in their similarly named sections in Chapter 3 of the EIS.

Comment 5

The EA fails to address the deficiencies that the PCHB rejected including water rights and water rights mitigation, hydrologic and geochemical modeling.

Response

The PCHB decision addressed Washington State permits and certifications and did not affect the USFS decision on the Crown Jewel Project. The USFS' decision was upheld through the Federal 9th Circuit Court of Appeals. The Appeals court agreed with the USFS that the EIS could rely on other agencies (e.g. WADOE) to carry out their legal responsibilities for environmental protection. In the present case, the USFS properly relies on the WADOE to determine water quality requirements for discharge at the infiltration site. WADOE has been delegated authority for Federal Clean Water Act by the USEPA. As such it is the WADOE's responsibility to address any applicable PCHB issues raised in the previous project in their permits and certifications for the current proposal. It is the Forest Service responsibility and intent to disclose the accumulation of any associated impacts with those direct and indirect impacts connected with the USFS project.

Comment 6

The EA fails to consider minimizing Marias Creek road impacts by reducing its width from 24 foot to 12 foot.

Response

Contrary to this statement the project interdisciplinary team did consider a one-lane road, but rejected it for safety reasons as described in the section in Chapter 2 entitled "Alternatives Considered But Not Fully Developed." This section gives the rationale for rejecting this proposal as required by NEPA. The actual measured width of the existing road is approximately 17 feet. At the end of the project, road portions on National Forest System lands and right-of-ways below the State DNR land would be reduced back to their present width with intervisible turnouts. The portion on National Forest system lands above the 3575-120 road would be returned to a one land road with intervisible turnouts.

Comment 7

Most of these issues were brought up in scoping comments. For these and the reasons below the EA is inadequate. The FS should make a determination that the impacts of this project including the direct, indirect and cumulative impacts are significant and merit an Environmental Impact Statement.

Response

The Forest Service decided in the summer of 2006 to document the analysis in an EIS.

Comment 8

The following comments explain why the EA in its current form does not adequately address potential direct, indirect, and cumulative impacts that would be caused by developments on NFS land for the proposed mine on Buckhorn Mountain. The EA does not look at alternatives that would minimize the impacts nor does it offer sufficient mitigation to make the impact acceptable. It would appear that the document was prepared to conclude that the impacts of the proposal are not significant, rather than as an objective examination of the data or an objective projection of the potential impacts. Much of the information is misleading because it extrapolates data inappropriately and draws conclusions from inadequate information or fails to draw conclusions or mitigate situations when the information would warrant action. There is not a sufficient basis for the responsible officials to come to an objective decision.

Response

This comment fails to give specifics to which a response can be formulated. Specifics may be in comments below and will be addressed in those responses.

Comment 9

The EA uses the word "preliminary" in the document title but does not explain what it means. There is no indication in the cover letter to planning participant or anywhere else in the document how comments are to be used. The only reference is that "Only those submitting timely comments will be accepted as appellants." When would the EA be considered final?

Response

“Preliminary” is defined in Merriam-Webster On-line Dictionary as “something that precedes.” The EA is preliminary, preceding a final EA to be published after comments are considered on the preliminary EA. However, the Forest Service decided in summer of 2006 to disclose the impacts in an EIS, so a draft EIS was published in August 2006.

Comment 10

The EA fails to include a list of references that the FS relied on to make the document. Without a list of references, the document is not accountable to published models and methods that inform decision-making. Further, with no list of references the document is unsubstantiated.

Response

A list of references was added to the EIS.

Comment 11

This shows little respect, consideration, or appreciation for other agency and the public's involvement in the review effort especially considering that the document was released on December 9 for a 30 day comment period right through the holiday season.

Response

Public involvement for the project took place in Spring of 2005 and included a 45 day scoping period that allowed people to comment on the proposed action. Numerous comments were received during that time, including comments from the author of this letter. The EA wasn't finished until the week of December 9th. The 30 day comment period is set by the implementing regulations for the Appeal Reform Act passed by Congress in 1993 and cannot be extended. An additional scoping period was provided in the summer 2006 (resulting in two new issues), and a draft EIS was published in August 2006, providing the public with two more opportunities to comment on the proposal.

Comment 12

Chapter 1: Background (page 1). The EA states that "due to a subsequent State of Washington decision to rescind a key permit for the project....". In actuality the State did not rescind a permit, a quasi-judicial board granted the appeals of the State's decisions and ordered water rights and water quality certification reversed and vacated respectively. This should be corrected because this point is important in explaining the conclusions of law that the mine project must adhere to.

Response

We appreciate the clarification. This has been corrected in the EIS.

Comment 13

As a reminder we include the Pollution Control Hearings Board (PCHB) January 19, 2000 decision, finding of facts, conclusion of law, and order in it's entirety (appendix # 1), as part of our comments so that it may be entered into the record. Each and every technical issue, and conclusion should be addressed in the EA. A full accounting of the issues, documents and predictive modeling rejected by the PCHB (see appendix 1) should be included so the public can be assured that inappropriate information is not being relied on in the EA.

Response

See response to comment 5 above.

Comment 14

The sub-section goes on to state that the "the decision space was narrowed to only those activities...". The narrower decision the FS has to make does not in any way excuse the FS from reviewing all the impacts of the project that relies on FS land for it's implementation.

Response

The EA discloses impacts for all project activities. These are limited to the activities over which the Forest Service has authority. To the extent that activities on private or State lands have overlapping effects with the effects of project activities on National Forest System lands, those are analyzed in the appropriate cumulative effects sections of the EIS.

Comment 15

Management Direction (page 4). While 'the Forest Plan has a forest wide standard and guideline that requires mining claimants be given reasonable access to their mining claims', according to the Forest Service, the project that the road access and related facilities supply is located on private land and not subject to this standard and guideline. Indeed, given the Forest Service's position that the lands proposed for mining are private, no "rights" associated with the federal mining laws, including the 1872 Mining Law, applies to these lands. As such, the entire project should instead be managed and evaluated under the standard discretionary multiple use guidelines that balance and considers all of the goods and services that the federal public land provides.

Response

The infiltration facility and pipeline, most monitoring sites and associated access roads, as well as the upper part of the ore haul/supply road are located on Crown's unpatented mining claims and are clearly part of the overall mining operations. The EIS has been clarified on this point.

Alaska National Interest Lands Conservation Act (ANILCA, 1980, 16 U.S.C. § 3210) applies to all National Forest lands, not just those in Alaska, and provides for reasonable access to private land in-holdings that are enclosed within National Forest System lands. Section 1323 (a) of the Act states that:

> *"Notwithstanding any other provision of law, and subject to such terms and conditions as the Secretary of Agriculture may prescribe, the Secretary shall provide such access to nonfederally owned land within the boundaries of the National Forest System as the Secretary deems adequate to secure to the owner the reasonable use and enjoyment thereof:* ***Provided, that such owner comply with rules and regulations applicable to ingress and egress to or from the National Forest System***"(emphasis added).

In-keeping with the above highlighted ANILCA provision, regulations at 36 CFR 228 Subpart A (specifically 228.1 thru 228.3), and the recent policy letters written by the Undersecretary and Deputy Chief (9/22/03 and 10/10/03), the 36 CFR 228 Subpart A regulations are deemed appropriate for authorizing access and other locatable mineral-related activities conducted in support of mining gold (a locatable mineral), even if the mine itself is located on recently patented mining claims.

Comment 16

Purpose and Need (page 4) Part of the purpose and of an environmental assessment is to determine if a project would have significant environmental impacts. If the answer is yes, an environmental impact statement (EIS) is required. The State of Washington in the DSEIS for the mine proposal that the FS has incorporated into this EA has already established that it would have significant environmental impacts. The FS must make a determination as to whether the impacts of this project including the direct, indirect and cumulative impacts are significant.

Response

The author confuses the purpose and need for the project with the purpose of preparing an EA. The author is correct that procedurally, part of the purpose of preparing an EA is to determine if the project will have significant impacts or not. However, this is not the purpose and need for the project, which is displayed in the preliminary EA and EIS. The Forest Service decided to document the effects of the project in an EIS in the summer of 2006. This draft EIS was released for public comment during August 2006.

Comment 17

The stated purpose and need unreasonably restricts the Forest Service's discretion and its analysis of alternatives and impacts. The Forest Service's purpose and need should be revised to reflect the Forest Service's broad discretion and authority over the entire mining operation, including those activities proposed on public and private lands.

Response

See Comment 1 above. The Forest Service has no discretion or authority over activities on private or State lands.

Comment 18

Please correct the statement that "The newly patented lands are an inholding surrounded by National Forest System and Bureau of Land Management lands, and the mining claimant has no other reasonable access." In fact, the newly patented lands also abut private lands on the northern perimeter.

Response

This statement was clarified in the DEIS. The newly patented lands and adjacent previously patented lands are an in holding surrounded, for all practical purposes, by National Forest System and BLM lands. Such a route was considered and eliminated from detailed study. This is described in Chapter 2 in the Components Considered but Eliminated from Detail Study section.

Comment 19

Proposed Action (page 6) According to the EA, the Forest Supervisor proposes to approve

access to the proposed mine along with other related activities without a determination of whether the impacts would be significant.

Response

As noted by the author above, the purpose of an EA is to determine whether or not significant impacts would result. The Forest Supervisor decided in the summer of 2006 to prepare an EIS.

Comment 20

Further the Forest Supervisor is proposing to approve access and related facilities to a project that the Pollution Control Hearings Board (PCHB) has determined as a "conclusion of law" does not meet requirements of law. Unless and until there is some reason to believe that the established law has been somehow changed, the Forest Supervisor has a responsibility to consider and respect them as the law of the land.

In its Conclusions of Law at *#59* the PCHB stated;
"The focus of our environmental laws must be on preventing pollution and habitat degradation. It is not legally sufficient to proceed with the proposed mine without *much more* specific knowledge of the potential impacts from the development and meaningful means of preventing and protecting against adverse consequences of the development. The long-term engineered solutions proposed in this case are *legally insufficient."* (Emphasis added)

Response

See response to Comment 5 above.

Comment 21

It appears that the FS has come to a predetermined result (ie. no significant impact). The FS must ensure the scientific integrity of all studies.

Response

See response to Comment 19 above.

Comment 22

Despite the fact that the mine as proposed would be a private land development, it would be a direct impact of the FS approval here.

Response

See response to Comment 1 above.

Comment 23

The EA should include a list of which of the underlying documents in the 1997 FEIS are still being relied on as accurate and which the PCHB has rejected in its technical issue and/or conclusion of

law and are no longer reliable or relevant. Much of the information in the Crown Jewel Project EIS is almost a decade old and out of date.

Response

Where information from the 1997 FEIS and underlying documents is relied upon, it is specifically identified at that time.

Comment 24

A big part of the proposed action is access roads. The limited maps lack road labels making it extremely difficult to follow explanations in the EA. The large scale of nearly identical maps make it difficult to identify locations referenced in the document.

Response

Road labels and other details have been added to the maps in the EIS and a number of the maps were increased to an 11 X 17" size; twice the size of previous maps.

Comment 25

Decision Framework (page 6). Once again the document fails to identify the responsibility to make a determination whether the direct and indirect impacts along with the cumulative impacts would be significant to people and the environment. This includes impacts associated with the private land mine development, which the activities proposed on Forest Service lands makes possible. For example, as currently presented and without such a detailed analysis, there is no way for the Forest Supervisor to determine if the mine proposal that the road access and related activities and facilities would or could obtain water rights, or comply with the waste discharge and other environmental protection laws.

Response

See response to Comment 1 above.

Comment 26

The Washington Department of Fish and Wildlife (DFW) has stated in its comments to the DSEIS for the Buckhorn Mine proposal, "it does not appear that adequate mitigation measures will be in place to offset impacts such as the permanent reduction in stream flow in Myers Creek and the long-term reduction in all the headwater tributaries originating on Buckhorn Mountain." Therefore there is no way the Forest Supervisor can legitimately make a Determination or Mitigated Determination of No Significance.

Response

The author comments on a letter from WADFW to the Washington State Department of Ecology on the State's DSEIS which is outside the scope of this EA. The WADFW wrote the Forest Service a letter on the Forest Service EA identifying specific concerns on the Forest Service project, which are addressed in a separate "discrete comments" response document.

Comment 27

The Forest Service's decision in this case to grant any access, including that for ancillary facilities such as pipelines and other facilities must comply with Title V of the Federal Land Policy and Management Act (FLPMA), which gives the Forest Service full discretionary authority to regulate grants of rights-of-way on Forest Service lands. This discretionary authority includes charging fair market value for the use of such public lands.

Response

The Forest reviewed existing laws, Forest Service regulations, and case law to determine that the proposed activity is properly authorized by an approved Plan of Operations under Forest Service Surface Management Regulations 36 CFR 228A (Lentz, 2005, Buckhorn Mountain Project Surface Use Determinations: Unpublished USFS Admin. Report, Okanogan & Wenatchee NFs, Okanogan Valley Office, Okanogan, WA.). See also response to comment 15.

Comment 28

Public Involvement and Consultation, Consultation (page 7) There is no mention in this section of consultation with the Washington State Department of Ecology or the Washington State Department of Fish and Wildlife. The Forest Service relationship with Ecology and Fish & Wildlife should be clearly explained in this document. The document should list who at the various agencies has been consulted on this project.

Response

This section is intended to identify consultation required by law. The section has since been expanded to identify other agencies the Forest Service coordinated with during preparation of the document.

Comment 29

Public Involvement and Consultation, Issues (page 7) The EA fails to discuss or consider the unavoidable adverse direct, indirect, and cumulative impacts so that alternatives to minimize or mitigation developed and undesirable and unintended consequences can be avoided. A direct impact of the FS' approval would be the private land development of the proposed mine. This issue should be fully discussed in the EA.

Response

See response to Comment 1 above. If this comment relates to post-mine development of the land, development of the mine site following closure of the mine is not part of any proposal at this time and therefore is not reasonably foreseeable within the meaning of NEPA.

Comment 30

Issue # 1; Measured by should include miles of fence on all lands not just NFS administered

lands.

Response

This issue as defined by scoping comments is about project activities, not cumulative effects and miles of fence on NFS administered land is the appropriate unit of measure. Approximately 70% of the fence is on NFS administered land.

Comment 31

Issue # 3; Measured by should include not only the amount hauled over NFS lands but the quantity *spread* on NFS and other lands and include an analysis of the quantity of impacts.

Response

This is covered by the qualitative discussion of the potential for toxic substances and a quantitative discussion of sediment to enter streams, riparian areas, and wetlands. The effects are discussed in the hydrology, aquatic resources, wildlife, botany, forest vegetation, and under Other Required Disclosures (Accidents and Spills – Transportation Spills).

Comment 32

Issue # 7; The description of the issue should include that the site that is proposed for obtaining gravel for upgrading and constructing the Marias Creek access road is known to be badly infested with noxious weeds. Alternatives to deal with this and additional mitigation should be developed to prevent or at least minimize the spread of weeds so that herbicide spreading on public land can be minimized.

Response

Information about the existing condition of the Beal and Tollefson's borrow site has been included in the EIS. Although the Forest Service cannot tell the proponent where to get gravel, the gravel used for construction and reconstruction of roads is required to be noxious weed free. Our understanding is that the proponent intends to remove the top 12-24 inches to access weed free gravel. This has been clarified in the EIS in the Noxious Weeds section under Reasonably Foreseeable Future and Ongoing Actions (page 387 of the DEIS).

Comment 33

Issue #8; Not only would the proposed action have cumulative impacts with the mine, there would be direct and indirect impacts as well. A direct or at least an indirect impact of water coming out of the pipe and into the infiltration area is the water going into the pipe. The impacts of where the water is coming from should be considered in the EA. The direct, indirect and cumulative impacts of the project with the mine should also be measured by; the quantity and quality of stream habitat that would be reduced in winter. The decrease in stream flow in consecutive low precipitation years and under drought conditions. The functional loss of the reduction in seeps, springs, ponds, and wetlands should be qualified. The reduction in fish and fish habitat. The Impact of increase chloride in Marias Creek.

Response

The author confuses direct and indirect effects with cumulative effects. Direct and indirect effects are those caused by the actions proposed on NFS lands. Activities on NFS lands are not causing water decreases in stream flows or reductions to fish habitat. NFS activities are designed to increase stream flows, although the mining project on private lands will reduce flows. The infiltration gallery will partially offset stream flows in the South Fork of Nicholson Creek, with water augmentation sites mostly offset stream flows in South Fork Nicholson Creek and fully offset flows in the headwaters of Marias Creek lost from mine dewatering during the summer months. The hydrology section discusses the direct, indirect, and cumulative effects of these changes on streams. Increased chlorides in Marias Creek are an indirect impact of the use of $MgCl_2$ on the Marias Road and increased chlorides from the road are assessed in the direct and indirect impacts of the hydrology, aquatic, botany, forest vegetation, and wildlife sections. Additional information on wetlands has been added to the EIS. The hydrology section has been supplemented to include the impact of chlorides from the water diverted to the infiltration gallery and water augmentation sites, and the cumulative effects of on water flows from mine dewatering.

Comment 34

Chapter 2,
Alternatives, Management Mitigation, and Monitoring (page 15) It appears that the FS has come to a predetermined result (ie. no significant impact). The FS must ensure the scientific integrity of all studies and provide sufficient information on all proposed mitigation, including how effective that mitigation will be. Despite the fact that the mine as proposed would be a private land development, it would not occur but for a FS decision approving the activities on Forest Service lands, and therefore the entire mine development and its environmental impacts are direct, indirect, and cumulative impact of the FS' approval here. (See Decision Framework above)

Response

See responses to Comments 1 and 19 above.

Comment 35

Alternatives Considered but Eliminated From Detailed Study (page 15) Although this section acknowledges that all the alternatives in the 1997 FEIS considers different proposals for on-site processing of ore, for some reason, they are incorporated by reference in this EA. Since the Forest Service incorporates the 1997 FEIS in this EA, OHA incorporates the entire administrative record of that EIS in our comments to this preliminary EA. They are available at the Tonasket Ranger District.

Response

Noted. Those comments have been fully responded to in the 1997 Final EIS.

Comment 36

The Forest Service must consider alternatives that assess how changes to the mine operation proposed on private lands can reduce impacts to Forest Service lands and resources. For instance, the Forest Service must analyze alternatives that explore the potential to mitigate water quality discharges and other environmental impacts from the mine site, rather than simply what treatment measures or other mitigation that could be implemented outside of the private mine site. It is consistent with NEPA for the Forest Service to take into consideration alternatives, including additional mitigation measures, that can be required and implemented on the private lands.

Response

See response to Comment 1 above. The Forest Service has no authority or discretion to require mitigation on private and State lands, nor is it necessary to mitigate for the project activities considered in this EIS.

Comment 37

Components Considered but Eliminated From Detailed Study, Ore and Supply Transportation Operating Schedule, Operating Season (page 18) states, "The Forest Service would only shut down when haul is causing environmental damage." What standards and benchmarks are being used to assess this environmental damage? It states that cost would be borne by the mining company.

Response

The same standards would be used as are presently used on timber sales. This standard (TR-1) is that “Winter haul and haul during spring breakup would cease when normal, routine road maintenance can not be kept up with the surfacing standard as substantially free of chuckholes, wheel ruts, or washboard corrugations.

Comment 38

How would the cost of increased sedimentation be assessed and compensated?

Response

The proponent will be required follow “best management practices” for erosion and sediment control. Some of these techniques are described in WQ-1. Erosion and sediment analysis is disclosed in the hydrology section of the EIS. As described on page 66 of the preliminary EA and page 72 of the DEIS, if substantial sedimentation occurs, construction and operational activities responsible for the sediment would be suspended or modified, and additional actions would be implemented to reduce sediment delivery. No “cost” would be assessed or compensated.

Comment 39

Alternatives Fully Developed
Infiltration Areas and Supply Pipeline (page 26) States, "An infiltration area for treated mine water meeting State and Federal Water Quality Standards would be constructed...." There is no justification for this statement in the EA. In their December 28 comment letter to Ecology regarding the Buckhorn Mtn proposal the EPA stated, "In addition, the predicted effluent quality from the proposed mine water treatment system would not meet surface water quality criteria for some parameters." The FS must show how it arrived at and can justify its conclusion. Further, more detail and scientific support is necessary regarding an analysis of the impacts of this infiltration area, and, as with all proposed or relied upon mitigation, how effective it is expected to be. (See appendix #2 EPA comment letter to Ecology regarding the Buckhorn Mtn proposal, December 28)

Response

The chart regarding water quality in the State's DSEIS was corrected in the State's FSEIS. After conferring with the State's water quality specialists, the language regarding water quality has been clarified throughout the Forest Service EIS. Effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or ground water criteria. The effluent limits shall be met at the "end-of-pipe" without regard for whether discharges are to surface or ground water.

Comment 40

Alternative B - Proposed Action (page 26) States that this alternative is based on the Amended Plan submitted March 15, 2005 and 'subsequent clarification of this plan'. The EA should state specifically what documents it received that provide clarification of this plan.

Response

Subsequent clarifications are a series of letters and emails from the Forest Service to the Company and the Company's replies and meetings with the company, in addition to compensatory mitigation items on NFS lands required by the State. These are too numerous to describe in the EIS, but all activities are described and analyzed in the EIS, and the letters and e-mails are all part of the project record at the Tonasket Ranger District.

Comment 41

Ore Haul Route (page 26) The maps fails to label roads making it difficult to follow the text explanation of the alternative.

Response

Road numbers have been added to roads on the Alternative maps in the EIS. Also, the size of these maps was doubled to 11 X 17" to make them easier to use.

Comment 42

Supply Haul Route (page 27) What mechanism insures that suppliers will use the routes that are described in the EA? Are they legally bound in some way or are they free to use the easier route of Beaver Canyon to the Chesaw side of the Pontiac Ridge Road?

Response

The road use permit from the Forest Service to the proponent will state which roads they can legally utilize for commercial haul traffic.

Comment 43

Water Monitoring (page 29) The EA states that there are presently 8 monitoring wells and a number of water monitoring stations on National Forest System (NFS) land. The location and purpose of these water monitoring devices should be identified.

Response

A map has been added to the monitoring section of Chapter 2 showing all existing and new wells and most surface water monitoring locations associated with NFS lands. The purpose of water monitoring is identified in the EIS in the water monitoring section. The State's NPDES will contain the specifics of most water monitoring. Additional required water monitoring specific to Forest Service needs has been added to the appendix of the EIS.

Comment 44

Water quality is basic to the significance of the impacts of the proposed infiltration area and road access. The EPA has stated, in its December 28 comment letter to Ecology, "We do, however, have some significant concerns with the DSEIS. In particular, the predictions of water quality conditions during and post-mining may be underestimated..." The FS cannot ignore its responsibility under NEPA to use all the information available prior to making statements and certainly decisions.

Response

This comment refers to a letter from EPA to the State Department of Ecology, not the Forest Service EA, which is outside the scope of this EIS. The Forest Service received a comment letter directly from the EPA and those comments are responded to in the separate "discrete comments" response document. References to water quality have been clarified in the EIS as specified in the response to comment 39 above.

Comment 45

What criteria was used to determine that 4 or more water monitoring devices described in the EA would be adequate? What evidence is there to insure that NFS land would be protected from pollution.

Response

The State of Washington determined the need for and adequacy of water monitoring devices to be installed on NFS lands to monitor the effects of the mine in private lands, a monitoring network that includes more than 4 monitoring devices. A map of all ground monitoring wells and surface water monitoring sites (including existing wells) on NFS lands has been added to the monitoring section of Chapter 2 in the EIS. The Forest Service has no authority to control or condition activities on private lands, including effects to ground water quality. The State's NPDES will contain the specifics of most water monitoring. Additional required water monitoring specific to Forest Service needs has been added to the appendix of the EIS.

Comment 46

Management and Mitigation (page 52) Issuing of permits and approvals does little or nothing to ensure enforcement of management and mitigation. Specific ongoing enforcement with trigger criteria should be identified especially since some of the impacts from project components may not be completed until after the "60 or more years" needed for the mine to reach equilibrium and that environmental consequences are predicted based on successful implementation of these measures.

Response

This comment appears to be about effects to ground water from the mine dewatering which is not a Federal action. This comment should be appropriately directed to the State of Washington Department of Ecology.

Comment 47

The Forest Service must provide scientific support demonstrating the effectiveness of any mitigation proposed for adoption, especially if this mitigation is relied upon in making a "no significant impact" determination.

Response

As explained on page 52 of the preliminary EA and page 58 of the draft EIS, the effectiveness rating system is described in General Water Quality Best Management Practices. Ratings are based on the professional judgment of the interdisciplinary team or research where available.

Comment 48

Water Discharges, Water quality (page 57) The DSEIS does not predict water quality standards would be met. See comment above. In addition, water quality predictions are not conservative.

Response

See response to comment 39 above.

Comment 49

Water Discharges, Flow Augmentation (page 57) This item recognizes the direct and indirect impacts that would be caused by the proposed underground mine on NFS land. These direct and indirect impacts should be expressed throughout the document and the mine components (surge pond, treatment plant, etc) should be fully described and explained in this document. The monitoring described in this section is not reflected in the water monitoring component in the Alternative section above.

Response

See Response to comment 1 above.

Comment 50

Land Use (page 58) Seven items in this section related to range management. They are poorly explained and some these items may have impacts of their own that should be analyzed. The EA should have a section that relates specifically to range management.

Response

The Management and Mitigation section has been reorganized to provide a separate heading for range mitigation. The IDT has reviewed the range mitigation and feels it is self explanatory when viewed in conjunction with the referenced maps. Chapter 3 includes a range effects analysis that describes the effect of the project on range with mitigation in place.

Comment 51

Land Use, Noxious Weed Control (page 61) The $4,000 fee the proponents would pay for weed control would do little to stop the spread of noxious weeds if the current plan is implemented. The Beal gravel pit is known to be infested with noxious weeds. This is where the spread of weeds should be managed not after the fact. It would be better to minimize the spread of weeds than to have to remediate an infestation.

Response

The Forest Service is requiring weed free gravel to be used on NFS lands which would prevent weed spread from gravel sources. Although the Forest Service cannot tell the proponent where to get gravel, the Proponent's plan is for that gravel to come from the Beal borrow site, which is infested with weeds. In discussions with the proponent, they plan to scrape the top 12-24 inches of soil off of the pit to get to access suitable gravel material. This information has been added to the noxious weed section environmental

effects of the EIS.

Comment 52

Monitoring Measures (page 76) This section is insufficient to protect the environment. A complete monitoring plan should be required with the EA. This section uses words like 'some' and 'portions of to refer to what monitoring would take place. The EA should be clear about what monitoring would take place, when, and by who. What other agencies are referred to that would have permit requirements and require monitoring? What specific monitoring and compliance would the FS require? The EA should include a table of all monitoring that is proposed, who would be responsible, when would monitoring be done and what would trigger remedial action.

Response

Some of the monitoring items have been changed in the EIS. The monitoring information presented in the EIS is objective oriented. A complete monitoring plan, will be coordinated with the State of Washington and included in the Plan of Operations.

Comment 53

Water Resources Monitoring (page 77) The description in this section of water quality, quantity, and levels of regulated substances monitoring are completely inadequate to assess the impacts that would occur and especially if the goal is to prevent, reduce, or mitigate the impacts. The timing of monitoring water flows along haul road are especially inadequate, monthly is not adequate and quarterly in the winter leaves no room for informed action.

Response

Monitoring discussed in the EA is for Forest Service actions approved on National Forest System lands and not for activities on private or State lands. See response to comment 45 above. A water quality monitoring appendix has been added to the EIS to include water quality monitoring required by the Forest Service that is in addition to the water quality monitoring required by the State's NPDES permit. Water quality monitoring frequency for Forest Service required monitoring has been revised in the EIS from what was in the preliminary EA.

Comment 54

What specific surface monitoring stations would be set up for streams, seeps, and springs impacted by ore haul, water infiltration, and mining operations?

Response

Surface water monitoring stations are displayed on the maps for Alternatives B, B1, and C in the preliminary EA. These maps were updated in the draft EIS to include additional monitoring locations on the alternative maps. A map of surface and ground water monitoring stations with U.S.F.S. ownership was added to the monitoring section of Chapter 2 in the draft EIS. These maps have been further updated to contain additional monitoring stations in the final EIS. Seeps and springs will not be affected by project activities to be permitted on National Forest System

land, except to the extent that the infiltration gallery and water augmentation sites will partially offset flows lost from mine dewatering on private lands during the summer season. Monitoring for impacts of the mine are the purview of the State and are addressed in the State's SEIS and the NPDES permit. To the extent that monitoring actually takes place on NFS lands, those activities are discussed in the EIS. The environmental effects from water quality and quantity monitoring are minimal with the greatest impact likely coming from plowing the roads to the monitoring site during the winter. Only alternative B will allow plowing of roads to water monitoring sites. Under the other alternatives, most access will be via snowmobiles.

Comment 55

What 'baseline monitoring network' is referred to that 'would be preserved to the extent possible'? What baseline water quality and quantity parameters would be used to assess if remedial action is needed?

Response

As disclosed in the preliminary EA on page 77 and page 84 of the draft EIS, as part of the baseline water monitoring, a series of monitoring wells and surface water monitoring points were set up and would be utilized where those wells and surface water monitoring points are in locations that make sense. One additional monitoring well for water quality is proposed to be added to the monitoring network on National Forest System lands and at least two additional surface water monitoring locations. Several additional piezometers would be added in the vicinity of the infiltration gallery to monitor the water level. Piezometers and staff gages would be installed in a number of seeps, springs, or wetlands to monitor water levels. A map of all groundwater wells and surface water monitoring locations on NFS lands has been added to the EIS in the monitoring section of Chapter 2, Figure II-5 in the draft EIS. This figure was updated to include additional spring, seep, and wetland sites in the final EIS.

Comment 56

Groundwater monitoring wells should be located where they could best assess impacts not necessarily as close as possible. What 'baseline monitoring network' is referred to that 'would be preserved to the extent possible'? What baseline water quality and quantity parameters would be used to assess if remedial action is needed?

Response

The State of Washington in coordination with the Forest Service will determine exact locations of additional water monitoring wells and surface water monitoring points to best monitor effects on ground and surface water impacted by mine activities on private lands. See also response to comments 54 and 55 above.

Comment 57

This section indicates that post closure monitoring would continue at least 3 to 5 years and the focus would be long-term water quality. Three to five years would not be considered 'long-term'

especially for a project that is predicted to take 25 to 60 years or more to reach hydrologic equilibrium.

Response

The EIS has been clarified and revised to show that some water quality monitoring by the State of Washington for activities on private lands would continue for a longer period of time.

Comment 58

Fish Populations (page 78) Every other year for monitoring fish populations as presented in this section of the EA is completely inadequate considering the impacts of this proposal. By the time changes in fish populations were discovered by biennial monitoring as proposed in the EA and attributed to project activities it would be too late to develop and implement adequate mitigation or project modifications. Do "project activities" in this section relate to the mine or the road and infiltration area?

Response

Project activities relate mostly to the road construction and use. Infiltration activities should have little, if any, impacts on fish populations due to the distance from these activities from fish habitat. The monitoring frequency of the fish population surveys has been changed to years 1 through 5, 8 and 10 in the EIS. If fish kills are detected at any time (WF-8, draft EIS), an investigation would be conducted to determine the reason for the deaths.

Comment 59

Noxious Weed Monitoring (page 78) It should be noted that the gravel pit that is proposed to supply gravel for the Marias Creek Access road is infested with noxious weeds. Some type of monitoring to insure these weeds do not spread would be important to minimize the problem.

Response

The Forest Service is requiring gravel to be weed free (LU-3, draft EIS) (see response to comment 51 above). Noxious weed monitoring requirements on NFS lands are detailed in the monitoring section in Chapter 2 of the EIS. Other noxious weed mitigation measures include equipment washing (LU-4), the use of noxious weed-free mulch and seed (LU-5), concurrent reclamation when possible, and reclamation of past exploration and development disturbance areas that are no longer needed (LU-6).

Comment 60

Chapter 3.
Environmental Consequences (page 89) This section summarizes and cites specialist's reports. There should also be a list or table of references of both the citations in the EA and of reports that were relied on in the specialist's reports.

Response

See response to comment 10 above.

Comment 61

The FS incorporating Ecology's DSEIS does not release the FS from its responsibility to review the direct, indirect and cumulative impacts by doing an EIS under NEPA. The road access and related facilities are integral parts of a larger project and the Forest Service must analyze the impacts from, alternatives to, and mitigation for, the impacts occurring on private lands associated with the mine development.

Response

See response to comment 1 above.

Comment 62

Hydrology (page 111) A definition and scope of this section should be explained.

Response

The scope and analysis in this section is self evident.

Comment 63

Ecology's DSEIS is a draft document with numerous problems, it should not be relied on as a basis for the FS analysis of impacts to NFS land.

Response

The EIS references the State's DSEIS in the hydrology section wherever information from that document was relied on. Most of the analysis does not rely on that document. This section will be update to reference the final Supplemental EIS wherever information from that document was relied on since there were changes between the draft and final SEIS based on additional field work on springs, seeps, and wetlands; and the running of the FEFLOW, transitory water model.

Comment 64

Existing Condition, Climate (page 111) Impacts to the hydrology in this area are of primary importance. The lack of confidence in the underlying data was one of the main causes for water rights and water quality certification to be vacated and revoked respectively. The accuracy of the climate information is questionable. The mean temperature cites Pentec Environmental 2004. When Pentec Environmental 2004is reviewed it cites Forest Service and Ecology 1997 and actually a correlation from Republic and Molson and not from within the project area. This information was subsequently readjusted before the PCHB hearing. The FS should be using the most up-to-date information and not present a chain of different

citations. Further the figures for precipitation do not have a citation. Accurate precipitation information is critical since stream flows are modeled from this information. The information in Pentec 2004 states, " The average annual precipitation for the area ranges from 15 inches in Republic to 12 inches at Omak in the west precipitation at Conconully, northwest of Republic, is approximately 15 inches. Over the region, precipitation averages approximately 21 inches annually (PNRBC, 1970)." Conconully is not northwest of Republic but northwest of Omak and 21 inches does not come close to the numbers being averaged.

Response

The climate section in the EIS has been revised to use the most up to date information regarding precipitation. Yearly average precipitation at the mine site was calculated to be 20 inches per year using data from 1993 to 1996. Updated values were calculated using data through 1998 indicated yearly average precipitation to be 19.8 inches (Wilder 1998). Golder's 2004 estimate of long-term precipitation was a range of 19.6 to 20.7 inches per year. Precipitation information from Golder's 2006 report has been included in the FEIS. This precipitation was used in the updated WEPP analysis, and a sensitivity analysis was conducted for less precipitation.

Comment 65

Wetlands (page 113) This section does little to describe the existing condition of wetlands within the project area. Mentioning the various consultants that have mapped wetlands and the various amounts each one has come up with for various agencies and the mining proponent does not provide any representation of the quantity or quality of the wetlands in the project area. This section should describe not only the quantity or quality of the wetlands but their structure and function as well.

Response

Additional condition information has been added to the EIS regarding wetlands that would be affected by project activities on National Forest system land. Wetlands and existing conditions of wetlands within the project area have been mapped by several sources (original Crown Jewel Proposal, Shaw Environmental in 2004, ENSR in 2005, and URS in 2006). These documents would need to be referred to for conditions of specific wetlands not affected by project activities on NFS lands. Additional summary type information is located in WADOE's FSEIS in Table 3.9-2 and figure 3.9-1.

Comment 66

The EA should include information about the changes that have occurred over the years regarding the water flowing out of the Roosevelt adit.

Response

Past changes to flows at the Roosevelt adit are not relevant and not needed for an informed decision on activities planned on NFS lands. However, information about how the adit intercepts and redirects flows on the mountain has been added to the hydrology cumulative

effects section of the FEIS.

Comment 67

Soil Permeability (page 113) The description of the existing condition of soil permeability for the infiltration gallery is inadequate. This issue is extremely important because it would receive the direct impacts of the dewatering of the mine yielding impacts from water quality and quantity. Any casual observer would note the large road cut adjacent to the proposed infiltration area. It is likely that the outwash sand and gravel overlaying the till and/or glacio-lacustrine sediments are from this road cut. This should be discussed in the text. The text fails to describe that water currently flows from beneath the proposed infiltration area. Water discharged to this area would likely flow directly into surface water. This should be realistically analyzed and reflected in the documentation.

Response

The "road cut" cited above is a borrow site, and this material was not placed over the area where the infiltration gallery is located, though it is likely that some surface material was placed below the existing road to create the small flat at that location at the elevation of the road, above the flat area where the infiltration gallery is located. Depth of the infiltration gallery gravels have been tested and are 5 to 15 feet deep (Golder, 2004). Water discharged from the infiltration gallery would move towards an old cut-slope and some water would begin to seep out of the soil during the wet times of the year and would be most evident when the infiltration gallery is taking the maximum inflow of 20 gallons per minute. If it is determined that the infiltration gallery can accept discharges of greater than 20 gpm without adverse environmental effects based on monitoring of groundwater levels and flows in down gradient seeps, springs, or wetlands, flows could be increased up to 40 gpm. This has been clarified in the final EIS. When flows exceed the capacity of the infiltration gallery, they would be directed at other water augmentation sites.

Comment 68

Water quality (page 114) There is a disconnect between the FS EA and the Ecology DSEIS. While the EA states that any water discharged must meet water quality standards, the DSEIS predicted treated effluent concentrations shown in Table 3.7-1 exceed groundwater criteria for chromium (as stated), and are equal to the criterion values for nitrate and selenium and also equal to the MCL for antimony. When compared to surface water criteria and aquatic life criteria, treated effluent concentrations exceed surface water criteria for chromium (by 70 times), lead (by 2 times), mercury (by 33 times), ammonia (by 8.6 times), selenium (by 2 times), silver (by 3 times), and zinc (by 1.1 times). The impact of the release of treated effluent is not discussed in the EA.
(See Addendum #3; Memorandum by Ann Maest PhD; Buka Environmental Re: Comments on Projected Operational and Post-Closure Water Quality for the Buckhorn Mountain Project, December 14, 2005. Attached and incorporated.)

Response

See response to comment 39 above.

Comment 69

Water Infiltration Gallery Effects for all Action Alternatives (page 118) This section seems to limit water discharge into the infiltration area to 40 gpm with the rest going into "the Roosevelt adit or wetland in Marias Creek." This misleads the reader into believing that the rest of the water would go down Marias Creek. This is not the case since currently the discharge from the Roosevelt adit is routed back into Nicholson Creek. See page 3-39 of the 1997 FEIS; "At this time, surface and subsurface flows in Nicholson Creek includes most of the Roosevelt adit flows." The water rights application for the mine requests 100 gpm for dewatering mine shafts. The impacts of discharging this water into Nicholson Creek should be fully and realistically examined in the EA.

Response

This section of the EIS has been clarified to explain water from the Roosevelt adit drains to Nicholson Creek. Excess water not used for infiltration or water augmentation would be diverted to storage ponds or outfalls on the mining site, which are not part of the Forest Service proposal since those points are in private lands. Water augmentation to the Roosevelt adit and to a watering trough above a wetland in the headwaters of Marias Creek are designed to partially offset flows from mine dewatering during the growing season. If impacts to Marias Creek or Roosevelt adit are 20%, or more, greater than predicted, then additional treated mine water will be discharged to the watering trough and/or Roosevelt adit provided water is available from the dewatering system. Additional treated water (beyond the mitigation quantities and outside the mitigation period) may be discharged to the Roosevelt adit and Marias Creek headwaters under the NPDES permit if more water than anticipated is encountered in the mine. No effects from the additional discharge are expected.

Comment 70

Effects of Salts for Dust Suppressants for all Action Alternatives (page 119) This section acknowledges that magnesium chloride has not been found effective, in some cases, even with product reapplication, for periods of more than about one year, and that it should only be used for short-term (less than one year) stabilization. Yet the EA ignores its own recommendation to limit the use of magnesium chloride and only when water quality testing shows a problem would action to stop its use be taken. This blatant disregard for aquatic degradation, pollution prevention, and anti-degradation laws is unacceptable.

Response

The EA makes no such recommendation it merely cites a study. Information about this study has been added to the EIS. Interim guidelines for dust palliative use in Clark County, Nevada highly discourages the use of salts, organic petroleum products and lignin-based palliatives within 20 yards of open bodies of water, including lakes and streams and recommend that the use of salts should be limited to magnesium chloride and only used for short-term (less than one year) stabilization of unpaved roads. Modeling done for this project for water quality impacts of the use of magnesium chloride indicates that chloride levels would be within standards.

Treated unpaved roads must be periodically maintained with additional applications of water and magnesium chloride as needed to maintain effectiveness. Magnesium chloride has not been found effective, in some cases, even with product reapplication, for periods of more than about one year but in other cases such as at the Idaho National Engineering and Environmental Laboratory magnesium chloride brine was applied four times between 1984 and 1993 (1984, 1985, 1992, and 1993) to suppress airborne dust emissions. The treatment met the objectives of controlling dust (Hull, L.C. and Bishop C.W., 2003).

Some factors that affect the effectiveness of magnesium chloride include: a minimum humidity level or periodic light watering are needed to absorb moisture, too much rainfall or water decreases effectiveness, and 10 – 20% fines (pass 70 *u*m) is desired in the road surface. These factors should be met at the Buckhorn site.

Comment 71

Alternative B and BI, Direct and Indirect Effects (page 121) This section fails to consider increased sediments due to the infiltration gallery will increase sediments in Nicholson Creek and that the increase would increase as dewatering increased. The gallery is proposed in soils that are highly permeable over soils that have low permeability. There is already a steady flow from the base of this area near the road cut. The addition of 40 gpm would go right through the gravel outwash into surface water producing sedimentation into Nicholson Creek, (see comment above from page 118)

Response

The maximum water now permitted at the infiltration gallery is 20 gpm. . If it is determined that the infiltration gallery can accept discharges of greater than 20 gpm without adverse environmental effects based on monitoring of groundwater levels and flows in down gradient seeps, springs, or wetlands, flows could be increased up to 40 gpm. No increases in sediment in Nicholson Creek are expected from the infiltration gallery because water is not expected to be of a volume or velocity to suspend sediment even when the water comes to the surface to add to Nicholson Creek flows.

Comment 72

The EA should describe in detail what the impacts of the estimated reduction on average of 124 gpm to the baseflow of Toroda Creek would be (as per the bottom of page 123 of the EA). See comment Amphibians (page 131) below.

Response

The State determined the information in the DSEIS is incorrect and was corrected in the FSEIS. Dust-control water requirements for the Marias Creek haul route would be quite variable. The maximum water use rate would often occur during summer months, which coincides with the historical use of the Newman Ranch well water right for irrigation. While use of the Newman Ranch well water right for dust suppression will result in small stream flow reductions in Toroda Creek upstream of Marias Creek October through April,

flows are projected to increase May 1 though September 30 (Golder 2006b). The water right will not be used for several years following the cessation of mining. Information has been added to the EIS regarding the effects of this drawdown on aquatic species. This information has been corrected in the EIS.

Comment 73

Cumulative Effects (page 129) Incorporating the state's DSEIS does not release the FS from its responsibility to apply its measure and fully review the cumulative environmental impacts under NEPA.

Response

See response to comment 1 above.

Comment 74

The air quality narrative on the environmental and human health risks associated with dust suppressants is much stronger in registering the limitations of our knowledge concerning adverse effects (Pages 161-162). The hydrology narrative does not appear to share this concern. If the concerns are valid, they should also be noted in the hydrology section.

Response

The hydrology section analyzed the effects of chlorides, salts on water quality. Information relating to lignin sulfonate has been added to the EIS, including effects on dissolved oxygen.

Comment 75

The EA continues to build on the foundation that the PCHB rejected. In Its Conclusions of Law at #61 the PCHB stated, "....As thoroughly as this proposed mine has been studied and evaluated, it is not at all certain that we have a clear understanding of the hydrogeology on the site. There are substantial questions about the stream flows, groundwater flows and relative precipitation..." Yet the EA continues to rely on much of the same data.

Response

See response to comment 5 above. Forest Service activities are not affecting hydrogeology, except by allowing infiltration and augmentation of water to partially offset the impacts of mine dewatering on NFS lands. This information has been added to the EIS.

Comment 76

The EA should describe where the proponent would get all the water discharged onto NFS land. This should include all water that would be dewatered in order to mine or water used for dust suppression. Water rights have been a pivotal issue to the mine in the past and since they have been rejected in the past because it was not clear that issuing them was lawful, the EA should show what has change to assume that water is available for this project. While water rights are

not generally the subject to an EA, in this case because of the PCHB decision and that adverse impacts to senior water rights are the significant impact identified by the DSEIS, it is altogether fitting and proper that water rights should be reviewed as part of this EA.

Response

All water used for dust suppression during operations and during construction of the haul route on NFS roads would come from an existing irrigation water right on Toroda Creek. Water routed to the infiltration gallery and water augmentation sites would come from a treatment facility on private lands and would consist of captured surface run-off and mine dewatering water. Water rights are not within the purview of the Forest Service EIS and will be granted through the States EIS/permitting process. See also response to comment 5 above.

Comment 77

The EA should clearly indicate the total water discharge that would flow from the proposed pipe line and exactly how that water would be distributed. Where would that water go, what would the quality of that water be, and what would the impacts of that discharge be. It should be noted that the water right application is for 100 gpm. for mine dewatering, industrial and mitigation with the impacts clearly defined. The EA should clearly state the specific rate at which groundwater would be pumped out of Buckhorn mountain including yearly and project totals. The DSEIS (page 3.7-26) uses a minimum recharge value of 1.9 inches/year but the corresponding figure on page 2-3 of the FEFLOW model is 1 inch/year. The Forest Service must also explore alternatives and mitigation for impacts associated with the mine development, whether on private or public lands.

Response

To the extent that activities on NFS lands affect these, the hydrology section has been supplemented in the EIS to address them. The Forest Service has no authority or discretion to require actions on private lands, and such alternatives are outside the scope of this analysis.

Comment 78

It would seem that the FS failed to coordinate the EA with the state's review of the same environment. Each agency has a different description of the affected environment and the estimated quantity of water in the seeps, springs and streams that may be temporarily or permanently altered.

Response

The State's affected environment information in the DSEIS is written for the entire project, while the existing condition information in the preliminary EA and EIS are written specific to NFS lands. The information regarding impacts on seeps, springs and streams has been clarified in the EIS.

Comment 79

The EA should explain how the changes would impact the function of the seeps spring and headwater streams including but not limited to moderation of temperatures, riparian vegetation,

sediment transport, and storage release attenuation.

Response

The Forest Service analysis only discusses the effects from activities on National Forest System lands and not the effects from activities on other ownerships, unless there are overlapping cumulative effects with the effects from activities on NFS lands. Activities on NFS lands would have little, if any effects on seeps and springs, except that they may partially offset impacts caused by mine dewatering on private lands. Sediment transport effects from activities on NFS land are discussed in the soils, hydrology and aquatic sections of Chapter 3. No effects to temperatures are expected as disclosed in the hydrology section on page 117 of the preliminary EA, and page 136 of the draft EIS. Effects to riparian vegetation are discussed in the botany and wildlife sections in the EIS.

Comment 80

The million-gallon surge pond seems to be a catch all for mine water that could be used for almost anything. What is the legal status of this proposed reservoir? The mitigation of streams on the eastern side of Buckhorn during critical times of the year should be comprehensively discussed in the EA. The piecemeal approach to mitigation is unacceptable. The EA fails to encompass the estimated "25 to more than 60 or more years" that it would take for the water level of the mountain to reach equilibrium after mining. All aspects of the EA should recalibrated to this time frame. The EA cannot ignore the impacts that the discharge into the infiltration gallery would have on the west side of Buckhorn Mountain. The EA must contain an accurate water balance. The EA must, but fails to, answer the basic questions; where does the water come from and where does it go to. Drought conditions should also be considered but are not. The EA cannot ignore the procedures for mine closure and post-closure monitoring since they directly impact uses of NFS land. The proposed plan for addressing groundwater impacted by contact with the mined area apparently relies upon extracting the impacted groundwater by pumping, circulating the impacted groundwater through the treatment system, and infiltrating the treated groundwater into the mined area (DSEIS, section 3.7.2.2). However, the intent of the proposed plan is unclear. For example, it is reasonable to expect that this approach would require maintaining groundwater levels equivalent to the lowest elevations achieved during dewatering to prevent release of impacted groundwater from the mine workings to the surrounding aquifer (if groundwater levels were allowed to rise, then capture of all impacted groundwater could not be assured). However, the proposed plan does not appear to consider the concept that maintaining depressed groundwater levels within the mined area may be necessary. For example, the plan apparently assumes that all extracted and treated groundwater will be discharged to the infiltration gallery (DSEIS, section 3.7.2.2), but previously noted in the same section that "the infiltration gallery may not have sufficient capacity to infiltrate all of the water". In addition, maintaining low groundwater levels within the mined area is inconsistent with the stated goal of allowing groundwater levels within the workings to recover swiftly in order to minimize impacts to groundwater quality anticipated from acid generation within the vadose zone and impacts to surface water and groundwater quantities anticipated from mine dewatering. It is also unclear whether the proposed approach will actually decrease impacts to applicable standards within a reasonable timeframe. The proposed approach does not explicitly commit the operator to prevent the release of impacted groundwater from the former mine workings, define the conditions under which the operator would transition to discharging treated mine water back into the mined area, or describe

how such discharge would be effected (i.e. whether an infiltration system would be constructed).

See Appendix # 4, Udaloy Environmental Services to Okanogan Highlands Alliance December 2005, (Udaloy 2005) attached and incorporated.

Response

Most of these comments apply to analysis done by the WADOE in their DSEIS for the entire mine project and are beyond the scope of the USFS analysis. For responses to these, the reader is directed to the FSEIS and any associated permits/certifications. See also response to comments 1 and 5 above. The Gold Bowl underground workings are expected to equilibrate (refill) within 7-8 years of mine closure (FSEIS, Table 3.7-11, page 3.7-47). This will mitigate much of the surface water quantity impacts in Nicholson Creek. Any remaining surface impacts after that time are expected to be minor and will likely include water monitoring and perhaps water augmentation. The maximum rate of infiltration at the infiltration site is presently 20 gpm. If it is determined that the infiltration gallery can accept discharges of greater than 20 gpm without adverse environmental effects based on monitoring of groundwater levels and flows in down gradient seeps, springs, or wetlands, flows could be increased up to 40 gpm.

Comment 81

Water Quality; The EA should also not ignore the ground water quality impacts of the mine for it could directly impact NFS land. The plan is to allow surface to runoff from development rock and ore stockpiles to mix with groundwater and then monitor the groundwater downstream and if needed enhance water capture and treatment. Alternatives and mitigation should include covering development rock and ore stockpiles so that groundwater would not be further contaminated thereby reducing the pollution that would eventually surface on NFS land. All potentially acid-producing rock could and should be mixed with cement to further reduce the inevitable acid mine drainage.

Response

These are not activities under Forest Service authority and occur on private and State lands. See response to comment 1 above.

Comment 82

Water quality in the Southwest Zone is predicted to be poor and outside the groundwater capture zone yet no modeling of the potential seepage to downgradient groundwater and surface water during operations was conducted. The DSEIS states that groundwater monitoring would be conducted to confirm that groundwater from this zone is being captured yet of the four monitor wells proposed none are close to the southwest zone. These impacts would take place on NFS land and should be included in the EA.

Response

See response to comment 1 above.

Comment 83

The DSEIS predicts that discharge to the infiltration gallery would not to exceed water quality criteria, four constituents are at or above water quality standards. The impacts of the release of treated effluent to surface water is not adequately considered in the EA. An evaluation of the consequences of releasing treated effluent to the Nicholson and Marias Creek watersheds, both in terms of quantity and quality of surface and groundwater, should be addressed in the EA.

Response

The Forest Service will condition the POO on meeting State water quality standards. Effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or ground water criteria. Effluent limits shall be met at the "end-of-pipe" without regard for whether discharges are to surface or ground water. Language regarding this has been clarified in the EIS. As explained in the preliminary EA on page 134 under the effects of the water infiltration system "Along with surface water augmentation provided in both Nicholson and Marias Creeks, the water infiltration system would minimize groundwater losses from mine operations in these watershed, and result in little change in water availability." Water releases into the Nicholson and Marias Creek drainages are designed to offset reduced flows from mine dewatering during July, August, and September to minimize impacts to vegetation in wetland areas during the low flow season. This has been clarified in the EIS.

Comment 84

The DSEIS predicts that water treatment will most likely be needed for nitrates and ammonia as the mine refills with water (25 or more than 60 or more years) and that the treatment facility would remain operational beyond that. This period should be considered part of the mine operation or at least the reclamation and be included in the EA when defining the project life. The EA should reflect that water treatment may be required for more than 60 years after actual mining stops; in other words, reclamation far exceeds the amount expressed throughout the document.

Response

According to the best information available from the State, water will only be infiltrated or augmented on NFS lands for 3-5 years post mine closure, and that is the timeframe used for both the preliminary EA and EIS. Treatment of water on private lands and deposited on private or State lands is not within the purview of the Forest Service and would not have cumulative impacts with Forest Service activities since infiltration and augmentation would no longer be ongoing. Water monitoring activities on NFS lands may continue for greater than this 3 – 5 year period. The length of this monitoring will be determined by the State's NPDES permit in consultation with the Forest Service.

Comment 85

The approach to arriving at the best and worst case water quality values for operational and post-closure water quality in the DSEIS is very convoluted and represents several iterations that are poorly presented in the geochemical appendix.

Response

This comment is about information presented in the DOEs DSEIS and not relevant to the Forest Service EA.

Comment 86

Surface Water, Water Quantity; (see above) The DSEIS states that effluent from the treatment facility would be required to meet water quality standards yet concentrations shown in Table 3.7-1 show four constituents at or above water quality standards going into the infiltration gallery. The impacts of the release of treated effluent to surface water is not adequately considered in the EA. An evaluation of the consequences of releasing treated effluent to the Nicholson and Marias Creek watersheds, both in terms of quantity and quality of surface and groundwater, should be addressed in the EA.

Response

See response to comments 39 and 83 above.

Comment 87

Surface Water, Water Quality; The EA should discuss the impacts that could occur from increased water flows going down Nicholson Creek. What would the impacts be of stopping that flow after 7.5 years. The area of the proposed infiltration gallery already has surface water flows coming from under the glacial till that was apparently excavated from the cut bank where near MW-3. The significant discharge into this area will likely result in creation of a direct path into surface water that would likely cause significant erosion down Nicholson Creek.

Response

See response to Comments 67 and 83 above. The releases of water to the infiltration gallery and water augmentation sites are designed to partially offset flow reductions from mine dewatering, not to increase then decrease existing flows.

Comment 88

For discharges of development rock and ore stockpiles see above. In addition contaminated water from development rock and ore stockpiles that infiltrates into groundwater via well or other infiltration should be considered a point source of pollution and required an NPDES permit.

Response

Water from development rock and ore stockpiles are not within the purview of the Forest Service decision. This project will meet State water quality standards as set by the NPDES operating permit. Effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or ground water criteria. The effluent limits shall be met at the “end-of-pipe” without regard for whether discharges are to surface or ground water (draft NPDES Fact Sheet, page 18).

Comment 89

Marias Creek Haul Route; Alternative road designs should be looked at that would meet project criteria for road access while minimizing impacts to public resources.

Response

Alternative road designs and routes for the Marias Creek road were considered but eliminated from detailed study based on safety and impacts to resources as described in the Chapter 2 under ore haul routes. The selected Marias Creek road alternative reclaims the road surface on NFS lands to the present width, 17 – 18', with intervisible turnouts. The road across NFS lands above the 3575-120 road will be reclaimed to a one lane road with intervisible turnouts.

Comment 90

The bottom of page 123 referring to dust-control water for the Marias Creek haul route states that baseflows of Toroda Creek would be reduced on average by about 124 gpm but fails to explain what the impacts of this would be. Instead the section concludes that no senior water rights have been identified in fall and winter so it does not represent an impact in fall or winter from a water rights perspective. The EA should clearly express the impacts of the reduced baseflow on Toroda Creek and affirm that the creek has been closed to new appropriation since the 1950's and that the change in use would constitute an expanded use and would most likely be denied.

The EA should evaluate the impacts of extracting groundwater from the Toroda Creek basin during early mine development.

Response

This section was based on information in the States DSEIS and it is incorrect. The correct information is now presented in the EIS and impacts of reduced flows on aquatic species in the non-irrigation season have been added to the EIS. See also response to comment 72 above.

Comment 91

Aquatics (page 129) Aquatics should be defined. A general description should include a mention of seeps and springs and their function as wetlands. In fact it is important to include the functions of wetland in the environment not simply how to identify them. Some of the functions that should include are moderation of temperatures, riparian vegetation, sediment transport, and storage release attenuation. The EA should consider the wetland edges of headwater streams and acknowledging that they accumulate to represent a notable resource. These wetland edges of headwater streams are not considered in this EA but should be.

Response

According to the Merriam-Webster online dictionary, "aquatic" refers to growing or living in or frequenting water. Wetlands, seeps and spring are evaluated in the hydrology section of the EIS. Forest Service project activities will not impact wetland edges in

headwater streams except to the extent that water infiltration and augmentation replaces water lost from mine dewatering on private and State lands. Information regarding wetland condition on wetlands impacted by activities on National Forest System lands has been added to the EIS. Some of the functions of wetlands are covered in the Aquatic section under the heading "Wetlands, Seeps and Springs" on page 133 of the preliminary EA and more information was added to the EIS. Storage and release attenuation is discussed in the hydrology section under Wetlands.

Comment 92

Existing Condition, Amphibians (page 131) It is good that the information that the EA contains a mention that Toroda creek has been closed to surface water availability based on fisheries dating back to the 1950's but this information should be at least under fisheries or hydrology, not amphibians. In addition it should be mentioned that this was on the recommendation of Washington State Department of Fish and Wildlife.

Response

A heading in the document was inadvertently missed under Existing Condition. This section has been modified to include the information about the recommendation by WDFW in the EIS.

Comment 93

Marias Creek, Wetlands, Seeps, and Springs (page 133) The description of the wetlands is inadequate for the public to understand the locations and impacts of the proposed action. The EA approximates 8 acres of wetland but fails to provide any way of assessing there location or relationship to the proposed activities. Are they above or below the road? There are also numerous wetlands near and downstream from the proposed infiltration site that should be included

Response

Only wetlands impacted by NFS land project activities are discussed. Effects to seeps or springs from project activities on National Forest System lands are expected to minimal. A map of wetlands impacted by the haul route has been added to the EIS, Figure III-1 in the draft EIS. Although other wetlands, seeps and springs may be enhanced through water infiltration and augmentation, flows are designed to partially offset dewatering impacts of the mine during summer months. The infiltration gallery is in the Nicholson Creek drainage, not the Marias Creek drainage.

Comment 94

Nicholson Creek, Wetlands, Seeps, and Springs (page 133) The description of the wetlands is inadequate for the public to understand the locations and impacts of the proposed action. The EA approximates 9 acres of wetland but fails to provide any way of assessing there location or relationship to the proposed activities. Are they above or below the road? The headwater of Nicholson Creek that is commonly referred to as the Gold Bowl should be recognized in the EA as a wetland even though much of its vegetation has been degraded by grazing and drought.

Likewise, there are numerous wetlands downstream from the proposed infiltration site. One directly below and others portions of the 9 acre wetland (RA1 through RA7) drain down Nicholson Creek.

Response

See response to comment 93 above. No activities on NFS lands will affect wetlands above the water infiltration or augmentation sites, including the Gold Bowl area.

Comment 95

Environmental Consequences, Effects Common to All Action Alternatives, Water Infiltration System, Direct/Indirect Effects (page 134) The EA should consider whether changes in water quality and quantity Water from the infiltration system could impact the full range of aquatic habitat and organisms. Maest 2005

Response

This comment is incomplete. See response to Comments 33, 39, 69, and 83 above. Infiltrated water is not expected to impact aquatic habitat or organisms.

Comment 96

Water from the infiltration system would reach surface water relatively quickly. Predicted effluent water quality exceeds a number of surface water criteria and/or aquatic life criterion values. The impacts of the discharge of this effluent on downgradient aquatic habitat and life should be evaluated for the EA.

Response

See response to comment 39, 63, 67, 69, and 83 above.

Comment 97

The discharge could also cause increased turbidity that should be considered.

Response

The hydrology section of the EIS has been clarified that the infiltration gallery is not expected to increase turbidity. See also response to 71 above.

Comment 98

The EA should consider that water from the treatment facility could be of higher temperature and would cause additional impacts.

Response

The EIS has been clarified that the infiltrated water is not expected to increase temperatures. the draft NPDES does not set a standard for temperature because "The anticipated maximum effluent temperature levels given in the applicant's engineering report were determined by the Department to not exceed the State's surface water criterion of 16 degrees C for Class AA waters. Therefore, no temperature effluent limit was placed into the permit. Temperature monitoring is required." (draft NPDES Fact Sheet, page 24).

Comment 99

Will the headwaters of Nicholson 'blow-out' from too much water? How would Nicholson Creek headwaters be impacted?

Response

Water infiltration and augmentation is designed to replace water lost to this drainage from mine operations during summer months, not increase flows. "Too much" water will not result. Little changes in water availability are expected. See response to Comments 33, 87 and 83 above.

Comment 100

The DSEIS states that "the water quality *would be assured* because the treatment system would treat it as needed." The DSEIS goes on to say, "as a contingency measure, the amount and location of delivery of water could be adjusted, based on monitoring."

Response

This comment is not clear enough to formulate a response. It appears to merely be repeating what is in the preliminary EA and is therefore non-substantive.

Comment 101

Which wetlands created by the seeps and springs on NFS land are above the drawdown in the water table are expected to have reduced flows or go dry from the water discharged into the infiltration gallery? At what elevation would the broadest part of the cone of depression intersect the slope of the mountain? The EA should describe how long each of the impacts of the mine, such as dewatering are predicted to last, and what the basis is for that prediction. What flows reduction from water going into the infiltration gallery should be expected from the Roosevelt Adit. Without a clear plan of how, by who, when and to what specific quantity flows would be augmented there is no way to understand what the impacts to wetlands would be or if mitigation would be effective.

Response

See response to comment 93 above. Forest Service activities will not impact water, wetlands, seeps or springs above the infiltration and augmentation sites. Reduced flows to the Roosevelt adit are a result on mine dewatering on private lands, not activities on NFS lands.

Water augmentation on NFS lands is designed to partially offset reduced flows from mine dewatering during the summer months at this site, which has been clarified in the EIS. The groundwater table will actually rise at the infiltration site.

Comment 102

Cumulative Impacts (page 134) The impacts of "shifting the water from one watershed to another" should be quantified. What would the improvements be to fish and other aquatic organisms in Toroda Creek and its tributaries and what would be the impact of reducing the water available on fish and aquatic organisms and habitat in the Myers Creek basin and its tributaries. The EA should contain a complete water balance. How much water is expected to be released and where? What are the expected water losses to wetlands, seeps, and springs that augmentation is expected to offset during dry months.

Response

Forest Service activities will not impact water in the Myers Creek basin or its tributaries and therefore would not affect fish or aquatic organisms in Myers Creek.

Comment 103

The EA should be clear that the cumulative impacts of the water infiltration system when looked at with the impacts from the mine and specifically the dewatering of the mountain and water quality concerns would be significant. The EA needs to fully quantify the aquatic impacts in the other drainages on Buckhorn Mountain and recognize that the proposed action does not come close to mitigating the impacts thereby necessitating that they be considered significant, any addition to these significant impacts would be considered cumulative.

Response

Forest Service activities will not impact water, wetlands, seeps or spring above the infiltration gallery and water augmentation sites. Impacts to seeps, springs and wetlands from activities on National Forest System lands are disclosed in the EIS.

Comment 104

Other Direct/Indirect Effects Common to All Action Alternatives, (page 135) The failure of the EA to recognize that there are significant unmitigated wetland and aquatic Resources impacts are major flaws in the document.

Response

This comment lacks enough information to formulate a response. To the extent it is explained by other comments in this letter, please see those comment responses.

Comment 105

Page 3.10-19 of the DSEIS states, A decrease in flow during the winter months has the potential to affect resident brook trout by exposing spawning gravels and reducing intragravel flow during the egg incubation period. There is no indication that this impact would be mitigated. It should be included in this section.

Response

This is a comment on the State's DEIS. However see response to comment 72 above. Flows in the portion of Nicholson Creek and Marias Creek containing fish habitat will be little different during winter months than existing flows.

Comment 106

The EA makes the case that sedimentation is bad for fish and that sediments during at least the first three years could be expected. Prevention in subsequent years is dependent on vegetation growth. If monitoring indicates a problem then shrubs or trees would be planted. This is an inadequate solution. It takes years for trees and shrubs to grow and in the meantime fish are being harmed or dying. In addition it is recognized that elevated levels of salts and chlorides could be impacting fish and amphibian. If fish or amphibian mortality is detected, lignin sulfonate could be used which is another waste product with few relevant guidelines are available for minimizing environmental risk (see bottom of page 161).

Response

Sediment control structures are planned to intercept most sediment. Although shrubs and trees will be used in reclamation, the EIS has been clarified to indicate that shrubs and trees are not used for sediment control and not proposed to reclaim road cut and fill slopes. The commenter is correct in stating it takes years for these to grow, which is why immediate and short-term measures rely on interception of sediment and establishment of grasses to dissipate energy so that sediment settles out before reaching the stream. Additional mitigation measures have been added to the Forest Service's requirements to minimize sediment. Effects from lignin sulfonate, a backup strategy for dust suppressant has been added to the hydrology and aquatics sections.

Comment 107

The aquatic impacts to Marias and Nicholson Creek from reduced flows from dewatering and refilling of the Buckhorn Mountain aquifer should be included in the EA. If, how, and when those impacts would be mitigated should also be made clear.

Response

Based on steady state and transient flow modeling, flows to Marias and Nicholson are not expected to change substantially below the water infiltration and augmentation sites during operations as a result of activities on National Forest System lands. See response to Comments 33, 83, and 87 above.

Comment 108

The EA should include information about the changes that have occurred over the years regarding the water flowing out of the Roosevelt adit.

Response

See response to comment 66 above.

Comment 109

Page 85 and 136 Different expected chloride levels in streams are presented .001 ppm and .015. If the level is .015, then that would indicate a potential impact to trout species which have a sensitivity to chloride concentrations as low as 400 ppm or .0004. Chloride levels leaving the infiltration gallery are projected to be about 14ppm. A discussion linking and clarifying the values would be helpful.

Response

The number on page 85 of the preliminary EA is actually given as .0001, not .001. The second number is given as 0.015 ppm which is below the 400 ppm. This whole section of the FEIS has been completely updated as a result of an error in the chloride calculations in the Forest Service DEIS and higher expected chloride values in WADOEs FSEIS and NPDES permit.

Comment 110

Alternative B and BI: Marias Creek Haul Route (page 137) The EA should quantify how much of the creek is adjacent to the road and not wide enough to intercept and hold sediments.

Response

The miles of road construction/reconstruction within riparian habitat conservation areas on National Forest System land or rights-of way is shown in the chart at the end of Chapter 2. 3.9 miles of road is within RHCAs in Alternatives B/B1 and 2.4 miles in Alternative C, and none in Alternative D. Acres of construction in riparian habitat is also shown in this table, 0.1 acres in Alternatives B/B1, 0.2 acres in Alternative C, and 0 acres in Alternative D. Under Alternatives B/B1, according to engineering specifications, the closest point that the road is to Marias Creek is about 5 feet, so in all cases there will be enough room between the ditch relief culvert outlet and the stream for appropriate sediment structures. This would not be true for portions of Alternative C since Nicholson Creek is directly adjacent to the road in several locations. Few sediment control structures will be needed in Alternative D because of the absence of live water on National Forest System lands. This has been clarified in the EIS.

Comment 111

The EA states that additional sediment in Marias creek could result in the **loss of fish populations** and that modeling indicates a 34% increase in sediments but that mitigation would reduce this. The EA should make some attempt to rate the effectiveness of this mitigation. Considering that the impact of additional sediments could be the loss of fish populations, there

should be a high likelihood of success.

Response

Chapter 2 of the preliminary EA and the EIS rates effectiveness of sediment control structures as high. Additional information on effectiveness has been added to the hydrology section of the EIS.

Comment 112

The EA has different solutions in different places. In this section rocks, shrubs and/or trees would be planted along the silt fence and page 66 states that if sedimentation occurs activities causing it would be suspended or modified.

Response

The aquatic section has been modified to delete the reference to shrub and tree planting for sediment control. Most sediment control measures are listed under mitigation measure WQ-1 in Chapter 2.

Comment 113

Both are unrealistic considering the length of time and addition sedimentation planting would cause and transportation of ore is integral to the project.

Response

This statement is unclear and it is not possible to formulate a response.

Comment 114

Additional mitigation could include excluding cows from the creek altogether.

Response

Cows would be excluded from the majority of Marias Creek through range fencing. Areas where they will not be excluded will generally be hardened so access would cause little sedimentation. Other portions of Marias Creek are less accessible to cattle because of natural barriers.

Comment 115

How much of the approximately 8 acres of wetland that would be excavated for widening the road or the new road cuts.

Response

Only 0.1 acre of wetland would be filled for widening roads and road cuts and fills in Alternatives B/B1, 0.2 acres in Alternative C and 0 acres in Alternative D, as stated in the preliminary EA on page 82 and again in the DEIS on page 97. This is further discussed in the hydrology section of

Chapter 3 on pages 145, 150, and 152 of the DEIS.

Comment 116

What is the likelihood that the wetlands would reestablish and occupy about the same area? How much of the wetland function would be reduced or lost? The reductions include flood water detention and retention, which allows peak flood flows to be reduced, groundwater recharge and discharge and water quality improvements. These impacts should be quantified and considered in developing mitigation. How would the accumulation of salts and dust suppressant impact the health and function of the wetlands? How long would it take for the wetlands to recover? What is the likelihood of success? How would noxious weed introduction from the Beal pit impact recovering wetlands? What wetland function would be impacted by culvert placement? Of the 160 feet of wetland that would be filled no mention is made of mitigating the impacts.

Response

These wetlands are not expected to reestablish because of road drainage features which will divert water through the ditch relief culverts and into Marias Creek after passing through sediment control structures. The Marias Creek road would be returned to its present 17 – 18' width with intervisible turnouts during reclamation. Wetland creation mitigation is required above both Marias Creek culverts on Forest Road 3550. Information regarding the effects of this creation has been added to the hydrology, aquatics, botany, and wildlife sections of the EIS. The botany section discusses the effect of salts on wetlands. Only noxious weed free gravel would be permitted for road construction. See response to Comment 32 above.

Comment 117

How would the Forest Service ban on fill that contains noxious weed seed be enforced?

Response

Fill would not be brought in from outside sources, and rather would be from road excavation on-site during road construction. As such fill will only contain noxious weeds, if present, that are already on-site. The top 12 – 24 inches of soils would be removed off any gravel sources proposed to be used for rock on NFS lands thus effectively eliminating noxious weed seed from the gravel source.

Comment 118

Cumulative Effects for All Action Alternatives (page 142) It does not seem that any real attempt was made to look at the cumulative impacts of this proposal on aquatic resources. This section is totally inadequate. The EA should consider present, and foreseeable future grazing impacts as well as foreseeable future mining impacts especially considering the almost 200 mining claims Crown controls in the area. Drought conditions should also be considered.

Response

The aquatic section discusses past, ongoing and future grazing effects on the aquatic resource on

pages 179 and 180 of the draft EIS. The aquatics cumulative effects section starts on page 179 of the draft EIS and continues until page 183. This section of the document was rewritten between the preliminary EA and the draft EIS. Future potential mining has not been proposed in this area and therefore is not a reasonably foreseeable future action under NEPA.

Comment 119

The cumulative impacts of the Forest Service changing the course of water flowing from the Roosevelt mine adit into Marias Creek so it would flow into Nicholson Creek for the previous mining proposal should be considered. If this is controversial, the history of changes to the flow of said waters should be discussed in the EA. In addition, the EA should discuss the possibility that the cumulative impacts of past mining exploration has created preferential flow paths and change the hydrology of the area.

Response

The Forest Service found no basis for the claim that flows from Marias Creek were diverted to Nicholson Creek in 1992. According to Forest Service records from that time, records from the 1980s indicated that water coming out of Roosevelt adit flowed into Nicholson Creek. The FEIS has been clarified to recognize that flows can be diverted through road construction and maintenance.

Comment 120

Ongoing Activities (page 143) Grazing should be considered in this section.

Response

The effects of ongoing and future grazing is discussed in the “past actions” section to avoid duplication.

Comment 121

Reasonably Foreseeable Future Action (page 145) The assertion that there are no cumulative impacts from surface water baseflows that are expected to would decrease in Marias and Nicholson Creeks effecting the viability of the fry and egg survival because road construction has no impact on baseflows is absurd. The infiltration gallery is an integral part and directly linked to dewatering of the mine and together formulate the cumulative impacts. The same goes for the Toroda Creek and Upper Myers Creek watersheds.

Response

Forest Service project activities will increase, not decrease flows in Marias and Nicholson Creek. However, it is recognized that water infiltration and augmentation is designed to offset decreases in flows caused by the mine. Based on predicted changes in average baseflows in the Department of Ecology’s FSEIS for the Buckhorn project, effects on Marias and Nicholson Creeks below the infiltration gallery and augmentation sites are small. Flows at SW-7, South Fork Nicholson Creek, are expected to increase by 14 gpm in the spring (high flow) and 29 gpm in the winter (low flow) and decrease at SW-8, Marias Creek, by 1 gpm, or less, in the spring and

winter, including water discharge to outfalls 001 (infiltration gallery) and 002 (Gold Bowl) (Table 3.7-8 FSEIS). Flows in Gold Bowl will decrease by 1 GPM during the spring and increase by 14 gpm during the winter due to the discharge of an average of 24 gpm of unused water produced from the mine in the spring and winter, but this is not as a result of any actions on NFS lands.

Comment 122

Biological Evaluation (page 145) This should be adjusted to reflect these comments.

Response

To the extent that the Forest Service agrees that adjustments to previous sections need to be made, those same adjustments will be made in the BE.

Comment 123

Other issues that should be included in the EA
In addition to reclamation and environmental protection costs, performance securities should be required to also cover the cost of environmental damages that could occur.

Response

The Forest Service does not have the ability to require performance securities for environmental damages, however the State of Washington will be including this through it's permitting process and will hold a performance protection security.

Comment 124

The mine site should include the loss of hunting and other recreation uses.

Response

Chapter 3 of the EIS discusses the impacts to recreational uses, including hunting. Hunting is the predominate recreational activity occurring in the immediate vicinity of the proposed mine site. The most important recreational impact would be the result of people generally not wanting to drive the same roads as the ore, supply, and employee traffic; not wanting to recreate adjacent to these roads due to noise and dust; and the effects of the project on recreational hunting, and dispersed camping associated with this hunting (page 226, draft EIS).

Comment 125

Animal Interaction with traffic and associated road kill of wildlife would increase on more roads than Marias and Toroda Creek Roads.

Response

The wildlife section of the EA discusses the effects on wildlife of increased mine employee traffic on other roads in addition to the ore haul route and additional information has been added in the EIS. The effects would be of a similar type as that

from ore haul, including road kill and disturbance but likely more dispersed (more potential routes) than caused by the ore trucks.

Comment 126

The EA should include a table of all of the anticipated fish and wildlife impacts and the mitigation measure that is proposed to offset that impact. The table should include short-term, long-term, and perpetual impacts.

Response

See response to comment 3 above.

Comment 127

The EA fails to include a Mitigation Plan.

Response

The mitigation plan for the EA is set out in the Mitigation section in Chapter 2. A more detailed mitigation plan for water monitoring is included in the appendix of the EIS. More detailed mitigation plans are not required by NEPA. This is also settled caselaw that NEPA does not require agencies to mitigate adverse environmental effects. As the U. S. Supreme Court found in *Robertson v. MVCC* [490 U.S. 332 (1989)]:

> While a reasonably complete discussion of possible mitigation measures is an important ingredient of an EIS, and its omission therefrom would undermine NEPA's "action-forcing" function, there is a fundamental distinction between a requirement that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated and a substantive requirement that a complete mitigation plan be actually formulated and adopted. Here, since the off-site environmental effects of the project cannot be mitigated unless the nonfederal government agencies having jurisdiction over the off-site area take appropriate action, it would be incongruous to conclude that the Service has no power to act until the local agencies have finally determined what mitigation measures are necessary. More significantly, it would be inconsistent with NEPA's reliance on procedural mechanisms - as opposed to substantive, result-based standards - to demand the presence of a fully developed mitigation plan before the agency can act.

The information presented in the DEIS and FEIS is adequate to meet this standard.

Comment 128

Water rights are an important part of the affected environment yet not mentioned in the EA. Senior water rights would be impacted by a shift in the hydrologic divide. While water rights are not generally the subject of an EA, when it is well know that a project would have significant enough impacts to change the hydrology of a mountain, impairing senior water rights and the public interest and this has been established as a 'conclusion of law', and the FS is analyzing the direct, indirect, and cumulative impacts of a pipeline and discharging the water onto NFS land, it should fall within the scope of the EA.

Response

Water rights are the purview of the State of Washington. Forest Service activities would not affect water rights. See also response to comment 5 above.

Comment 129

The cumulative impacts sections fail to take a hard look at foreseeable future events. It is reasonable to assume and foresee that improved access to previously inaccessible areas will result in increased development such as timber sales and mineral development.

Response

All reasonably foreseeable future actions (i.e. those that have been “proposed”; see Kleppe v. Sierra Club, 1976) have been considered in the appropriate cumulative effects sections. Speculation regarding what may happen in the future is not appropriate as cumulative effects under NEPA.

Comment 130

Again, the PCHB, weighed in on this one, stating in its decision at issue #14 "Ecology never considered the cumulative impacts of BMG's new water rights and existing and future demand from exempt wells and reasonable foreseeable development projects, either independent of or prompted by the mine's development." A reasonable assessment of future development should be part of the EA. Drought conditions should also be considered.

Response

Although the PCHB may have stated this, the PCHB is a State entity, not relevant to Federal decisions. Reasonable foreseeable future actions have been defined in Federal court as actions that have been proposed. No development projects have been proposed that have overlapping effects with the Buckhorn Access Road and Related Activities Project, except the Buckhorn Mountain (Mining) Project on private lands. There has been some discussion of placing the land in a conservation easement at the end of mining, but at this point, the proponent has indicated they will convene an advisory group to determine the final status of the private land on the mountain.

Comment 131

The EA fails to adequately consider the potential impacts of hazardous materials in the various locations and road conditions, potentially impacting bodies of water, fish and wildlife. These concerns should be addressed more accurately in the EA.

Response

Mitigation measures for hazardous materials and spills are included in Chapter 2 of the preliminary EA and EIS (SP-1 to SP-4). Potential for hazardous material spills were considered in the preliminary EA and the EIS at the end of Chapter 3 and are described in the effects writeups for wildlife and aquatics, although this information has been

supplemented in the EIS. A spill prevention plan would be required to prevent such spills and would contain a response plan to contain any spills. These should be highly effective in preventing spills, or containing any unlikely spills that may occur.

Comment 132

The EA fails to consider the impacts of the mitigation itself. Mitigation plays a pivotal roll in this proposal and should be fully included as a focus of the EA.

Response

Effects of all mitigation measures are analyzed in Chapter 3 of the preliminary EA and EIS. The Forest Service only analyzes impacts with mitigation in place because we consider mitigation to be an integral part of each alternative.

Comment 133

The EA should analyzes and compare whether reducing the width of the road proposed for Marias Creek would minimizing transportation impacts of the project.

Response

See response to comment 6 above.

Comment 134

The EA cannot be considered complete because it does not contain a reclamation plan for the Buckhorn Mine itself, and there is no corresponding estimate of the reclamation costs, post-closure monitoring, maintenance, and water treatment plant operating costs, and no analysis of whether the mine operator can meet the terms of the financial surety that would be required.

Response

A reclamation plan will be required as part of the Plan of Operations (POO). The "Reclamation Measures" section of Chapter 2 specifies the reclamation objectives for the project. As part of the approval of the POO a reclamation bond amount would be determined. Performance security objectives and requirements are disclosed in the "Performance Security" section of Chapter 2. Most reclamation would be done concurrent with construction/reconstruction of the road. The author of this letter litigated this point in Federal Court on the preceding Crown Jewel Mine EIS and the Federal District and Ninth Circuit Courts agreed with the Forest Service that the level of detail in the EIS was appropriate. This is settled case law under the Supreme Court decision *Robertson v. Methow Valley Citizens Council* (1989). In this case the Supreme Court found that:

> NEPA does not impose a substantive duty on agencies to mitigate adverse environmental effects or to include in each EIS a fully developed mitigation plan…While a reasonably complete discussion of possible mitigation measures is an important ingredient of an EIS, and its omission therefrom would undermine NEPA's "action-forcing" function, there is a fundamental distinction between a requirement that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated and a substantive requirement that a complete mitigation plan be actually formulated and adopted.

Comment 135

A geochemical analysis of the rock in the proposed gravel pit should be done to fully understand what the impacts of building and reconstructing the Marias Creek Road would have on water quality and fish habitat.

Response

A sampling and analysis program at Beal pit tested sand and gravel deposits to a depth of 80 feet (Golder, 2004, 2005). The investigation concluded that Beal deposits have a relatively uniform chemical composition, are not potentially acid forming and do not contain or leach anomalous amounts of trace metals.

Comment 136

In addition, the gravel pit is purported to be infested with noxious weeds. The impact of using noxious weed infested gravel should be fully analyzed and alternatives to minimize, reduce or mitigate the impacts should be proposed.

Response

See the response to comment 32 above.

Comment 137

The EA should clearly state how much water would be dewatered from the mountain. This information is needed because all of this water, except what would be consumed would be pumped to NFS land. In addition, how the water that would be pumped out of the mountain would be treated for nitrates and other contaminants before it would be pumped to an infiltration gallery or to replenish depleted stream flows should be fully analyzed since it is integral to assuring what the impacts from the infiltration gallery would be. This is all part of the mining process that the FS cannot ignore in the analysis of the related activities.

Response

See response to Comments 1 and 39 above.

Comment 138

What mechanism would be used to insure that supplies and employee would use the routes described in the EA?

Response

See response to Comment 92 above for supplies. Employee traffic would not be regulated except that snow plowing would only be approved for the ore haul route, and possibly the Cow Camp route. See mitigation measure TR-1 in Chapter 2. The use of other routes for supply and employee access is also discussed in Chapter 2 in the section Components Considered but Eliminated from Detailed Study and dismissed under Supply Haul Routes and Employee Transportation.

Comment 139

The EA should require that only seeds from native plants be used in all plantings.

Response

The Forest Service proposes to utilize a seed mix that includes both native and non-native seed since aggressive re-vegetation is desired to control erosion and the sedimentation of streams, and prevent the establishment of noxious weeds in disturbed areas. Use of native seed alone would not meet the desired ground cover success standards in the three years desired. All are already present in the area and most were used for prior reclamation at the Buckhorn Mountain Mine site. The seed mixes proposed meet the WADFW definition of native seed since all are already present in the area.

Comment 140

The DSEIS for the proposed mine predicts it would take 25 to 60 or more years for the water table on Buckhorn Mountain to reach equilibrium. Many times water quality problems don't start for 60 years. Post-closure monitoring and mitigation would be critical in maintaining water quantity and quality and it should be expected to be maintained for at least 60 or more years. The EA should be fixed fully reflect this time frame.

Response

All mitigation permitted by the Forest Service under the Plan of Operations is expected to be completed within 3-5 years post mine closures, which is the time span examined by each resource. Water monitoring for mine activities on private and State lands would be allowed on NFS lands for many years but such monitoring has insignificant environmental effects.

Comment 141

An environmental monitoring plan, including wildlife and aquatic resources mitigation monitoring should be developed. In addition, the responsible parties for collecting, evaluation and distribution of data should be identified.

Response

Additional information regarding monitoring of activities on NFS lands has been included in the EIS. In most cases, the Proponent will be responsible for the completion of the monitoring with oversight from the agencies. See response to comment 134 above.

Comment 142

The EA should consider the traffic, noise, dust and visual quality changes could discourage current and future residential or other low-intensity uses along the proposed Marias Creek haul route.

Response

The Marias Creek route on NFS lands is almost entirely surrounded by NFS lands, which cannot be used for residential purposes. To the extent that other low intensity uses appropriate for NFS lands such as recreation are affected, those impacts are displayed in the appropriate resource sections of the preliminary EA and EIS. There is a small amount of private land at the base of Marias Creek and at Cow Camp. Effects on traffic, noise, dust and visual quality are described in the transportation, noise, air quality and scenery sections of the preliminary EA and EIS.

Comment 143

The EA fails to acknowledge the impacts to community economic development efforts highlighting the scenic beauty and recreation opportunities of the areas rural character for tourism that allowing 5 to 7 trucks a minute to use Marias Creek Road would have. The indirect effects of this proposal on land use was expressed as a large concern by many of the people who would be most impacted by this proposal. The EA should address these concerns not simply mention them.

Response

Effects on scenery and recreation including scenic byways are disclosed in the preliminary EA and EIS in Chapter 3 under those resource sections. Most recreational use of the Buckhorn Mountain area is related to hunting and firewood cutting and less so to the recreational opportunities of the areas rural character for tourism.

Comment 144

The EA should look at the cumulative impacts that other or additional exploration could be developed using the access road. The EA fails to mention or consider the 189 mining claims that the proponent has in the area. The public has a right to know the possible impacts of foreseeable future projects that could affect NFS land in the area that the EA fail on this account. The EA should at least disclose the price of gold that was used to determine what part of the microscopic gold is profitable so the public can determine if expansion could be expected.

Response

The preliminary EA discusses the potential for mine expansion on page 340. The draft EIS discusses the potential for mine expansion on pages 401 and 402. This section has been updated in the EIS. No information or data indicate economic mineralization in the skarn north or west of the proposed mine to expand in those directions. While it is possible that during mining the Proponent could explore adjacent areas for potential replacement reserves, it would be highly speculative to try and guess what the results of such exploration might be. See also response to comment 130 above.

Comment 145

Ore trucks should be covered to reduce rocks and dust.

Response

Ore hauling over state and county roads (paved and unpaved) associated with Kettle River mining operations has been ongoing since 1989. Experience has shown that fugitive dust originating from uncovered ore in the truck beds is minimal due to the coarse nature of the ore material and the tendency for fines to sift quickly below a coarse surface layer. Rocks are not expected to fall off ore trucks.

Comment 146

The EA anticipates increases of noise to be right up to the limits allowed by state law. However, the noise document states that baseline ambient sound levels INCLUDE the traffic from the K2 mine (although that mine has been closed for months). These "ambient sounds" of K2 mine traffic, when taken out of the equation, would make the increased sound of traffic on and off the proposed mine site a "very serious impact" to the quality of life in the community. The truck noise from K2 should not be considered in the baseline and landowners need to be justly compensated for these noise impacts.

Response

The traffic sound levels, including the K2 mine traffic, were collected and used to predict the expected traffic sound levels for each location, independent of the measurements taken in the field, using the Federal Highway Administration noise models. These sound levels were used to verify the model which was used to predict sound levels on National Forest System land. These predictions were compared against ambient sound levels measured on, or near National Forest land, which the K2 mine traffic did not affect. This comment should be addressed to the State of Washington since it refers to ambient sound levels on the K2 mine haul route and not National Forest System land.

The Forest Service has no authority to require compensation of landowners for noise impacts. The effects on landowners along National Forest System roads are displayed in the Noise section of the preliminary EA and EIS.

Comment 147

An independent, local citizens group should monitor noise and be empowered to enforce noise

limits in their community.

Response

No “communities” are found on NFS lands so this type of monitoring would be outside the scope of the Forest Service analysis. This comment should be addressed to the State of Washington.

Comment 148

These actions could include requiring heavy-duty brake mufflers, further limiting of the hours of operation, and monetary compensation to mitigate impacts landowners seriously impacted by noise.

Response

This comment should be addressed to the State of Washington since it seems to mostly refer to ore haul off National Forest System lands. On National Forest System land, mufflers would be required on compression brakes on ore haul trucks as noted in mitigation measure NO-1. Ore haul trucks would also be equipped with “quiet type” mufflers to reduce sound levels, NO-1.

Alternatives B1, C, and D all examine alternatives to further limit the hours and days of operation including limited haul hours for loaded and unloaded ore trucks to 6:00 a.m. to 6:00 p.m. on National Forest System lands and limiting haul to 5 (Alternative D) and 6 (Alternative C) days per week.

The Forest Service has no authority to require compensation of landowners for noise impacts. The effects on landowners along National Forest System roads are displayed in the Noise section of the preliminary EA and EIS.

Comment 149

Who's job would it be to monitor noise impacts to Mule deer? With so many ore hauling truck, with trailer, on the haul road all the time year passing through mule deer winter range who would determine if engine-braking noise is determined to be a problem. What would be the extent of impact to mule deer? Is there is a study proposed to attempt to determine the impact? The use of specialized mufflers could reduce the impact on the mule deer. Specialized mufflers should be required on all of the haul trucks.

Response

The Forest Service does not have any plans to monitor or study noise impacts to deer. Quiet type mufflers, and compression brake mufflers are required. The EIS uses the 2004 Gaines, et al. study to describe expected impacts to deer. See response 148 above. An option to limit haul by loaded and unloaded trucks to ½ hour after sunrise until ½ hour before sunset, but no longer than 6:00 a.m. to 6:00 p.m. was considered but eliminated. This is further discussed in the Components Considered but Eliminated from Detailed Study section of Chapter 2 on page 22 of the draft EIS.

Comment 150

Soils (page 101) This section fails to consider the impacts of significant rain and rain on snow events that occur commonly in this area and could cause erosion and exacerbate mine pollution. The impact of large rain events and rain on snow should be included.

Response

Rain on snow events are relatively rare because the air masses stay at or below freezing during winter storms, so accelerated snow melt along with rain usually does not occur. Short high intensity thunderstorm events do occur in the summer time and are considered in this analysis. Rain-on-snow events are discussed in the hydrology section of Chapter 3 under Surface Water Hydrology, page 126 and 127 of the draft EIS. Peak flow records for several USGS stations near Republic, Chesaw, Ferry, Laurier, and Tonasket show that one station experienced peak flows in the winter in 1974. Another station had winter-time peak flows in 1973, 1974, and 1981.

Comment 151

Erosion of cut-and-fill slopes should be addressed. The EA should include other sediment control structure, like sediment settling areas, that would increase stream protection from sediment and polluted road runoff through culverts more than riprap.

Response

Erosion of cut and fill slopes is part of the WEPP modeling. Additional sediment control measures have been added in the EIS. Ditches will be vegetation lined. No riprap is planned. See mitigation measure WQ-1 in Chapter 2 for a partial list of erosion/sediment control measures required on National Forest System lands. Concurrent reclamation of road cut and fill slopes that will not be further disturbed (road cut and fill slopes on NFS lands below Forest Road 3575-120) is also required. Ground cover of 60% is required by the third year or replanting would take place until this standard is met. Interim reclamation would be required on cut and fill slopes that would be disturbed during final reclamation (infiltration gallery pipeline, and portions of the road cut and fill slopes on the portion of the road above Forest Road 3575-120).

Comment 152

How is the stability of the Toroda and Kettle River roads to be maintained considering the addition of 100 large ore truck per day over 7.5 years.

Response

The project activities planned for National Forest System lands would have no effect on the stability of these roads. These are County roads and are not within the purview of the Forest Service.

Comment 153

Vegetation (page 298) We are concerned that the riparian vegetation will be impacted by haul route traffic and de-watering caused by widening the road. There are several rare plants, such as the northern bog orchid and moonwart, that should be considered.

Response 154

The effects to vegetation, including rare plants are considered in both the Forest Vegetation and Botany sections of the preliminary EA and EIS. Both *Botrychium crenulatum* (moonwart) and *Platanthera obsusata* (northern bog orchid) are specifically analyzed.

Comment 155

We do not find in the report what the likelihood of the BMP's being implemented and maintained are. Past projects have never had 100% effectiveness and this is unlikely to break that precedent, so we would like to see an assessment of how effective the BMP's will be over time and how that will be monitored and funded.

Response

All mitigation listed in Chapter 2 is an integral part of the alternatives. BMPs are listed as high effectiveness based on IDT and literature review. High means the desired results are achieved more than 90% of the time and this is documented or obviously so. Effectiveness of mitigation is included with each mitigation measure and this effectiveness was further estimated in the use of the WEPP model in the hydrology section of Chapter 3. The Hydrology section estimated the effectiveness of these mitigation measures to be greater than 99% effective at preventing sedimentation of Marias Creek under Alternatives B and B1. Not all mitigation measures are monitored, but monitoring that is required is part of the monitoring section of the EA. Monitoring of cut and fill slopes and silt fences and straw bales is required by the Proponent on NFS lands for this project, and would additionally be monitored at least monthly by Forest Service personnel. This is further discussed in the monitoring section of Chapter 2.

Comment 156

Dust is mentioned as impacting plant photosynthesis [but the EA fails to quantify or even estimate the actual impacts],

Response

Information on the effect of dust on forest vegetation was included in the preliminary EA. Additional information has been added to the botany section of the EIS.

Comment 157

and weeds are mentioned as moving into disturbed sites, but the EA fails to quantify or even estimate the actual impacts, stating they would be small. This is not rigorous science and we ask

that the impacts of dust and weeds be quantified, or that the comment that the impacts would be "small" be backed up with analysis and research.

Response

Disturbance acres by alternative range from 28 to 60 as disclosed in the preliminary EA and DEIS (the NFS disturbance acres were decreased in the final EIS because it was discovered that the Forest Service did not have the road right of way through DNR lands). All disturbance areas have the potential for invasion by noxious weeds, although prevention mitigation measures described in Chapter 2 should be highly effective in preventing and controlling noxious weeds. Noxious weeds still may invade and would be controlled as necessary under existing integrated weed management decisions. This is the rationale for determining that the potential for noxious weed invasion is small.

Comment 158

This area is part of the former North Half of the Colville Reservation and cultural plants were important and their distribution and abundance ensured by treaty rights. The EA inadequately addresses the impacts on cultural plants, fails to inventory the plants, and does not discuss whether there has been communication with the Colville Confederated Tribe about plants on site and along the haul routes.

Response

Tribal consultation on this project has been ongoing as described in the consultation section of Chapter 1 of the preliminary EA and EIS. The Forest Service contacted the Tribes specifically regarding plants of interest to the Tribes on this project and effects to those plants are described in the Botany section of the preliminary EA and EIS.

Comment 159

The mitigation measures do not address the likelihood that weeds will invade newly disturbed sites and what the action will be when noxious weeds occupy those sites. A mitigation measure to require immediate restoration of disturbed sites with native plants should be included in the EA.

Response

See response to Comment 157 above. All mitigation measures are rated for effectiveness. A prevention strategy for noxious weeds is included in the mitigation measures including seeding disturbed sites and washing equipment, as are corrective actions such as implementing the Forest's Integrated Weed Management decisions. A vegetation management plan for controlling noxious weeds is included in the project file. Interim and segmental reclamation is required to reduce erosion and potential water quality degradation and to prevent the spread of noxious weeds. Monitoring for possible weed infestations would occur on disturbed and newly reclaimed land and as necessary weed control measures to eliminate noxious weeds would be implemented.

Comment 160

The 61.5 acres of cleared area along the Marias Creek Road is an irreversible loss of riparian and upland habitat, which is mentioned in the DSEIS.

Response

The comment appears to be directed at the State's DEIS. Impacts to riparian and upland habitat from activities planned on NFS lands are described in the aquatic, forest vegetation, and botany sections. For the Marias road, these impacts are not irreversible, although they are irretrievable. This has been added to the EIS.

Comment 161

The consequences on species viability is not measured or discussed in the EA.

Response

Effects on species viability are specifically addressed in the wildlife, botany, and aquatic resource sections.

Comment 162

It is also not discussed what would happen at the end of the project with this road.

Response

At the end of the project, gravel from the stream side of the 3550 and 3550-125 roads would be placed on top of the gravel on the ditch side of the road (except for turnouts and stream culvert crossings), and the stream side of the road would be ripped and seeded. The road would be returned to its present 17 – 18 foot width. Full restoration to a single lane road is not included because the IDT made the determination that effects from restoring the road to a one-lane surface would cause far more impacts than retaining the road as a double lane road. This is stated in the reclamation section under Alternatives B and B1. The new section of road from Cow Camp to the mine site would have the width of the running surface reduced from 24 feet to 12 feet, plus intervisible turnouts. How this section of road would be reclaimed varies between Alternative B and the other action alternatives.

Comment 163

We recommend it become a one-way haul road, without widening

Response

Upon receiving this comment, the IDT considered the idea of a one-way haul route. This, of course, would necessitate another road being designated as one-way also. Homes are located along both the Cow Camp and Nicholson roads which would necessitate having two way traffic to the homes furthest up the route, and for safety reasons this would require a two lane road for

those sections. In the case of Forest Road 3575-120 (Cow Camp) this is almost the entire length of the road up to WADNR land. In the case of Forest Road 3575 (the Nicholson Creek road), this would require construction of a two-lane road for about a 2.4 miles of the route. The use of a one-way system of roads would increase impacts to recreation, fish/aquatics, weeds, wildlife, and hydrology, thus it was decided to not consider this option further. The IDT felt that spreading haul over such a wide area would result in much greater impacts than a single two-lane road. This has been added to alternatives considered but not fully developed in Chapter 2 of the EIS in the Components, Considered but Eliminated From Detailed Study, Ore Haul Routes.

Comment 164

and that non-toxic dust abatement be used throughout the life of the project.

Response

Toxicity of the planned dust abatement chemical MgCl is discussed in the Air Quality, Hydrology and Aquatic sections of the EA and EIS and in the baseline reports for these resources. The only fully non-toxic dust abatement is water, which has been found to be between 40 to 85% effective in suppressing the suspension of soil particles for short time periods, but not effective over longer periods. Water can be effective for a period as short as half an hour and as long as twelve hours. Water is generally the most expensive and labor intensive of the inorganic suppressants, and the amount of water required would have adverse environmental effects on the Toroda and/or Myers Creek watershed, particularly outside the irrigation season. Water only is discussed in the Components Considered but Eliminated from Detailed Study, Dust Suppression Techniques in Chapter 2 of the EIS.

Comment 165

Increasing noxious weeds on another 61.5 acres should be compensated for by weed elimination on similar habitat elsewhere and plans to eventually restore these 61.5 acres after the hauling is done should be part of the SEIS and Decision.

Response

Although this comment appears to be directed at the State's DEIS, the preliminary EA and EIS include prevention measures that are expected to be effective in reducing the potential for weed spread, especially when coupled with weed treatment under the Forest's Integrated Weed Management decisions. The EA and EIS do not predict that there would be 61.5 acres of increased weeds. The preliminary EA and EIS only require the section of the haul route between Cow Camp and the patented land to be restored to a single lane road with intervisible turnouts. The section between Toroda Creek road and DNR land would be returned to near its present width with intervisible turnouts.

Comment 166

Transportation (page 90) The EA fails to address spills, spill prevention and spills into aquatic resources and accidents. The DSEIS in Table S-2 on page S-12 (Summary of Environmental Impacts), No Action; "There are existing material spills that occur periodically on the highway.

These spills would continue." Then in the Proposed Action column, "Similar accident as No Action Alternative."

Response

This comment appears to be directed at the State's DSEIS rather than the preliminary EA or the EIS. See response to Comment 131 above. Spills and spill prevention are discussed at the end of Chapter 3 of the Forest Service EIS.

Comment 167

Wildlife (page 203) Disturbance Effects

The wildlife analysis identifies a number of species that are potentially adversely impacted by mine related disturbance, including almost all the species officially listed in the EA as threatened or endangered, sensitive, or management indicators. The wildlife analysis notes that the disturbance impact would extend beyond the immediate footprint of where road construction and hauling would occur. But with the exception of the discussion on migratory birds there is no attempt to quantify how much area would be impacted. There is a critical need to quantify and site-specifically identify the likely habitat area that would be affected by disturbance for each threatened, endangered, and sensitive species as well as management indicator species or guilds. Quantifying the loss of functional habitat is necessary in order to clearly understand the full extent of project impacts, and additionally to help determine whether proposed mitigation measures will be successful or ineffective. For example, the wildlife analysis notes that 'songbird use of habitat within 500 feet of the ore haul route and employee access routes would likely decrease during the construction and operation of the mine (p.290)' due to noise levels above 42 dB. This impact area amounts to 760 acres of NFS lands in Alt. B and BI and 1250 acres for Alt. C. If woodpeckers are impacted by noise disturbance to a similar degree, then the adverse impact to woodpeckers from potentially abandoning suitable snags would be much greater than the 54 acres lost with the project footprint. Mitigation based on replacing lost snags in just the 54 acres would therefore not completely offset the impact. In addition, if snags are created as mitigation within the area affected by high noise levels, then the woodpeckers are less likely to use them and the mitigation would be ineffective.

An additional example involves the impact to deer. The wildlife analysis suggests that 'a full deer cover analysis is not warranted, nor would it be of any use because the percent change would be nearly undetectable (p.265).' This conclusion is based on the notion that only 54 acres are 'ground disturbed' within the affected management areas. Here again, the wildlife analysis does not quantify or identify the site specific area of impact to deer that could occur due to disturbance. Washington Department of Fish and Wildlife comments on the Preliminary EA point out a study from southeast Washington by Perry and Overly (1977) where disturbance impacts to deer extend up to _ mile from the road. This could result in a considerably larger area of disturbance approximately 3800 acres in size within the assessment area versus the 'nearly undetectable' 54 acres.

Response

As discussed in the preliminary EA and EIS in the wildlife section under Mule Deer, a full

deer cover analysis was not done because the acres of ground disturbance, and therefore loss of deer cover, are very small when calculated as a percentage. These percentages are calculated based on entire discrete management areas, so the small number of deer cover acres lost/changed due to this project is small when measured against the entire discrete management areas. This type of calculation for ground disturbance/loss of deer cover is different from a calculation for the acres of habitat affected by noise disturbance from traffic noise and human presence, which would extend well beyond the footprint of the roads and other facilities.

The acres of deer habitat, as well as habitat for other species, affected by the human presence and road noise were calculated based on the models recommended by Gaines et al. (2003). The Perry and Overly (1977) document cited by this comment and the comment letter by WDFW was cited and utilized by Gaines et al. (2003), so it was thereby incorporated in the analysis of this project through use of the Gaines et al. (2003) document. These calculations and analysis have been included in the EIS.

Plowed roads, snowmobile trails, and other routes open to the public within deer winter range Management Areas within the Buckhorn Block of National Forest System lands were used in these calculations. Roughly 2,870 more acres under Alternative B, 1,860 more acres under Alternative B1, 1,119 more acres under Alternative C, and 550 more acres under Alternative D would be impacted in mule deer winter range than are presently impacted.

The wildlife section in the Preliminary EA did not specify that snags created as mitigation would be created in areas away from the ore haul routes. This has been changed in the EIS to specify that snags would be created in areas away from the ore haul route (WF-4, draft EIS). This mitigation measure also requires that the snags created generally be more than 200 feet from open roads. This would reduce the disturbance impacts of the ore haul route and from other open roads on these new snags and thereby enhance the value of these created snags as mitigation.

Comment 168

The wildlife analysis in the mule deer section suggests that road closures in Bear Trap Canyon would 'partially offset the substantial increase in traffic along the ore haul route' for many species (P. 266). Based on Perry and Overly's estimates, the mitigative effects of road closures in the lower elevations of Bat Canyon within _ mile of the ore haul route would be less effective due to being within the disturbance zone from the ore haul route. Consequently the value of the mitigation has been reduced, and this should be addressed in the wildlife analysis.

Response

The lower part of the Marias Creek Road has no seasonal restrictions currently, although the 3550-125 and 3550 roads past the –125 junction are closed December 1 to March 31. The closures in Bear Trap Canyon are designed to offset road density impacts in this deer winter range area. Road closures in Bear Trap Canyon were included to meet Forest Plan direction within the management area 14-18 for road density where new road construction and opening a presently closed road in the winter is proposed. Effects described in the deer section are disclosed with mitigation in place. Effects on wildlife have been supplemented in the EIS by models described in Gaines, et al. (2003). USFWS was consulted regarding this project, and

concurred with the find of “may affect, not likely to adversely affect” on all threatened and endangered species including wolves, grizzly bear and bald eagle, for which deer are an important prey species. Although not included in the above comment, the distance from Perry and Overly (1977) is 800 meters. See response to Comment 167 above. Acknowledgement of the overlap between the acres of disturbance calculated from Gaines et al. and the bottom of the Bear Trap Canyon closures has been added to the wildlife effects analysis in the EIS.

Comment 169

The EA wildlife analysis states (P. 217): "The incremental disturbance effects of this project would be substantial when considered cumulatively, although the effect would be limited to the vicinity around the ore haul route. The disturbance would create a semi-permeable barrier to movement for some wildlife species and would stretchy across most of the Buckhorn Block of NFS lands from east to west. The disturbance associated with timber sales, public traffic, operation of the mine site, and ore haul once it leaves NFS lands would all contribute to road related impacts to wildlife species."

Response

This comment simply repeats what is in the preliminary EA and the draft EIS and does not require response.

Comment 170

The EA wildlife analysis does not adequately address the impacts of the ore haul route once it leaves Marias Creek and NFS lands. The semi-permeable barrier to movement would continue outside the Buckhorn Block of NFS lands and extend along Toroda Creek to the Kettle River until the town of Curlew, and then south to the milling facility and tailings pond near Republic and the North Fork of the San Poil River. In effect this semi-permeable disturbance barrier extends across the forested divide of the Okanogan Highlands, which is the most likely landscape linkage supporting rare carnivore dispersal from Canadian source populations to the southern extension of the Okanogan Highlands.

Response

See response to comment 1. The BA was prepared for threatened and endangered species and examined the entire project and determined that the entire project may affect, but was not likely to adversely affect threatened and endangered species. The semi-permeable barrier already exists on private lands along Myers and Toroda Creeks, and the Kettle and San Poil Rivers, so no change is expected along those routes.

Comment 171

This has potential implications for a number of listed species that need to be addressed, including the following: How will mine related impacts affect movement between grizzly bear recovery zones? How will mine related impacts affect the ability for dispersing lynx to reach the remaining LAU's in the portion of the Okanogan Highlands south of the semi-permeable barrier?

Response

Impacts to threatened and endangered species, including connectivity were analyzed, and consulted on with USFWS for all Forest Service activities and all mine and mill activities, under the requirements of the Endangered Species Act. The Biological Assessment for this project and the mine and mill determined that the project in it's entirety may affect, but was not likely to adversely affect the listed species habitat and range in the area. USFWS concurred with these findings.

Comment 172

The EA wildlife analysis identifies that 'it is not unlikely that during the course of the project, a nest territory or two could be established along the Kettle River (P. 219).' We concur that the Kettle River has the best habitat and fishery for supporting nesting eagles in the areas directly affected by project components. The analysis then states that 'Bald Eagles, if present, may avoid use of the habitat adjacent to the roadway and redistribute to habitat elsewhere within the Buckhorn block of National Forest System lands (P.219).' It appears that the wildlife analysis needs to address the impact of the ore haul route on potential eagle nesting along the Kettle River.

Response

The preliminary EA and EIS consider the effects to bald eagles along the Kettle River. It is discussed in the cumulative effects portion of the bald eagle section. Bald eagles may potentially be disturbed along the Kettle River, although this road currently experiences traffic, including large trucks. The USFWS was consulted on the effects on bald eagles for the entire project, including mine traffic off of NFS lands. The USFWS concurred with our effects determination of "may affect, not likely to adversely affect."

Comment 173

The EA wildlife analysis chronically uses the following rationale- Many species will be affected by disturbance, may avoid use of an undetermined amount of habitat adjacent to the roadway, and will redistribute to habitat elsewhere within the Buckhorn block. Unfortunately this rationale may underestimate the impacts to animals since it is based on two unsupported assumptions: that there is ample habitat/resources in the surrounding area to support an additional animal or home range, and that this habitat is vacant. Both of these assumptions would need to be provided for carnivores attempting to successfully establish a new home range since carnivores characteristically are highly territorial, and resident males defend their home range. Herbivores would need to obtain ample resources in the surrounding area in order to successfully redistribute, otherwise the carrying capacity of the habitat may be exceeded. An inherent weakness in the wildlife analysis is the lack of site specificity regarding the quality and quantity of available habitat, both in terms of what is available to redistributing animals and what will be impacted by mine disturbance and other related project impacts.

Response

The models recommended in Gaines et al. (2003) were used to analyze the wildlife effects of this project, and that analysis is incorporated into the EIS in the wildlife section

of the document. These models take into consideration open roads and other routes used by the public, including the roads used for this project, as well as the amount of habitat impacted by those roads. These analyses are done on scales up to the size of a 5th field watershed, such as the Toroda or Myers Creek watersheds. Habitat was mapped for the entire 5th field watersheds in order to determine the cumulative effects of all the roads within those watersheds on wildlife habitat.

Comment 174

The wildlife analysis needs to assess the additional possibility that the loss of functional habitat will not be replaced in surrounding areas, and that animals will not successfully redistribute. This possibility is supported by the analysis of Wisdom et al. 2000, referenced in the wildlife analysis, which concluded that a decline in available habitat has occurred in the Interior Columbia Basin for species like gray wolf and grizzly bear. Assuming that all animals will successfully redistribute is unsupported, and unlikely. Given the lack of supporting data, it is best to be conservative when dealing with identifying potential impacts to listed species and acknowledge that the habitat may not be available for animals to redistribute, and that they would be a decline in available habitat.

Response

See the response to Comment 174. Also, for species such as the gray wolf and grizzly bear, USFWS has be consulted and have concurred with the effects determinations of "may affect, not likely to adversely affect" for those species. The EIS and BA acknowledge that there would be a decline in available habitat by stating that wildlife may avoid areas near the roadways used by mine related traffic.

Comment 175

Another notion used in the wildlife analysis that tends to downplay the impact of mine related activities is the following statement frequently concluding the cumulative effects write-up for the majority of rare species. "Although this project would add incrementally to the cumulative effects on wolves, the overall effect is likely to be relatively low due to the unlikely presence of wolves (P. 230)." Substitute lynx, grizzly bear, wolverine, fisher, and marten in the appropriate sections. Often this conclusion is preceded by two key observations. One is that current habitat conditions are generally unfavorable to the animal due to impacts such as high road densities. The second is that proposed mine impacts will increase disturbance to the animals and reduce functional habitat.

Response

The meaning of this comment is unclear. For the wide ranging carnivores mentioned in this comment, the preliminary EA and EIS disclose that there are no Lynx Analysis Units or Grizzly Bear Management Units located within the Buckhorn Block of NFS lands. This is due to the lack of suitable habitat within this block of NFS lands. Additionally, the best habitat for wolves, wolverine, fisher, and marten would most likely be provided by the unroaded and undeveloped portions of this block of NFS lands. This is also disclosed in the preliminary EA and EIS. There are very few, recent documented occurrences of these wide ranging carnivores within this block of NFS lands or the surrounding area. The preliminary EA and EIS discuss the possibility that these

carnivores may be traveling through the area between more suitable habitats and that it is possible that these traveling carnivores would be displaced away from the mine related activities.

Comment 176

Ironically the consistent Effects Determination for Alternative A (maintaining current conditions) is either No Effect or No Impact depending on the status of the species. Alternative B, BI, C and D are given either May affect, Not likely to adversely affect, or May impact individuals or habitat, not likely to result in a trend toward federal listing or loss of viability. Looking at the situation objectively, the wildlife narrative appears to be describing that current conditions adversely affecting habitat utilization no longer support occupancy by the animal in question. Logically Alternative A should not have a No Effect or No Impact determination because current adverse conditions (often reflecting the impact of high road densities) may continue to prevent animal occupancy. The statement that the overall effect is likely to be relatively low due to the unlikely presence of the animal really misses the point, and in the process underestimates the impacts from the project. The questions that need to be addressed are the following: Does this project do anything to improve habitat suitability that would reverse the currently adverse condition? If not, does the project adversely affect habitat, thereby making recovery of the species even more problematic. Clearly the wildlife analysis describes a loss of functional habitat resulting from disturbance impacts, exacerbating conditions that make the presence of an animal unlikely now and into the future. This is not an insignificant effect.

Response

The purpose and need for this project is not to improve habitat suitability; although this project may affect threatened or endangered species, it is not likely to adversely affect them. Past habitat alterations, whether they are roads or any other activity, have certainly shaped current habitat conditions. This is considered, by default, when describing the affected environment. Also, past activities were considered as part of cumulative effects. The effects determinations are based on the effects of this project on existing conditions and how the effects of this project *intermix* with the effects of other past, ongoing or proposed activities (cumulative effects). If this project doesn't exist (Alternative A), then this project has no effects that can intermix with other activities and would have no impacts on existing conditions. The preliminary EA and EIS acknowledge that there would be cumulative effects of this project when added to other past, present, and reasonable foreseeable future activities. It is acknowledged that this project may impact individuals or habitats, but when considered across the larger 5th field watersheds or even larger scales, this project would not result in a large-scale species decline or loss of habitat.

Comment 177

Additional Wildlife Issues

The wildlife narrative states that 'With any potential spill, the likelihood of wildlife being affected by contaminated water is low since a spill would be a short-term accidental event. Cleanup would occur according to the Spill Response Plan and it's unlikely that any effects of a spill on National Forest System lands would reach Toroda Creek, although it would depend on the time of year and flows (P.210).' Please include a discussion of the likelihood, and potential impact, of a spill

reaching Toroda Creek during spring runoff.

Response

"Low" doesn't mean "no" potential for effects. Even if a spill did occur, assuming it was liquid, road insloping and ditches would route any spills to sediment control structures, which would stop and prevent more viscous spills from reaching the creek. Non liquid spills could be cleaned up where they occurred, without affecting the creek.

Comment 178

The wildlife narrative suggests that 'Snowmobiling would cause less impacts to wildlife during the winter due to the smaller area disturbed and fewer visits compared to plowing .. .Snow compaction would not be as great compared to plowing and therefore there would be less opportunity for predators and competitors to access habitats in winter that they are usually exclude from due to snow depth (Pages 207-208).' Admittedly, there would be less disturbance associated with fewer snowmobile visits when compared to plowing. But competing predators, such as coyotes, would have access to the same monitoring site areas as a result of snowmobile trails, despite the fact that snowmobile tracks are narrower than a snow plow.

Response

As quoted in the comment itself, the preliminary EA, and the subsequent EIS acknowledge that there would be impacts from snowmobiling, but those effects would be less than if the roads were plowed to the water monitoring sites. The preliminary EA and EIS state that snowmobiling would cause snow compaction and that this would increase access for some wildlife, and go on to compare these effects to that of plowing. The comment author appears to agree with the preliminary EA and EIS statement that snowmobiling would result in less disturbance compared to plowing the roads into the water monitoring sites.

Comment 179

Gaps in the Wildlife Analysis

Wetlands, springs, and seeps are very important habitat features for wildlife. The EA does an inadequate job of site-specifically identifying where these features occur, and which features will be lost during mine operation. A map is needed showing locations of existing wetlands, springs, and seeps, along with a depiction of where sites will be impacted. The wildlife and aquatics narrative needs to address the impacts to wetlands in a more site specific manner.

Response

See response to Comments 65, 79 and 93 above.

Comment 180

The wildlife analysis refers to road closures many times. It would be helpful to have a map showing the roads mentioned in the narrative. Please identify the road closures that will be used to access monitoring wells.

Response

The only road closures required during ore operations are identified on the alternative maps in Chapter 2. In addition, the 3550-130 road would be closed, except for administrative traffic, post mine operations, once the public can utilize the new access road between FR 3575-120 and FR 3550. Road numbers have been added to the alternative maps, as have post project road closures. Roads to all monitoring wells are closed to all but administrative traffic. A map of monitoring well locations has been added to Chapter 2 of the EIS.

Comment 181

The wildlife section states that: "Deicing salts, dust, and dust suppressants can all negatively impact wildlife and their habitats near roadways.. .The chemicals may also directly impact animals due to their toxic effects (P. 212)." Unfortunately there is no more description of what toxic effects are possible. What species are vulnerable to toxic effects? How does it affect listed species?

Response

Toxic effects of dust suppressants depend on the chemicals and species impacted. $MgCl_2$, utilized as a dust suppressant in this proposal, has been documented to cause weight loss in small mammals (Kurata et al. 1989, Tanaka et al. 1994), although the lethal dose of this chemical is relatively high and therefore considered “practically non-toxic” (Fischel 2001). Other effects include skin and eye irritation. Lignosulfonate is an alternative dust abatement chemical that is biodegradable and is added to livestock feeds (Mansfield and Stern 1994, Flickinger et al. 1998). Sodium chloride has been dropped from winter sanding. The effects from magnesium chloride would be limited to the roadway and immediately adjacent habitats. Species federally listed as threatened or endangered were determined to have a “may affect, not likely to adversely affect” for this project. USFWS was consulted for this project and concurred with these effects determinations for listed species.

Comment 182

Both the aquatics and wildlife narrative in the EA assume that state water quality standards will be met from water released from mining operations. However, the EPA review of the DSEIS data points out that treated water exceeds criteria for chromium, ammonia, zinc, and selenium and other parameters. There is a need for a detailed analysis of the potential impacts to flora and fauna from these effluents. What species are vulnerable to toxic effects? How does it affect listed species?

Response

See response to comment 39 above.

Comment 183

Wildlife Mitigation and Monitoring
The way mitigation is described in the wildlife analysis makes it difficult to know how much project impacts have been reduced. The narrative suggests that a mitigation item would partially offset an impact, without saying how much of the impact would be left, or offset. Previous comments have pointed out the need to carefully assess where mitigation will occur to ensure effective results.

Response

The effects displayed in Chapter 3 are with mitigation in place. See response to comment 3, 50, 132 and 168 above.

Comment 184

There are unmitigated wildlife impacts that should be ameliorated, such as using specialized mufflers that reduce noise for trucks hauling ore and supplies.

Response

See response to comment 148 above.

Comment 185

Some mitigation items are discussed in the context that they could be implemented. The EA needs to clearly state what mitigation will occur in order to more accurately determine impacts.

Response

This comment appears to be directed at the State's DEIS. As discussed above in the response to comments 3, 50, 132, 168 and 183 above, all mitigation listed in Chapter 2 would occur.

Comment 186

There needs to be frequent monitoring set up specifically to look for dead animals near roads and dead fish in Marias Creek, in order to assess the possible toxic effects associated with deicing and dust suppressants.

Response

Both of these chemicals are used routinely around the State of Washington, although sodium chloride has been dropped from winter sanding in the proposal. Water monitoring includes magnesium and fish kill will be investigated to determine the reason for death. Other methods of dust suppressant would be used until a determination is made that MgCl is not the cause of death (DEIS, page 80)

Comment 187

Concluding Comment on the Wildlife Analysis
Wildlife disturbance impacts are described in the EA using the term 'substantial'. The wildlife analysis does not quantify the area that could be impacted by this disturbance which clearly extends beyond the 54 acres of the footprint. Previously provided comments on the EA point out gaps in the wildlife analysis, such as describing in detail potential toxic effects, or describing the impacts to wetlands, springs and seeps, or thoroughly discussing the cumulative impacts of mine development. Questions have been raised regarding the effectiveness of proposed mitigation. In general, the contention that 'the incremental effects of this Buckhorn Mountain access road project when considered cumulatively with the other activities would be insignificant (P. 213)' to wildlife is not supported in the EA.

Response

Please see previous comment responses to these comments.

Comment 188

Threatened, Endangered, and Candidate Species; The EA fails to, but should, consider impacts to fresh water mussels and floaters that can inhabit headwater stream in this area. They are imperiled or critically imperiled in this area. (See exhibit #5 attached and incorporated)

Response

Fresh water mussels and floaters are not threatened, endangered or candidate species. However, they are a species of interest to the UWFWS. Information regarding California floaters has been added to the EIS. Information on other mussels is not required for an informed decision.

Comment 189

This table lists several species and a likelihood of occurrence in the affected areas, citing the 1997 FEIS. However the project scope has changed, and this will now be an underground mine, and the ore will be hauled to the Republic mill site. In effect the mining site is smaller and more enclosed, but the affected area from hauling and motorized activity has expanded exponentially. This is a changed circumstance that requires a new look at the interactions of this project with wildlife, and new consultation with federal agencies.

Response

This comment isn't specific about what table is being referred to. However, a site specific analysis has been conducted for this specific project, and consultation has been conducted with the USFWS and the affected Tribes. The USFWS concurred with the findings of "may affect, not likely to adversely affect" threatened and endangered species for this project. The State Historic Preservation Office has also concurred with the findings on this project.

Comment 190

The North American Lynx is now listed as a threatened species and suitable and possible occupied habitat exists near the area, and along the travel corridor, which is very close to the Jackson Roadless Area. Lynx are known to be moving into areas near Republic and are also known to travel over long distances. The EA fails to acknowledge any impacts on lynx within the mine site and travel route and we do not see evidence that US Fish and Wildlife has been recently consulted regarding lynx.

Response

This comment appears to be directed at the State's DEIS since lynx were discussed in the preliminary EA and in our consultation with the USFWS. Effects on lynx are fully disclosed in the preliminary EA and EIS for project activities and for the mine site in the cumulative effects analysis. The USFWS had been consulted regarding both the Forest Service project activities and the entire mine, haul and mill project and has concurred with the determination of "may affect, not likely to adversely affect" for lynx.

Comment 191

Wolverine have been seen in this part of Washington, in fact a wolverine was killed several years ago within a few miles of the mine site and haul route. They are also reclusive animals that could be impacted by vehicle collisions, noise such as blasting and vehicles, and access by the increased population of miners in the area. No mention was made in the wildlife section about the cumulative impacts of the increased population that would likely include hunters and motorized recreationists.

Response

This comment appears to be directed at the State's DEIS. The effects of potentially increased numbers of hunters and recreationists within the Buckhorn Block resulting from mine employees becoming familiar with the area are discussed in the wildlife section of the preliminary EA and EIS (Cumulative Effects Common to All Species).

Comment 192

Gray wolves are returning to their once occupied habitat in Idaho and Montana and have been reported in eastern Washington as dispersal animals. Road kills or injuries can attract predators such as wolf, bald eagle, golden eagle and wolverine and the constant truck traffic and expected mortalities could impact these species. This is not discussed (except for deer) in the wildlife report.

Response

This comment appears to be directed at the State's DEIS. Effects on wolves are fully disclosed in the preliminary EA and EIS for project activities and for the mine site in the cumulative effects analysis. The USFWS had been consulted regarding both the Forest Service project

activities and the entire mine, haul and mill project and has concurred with the determination of “may affect, not likely to adversely affect” for wolves.

Comment 193

California bighorn sheep occupy Vulcan Mountain within a half-mile of the haul route and may be expanding into the Toroda/Marias Creek area. There should be consultation with Washington Department of Fish and Wildlife to assess the impacts of haul traffic on sheep populations.

Response

Bighorn sheep would not be impacted in any way by any project activities proposed by the Forest Service. The Vulcan Mountain area is 10-12 miles from the Forest Service roads under consideration in this project.

Comment 194

Bald Eagles occupy many stretches of the haul route, are an endangered species, and yet are not discussed in the report. Consultation with US Fish and Wildlife Service should occur and mitigation impacts should be part of the EA. One such mitigation measure might be to lower speed limits along the Kettle River and Curlew Creek part of the haul route.

Response

This comment appears to be directed at the State’s DEIS. Effects on bald eagles are fully disclosed in the preliminary EA and EIS for project activities and for the mine site in the cumulative effects analysis. The USFWS had been consulted regarding both the Forest Service project activities and the entire mine, haul route and mill project and has concurred with the determination of “may affect, not likely to adversely affect” for bald eagles.

Comment 195

Impacts of the hauling along Marias Creek, Toroda Creek, the Kettle River, and Curlew Creek are not addressed with regards to impacts on riparian vegetation and wildlife. Noise, dust, herbicides to restrict noxious weeds are all issues of importance along roads. When those roads are within riparian areas the concerns are increased. Since some of the water bodies near the mine site will be de-watered, it may cause birds and mammals to be displaced to other riparian areas.

Response

Impacts along the Marias Creek haul route are addressed for impacts on riparian vegetation in the aquatics and botany sections, and on wildlife in the wildlife section of the preliminary EA and EIS. Impacts on noise and noxious weed are discussed in their respective sections of the preliminary EA and EIS. Impacts from dust are discussed in the air quality section of the preliminary EA and EIS. Toroda Creek, Kettle River and Curlew Creek are outside the scope of this analysis. The Forest Service has no authority over private or State lands. No

Forest Service project activities would result in dewatering of water bodies. See response to comment 1.

Comment 196

The EA underestimates the impacts to mule deer and other wildlife, noise from construction and operation of the haul road could affect some species substantially more than an amount equal to doubling the width of the road as indicated by the Forman, 2000. A substantially greater amount of mitigation should be required for this.

Response

See response to Comments 3, 167, and 168 above.

Buckhorn Access Project
Responses to summarized comments
from all comment letters on preliminary EA and DEIS
except OHA and Earthworks comments on the preliminary EA

Air Quality

1. The EA and DEIS fail to acknowledge, mitigate and downplay impacts on residents and tourists from air quality.
    a. This comment does not give any specifics regarding how the EA failed to provide this information. The effects on air quality are described in Chapter 3 in the air quality section of both the preliminary EA, and the EIS.
2. The FS must consider cumulative effects with entire mine proposal including air quality.
    a. The air quality section in Chapter 3 of the EIS describes the cumulative effects with the mine on air quality in the air quality cumulative effects section.
3. Dust from the project may impact the Pasayten Wilderness. Sufficient mitigation should be included to prevent this.
    a. Impacts to Class I airsheds are described in the Air Quality section of the draft and final EIS under "Cumulative Effects and further described in the Air Quality background report and supporting information provided by the Proponent. Based on screening using the CALPUFF Screening Mode model, the cumulative effects from project activities on all ownerships were one day of impacts on the Pasayten Wilderness each in March and October over a 5-year period.
4. Because the airshed is unclassified, there is insufficient information in the EA to determine the extent of air quality impacts from dust.
    a. The Buckhorn Mountain airshed is currently "unclassified" in terms of National Ambient Air Quality Standards by the State of Washington. For the Buckhorn Mountain airshed, State and Federal air quality managers have little to no monitoring data from which to assess existing ambient conditions so in air quality modeling done by the Proponent, conservative assumptions of background air quality were assumed. One year of PM-10 data was collected during 1996 to 1997 at the site. This data showed that the assumptions used were conservative. The Proponent has stated that its air quality analysis for Alternative B demonstrates compliance with ambient air quality standards. The Washington State Department of Ecology, Notice of Construction, Air Quality Permit was issued the last week of September 2006. Table III-34, Criteria Pollutants, in the draft EIS provided the results of the modeling which indicates compliance. Table III-33, Total Dust Emissions on National Forest Haul Routes in the draft EIS estimates total dust emissions from National Forest System roads.

5. We recommend that quantitative information regarding cumulative impacts from the mine operation along with other activities such as prescribed fire be included in determining potential cumulative impacts on air quality.

    a. This is addressed in the Air Quality section of the preliminary EA and draft and final EIS, in particular in the Existing Condition/Affected Environment, Operations, and Cumulative Effects sections. A qualitative discussion of other reasonably foreseeable future actions that might impact air quality is provided in the cumulative effects section. Because the State of Washington, Department of Natural Resources approves prescribed burning on a case-by-case, day-by-day basis based on air quality and atmospheric conditions, quantitative analysis is not possible. In general, smoke emissions from controlled burns are occasional short-term events that disappear in the large-scale motions of daily wind and rain. Permissions are granted for controlled burning emissions only after ambient air quality is considered. The additive effects of controlled burning is unlikely to be important in combination with everyday activities since burning occurs during optimal conditions and generally averages less than 12 days a year on the Tonasket Ranger District. The closest known proposed burning is about 6 miles from the preferred Marias ore haul route and the mine site as part of the Little Nicky sale on DNR land. DNR only approves such burning when it believes air quality standards can be met. No violation of the particulate matter National Ambient Air Quality Standard (NAAQS) has ever been attributed to prescribed fire in Washington (Leuschen, Tom, Personal communication With Fuels Specialist Duane Van Woert, June 2001).

6. Impacts on air quality are irreversible and unmitigated.

    a. Impacts on air quality from activities on National Forest System lands will be effectively mitigated by the use of dust suppressants. Any minor impacts would be short term and not irreversible. Once mining, ore haul, and reclamation are completed, air quality impacts from this project will cease. Greater than 90% of haul road dust travels no further than 100 meters from where it is generated. There is published data showing that 90% of the dust suspended 2 meters above ground levels from an unpaved road is re-deposited within 50 meters of its source (Watson et al., 1996, Gebhart et al., 1999).

7. Concern about dust pollution, which is a major concern to many residents along the proposed routes. Construction will cause an inordinate amount of dust and toxic sediments, and impact air quality. Require frequent watering with no drying during travel hours.

    a. Impacts on air quality on National Forest System lands are disclosed in the air quality section of the preliminary EA, draft EIS and final EIS. Fugitive dust impacts from activities on National Forest system lands will be effectively mitigated by the use of dust suppressants. Construction is not expected to cause toxic sediments.

8. Tier 3 2006 truck engines are quieter and emit fewer emissions. Kinross and their haul contractor should find a way to use Tier 3 2006 engines in their haul trucks. Require tier 2 or 3 diesel engines that use low sulfur fuel.

    a. It is not known if tier 3 engines are quieter since this was not part of the 2000 or 2004 rules relating to engines by EPA. This was nowhere stated in the literature reviewed.

    In December 2000, EPA issued the final rule for a two-part strategy to reduce diesel emissions from heavy-duty trucks and buses. This included new diesel-engine standards in model year 2004 for all diesel vehicles over 8,500 pounds. Additional diesel standards and test procedures will begin in 2007. Because emission-control devices are damaged by sulfur, EPA also initiated a program requiring cleaner diesel fuels. Refiners are required to start producing diesel fuel for highway vehicles with a sulfur content of no more than 15 ppm, beginning on July 15, 2006 with this fuel being to the retail outlets by October 15, 2006. Though 20 percent of highway diesel fuel may continue to be produced at the existing 500 ppm sulfur maximum standard, it must be segregated from 15 ppm fuel in the distribution system, and may only be used in pre-2007 model year heavy-duty vehicles. In order to ensure a smooth transition, these rules will be phased in between 2006 to 2010. Due to the haul distances from this project, the haul contractor is likely to replace at least one haul truck yearly, if they do not buy a number of new trucks at the start of the project.

    In general, Tier 2, 3, or 4 engines refer to off road diesel engines and/or gasoline engines for light-duty vehicles so these vehicles would not be in haul trucks transporting ore to the Kettle River mill. “Tier 3, 2006 engines” generally refer to off road diesel engines below 750 h.p. and refer to an engine standard rule that has to be met in 2006.

    The health effects of diesel exhaust are discussed in the EIS under the air quality section. The amount of diesel exhaust present from this project is substantially less than the annual source impact level. If the haul vehicles meet EPA guidelines and there is no known health risk identified from the use of the vehicles, the Forest Service can not require the haul contractor to meet higher standards than set by rule. The haul contractor is required to meet Federal Highway and EPA Standards for their vehicles and fuel.

9. Include the range of opacity of fugitive dust on the Marias Creek Road.

    a. Opacity of fugitive dust on a road is not something that is usually measured or regulated in Counties or areas that meet the national primary or secondary ambient air quality standards for the pollutant [Federal Clean Air Act, 107(d) (1) (A) (iii)]. Since the Buckhorn Mountain airshed is currently “unclassified,” it is assumed to meet air quality standards.

    Opacity is a measure of the degree of visibility impairment caused by a cloud of airborne particulate matter. Modeled project concentrations of

PM_{10} are 41.3 *u*g/m^3, 28% of the 24-hour national standard (150 *u*g/m^3) and 5.8 *u*g/m^3, 12% of the annual national standard (50 *u*g/m^3). Opacity laws are typically applied to smokestacks and exhaust vents. Enforcement is typically based on momentary readings once every 15 seconds with every reading representing a 15 second period. Any 12 readings in an hour over the opacity limit is deemed to trigger a violation of the typical 3 minute rule (typically there is an allowance that 3 minutes in each hour can exceed the standard) other methods of sampling is typically an average of any 12 or any 24 consecutive readings must be lower than the standard. For example, a thick cloud of dust has an opacity of 100 percent (100%) if it totally obscures the visibility of an object behind it. If a faint outline of the object can be observed through the plume, an observer might assign an opacity reading of 80% to the plume. If most of the features on the object can be seen, the observer might assign an opacity reading of 20% or less to the plume. With the required mitigation on the haul route on National Forest System lands of a good gravel surface, chemical treatments to control dust, and watering, the observer would likely assign an opacity reading of 20% or less.

10. Keep water source for dust suppression near Marias Creek road so additional truck traffic is not created. Do not use a source from Kettle River road or Beal quarry, and disclose the water source in the EIS.
    a. Water for dust suppression on the Marias Creek Road is from an existing water right at Newman Ranch. This was disclosed in the DEIS in the hydrology cumulative effects section. This ranch is located about 4 miles south on Toroda Creek road from the junction of Marias Creek road.

11. Use adequate dust suppressant even in winter to avoid impacts like those seen at North Satellite Mine.
    a. Dust suppressants would be used at any time of the year that dust is created. Additionally, the speed limit on the Marias road will mitigate dust creation to avoid impacts like those seen at North Satellite Mine.

Alternatives

1. The EA fails to consider minimizing Marias Creek road impacts by reducing width from 24 to 12 feet.
    a. Contrary to this statement the project interdisciplinary team did consider a one-lane road, but rejected it for safety reasons as described in the section in Chapter 2 of the preliminary EA and draft and final EIS entitled "Alternatives Considered But Not Fully Developed." This section gives the rationale for rejecting this proposal as required by NEPA. The actual measured width of the existing road is approximately 17 - 18 feet. The selected alternative will return most of the utilizable road surface back to this pre-project width at the end of the project

2. The EA and DEIS do not look at alternatives to minimize or sufficiently mitigate impacts. The document was prepared to conclude project impacts were not significant/acceptable.

a. This comment fails to give specifics to which a response can be formulated. Specifics may be in comments below and will be addressed in those responses. All alternatives include considerable mitigation to minimize impacts. The purpose of an EA is to determine whether or not significant impacts exist. In this case, the Forest Service decided to prepare an EIS.

3. The alternative of helicopter access should be included. Helicopters are used to log in inaccessible areas, so they can be used here to mitigate effects.

    a. Helicopter yarding of 4 million tons of ore and 1.5 million tons of backfill gravel is economically and technically infeasible, and wouldn't be considered reasonable access under the 1872 Mining Law or ANILCA. Roaded access already exists to the mine site. Helicopter yarding of timber is only done over very short distances, usually less than a mile. The Toroda Creek road is 6-7 miles from the mine site on private lands. Helicopters can fly a payload of between 1-10 tons depending on the size of the ship, meaning that with the largest ship, 400,000 helicopter trips would be required for ore haul. Inclement weather would ground helicopters so that a steady flow of ore would not be provided to the mill unless stockpiles were created. These numbers do not consider the need for material from off-site to backfill the mine or the need for supplies at the mine site such as fuel, explosives, and cement/lime/fly ash.

4. Alternative D has significantly less impacts on NFS lands than other alternatives and the EA and DEIS do not contain any rationale for the preferred being Alternative B1.

    a. Alternative D has fewer impacts on some resources, but more impacts on others such as noise and quality of life to residents along the Cow Camp road right-of-way. Additionally, this would mean that many more residents along the County road would be cumulatively impacted. The haul route would be 6 – 13% longer, depending on route, with associated impacts such as potentially to wetlands along that route.

5. 25 MPH is safer for spotting cows and wildlife, making turns, passing other trucks and lessening dust.

    a. The preliminary EA and draft and final EIS considered both 25 and 30 mph in different alternatives. However, upon further analysis, the difference to wildlife appears to be slight. Because of this, the preferred alternative identified in the draft and final EIS allows a 30 mph speed limit. Without dust control, there would be about a 17% reduction in the amount of dust produced at 25 versus 30 mph but since most dust will be controlled using dust suppression chemicals little change is expected to the environment.

6. Include paving at bottom of Marias road to stop dust and off-tracking.

    a. Both paving of the lower 0.5 miles of the Marias Creek road and leaving this section as a gravel road treated with a dust suppressant were considered in different alternatives, alternatives B1 and B respectively. Tracking of dirt and dust onto the paved road would happen on the Marias Creek road itself, either upstream from the Toroda Creek road

junction, or onto the Toroda Creek road depending on where the pavement starts. The preferred alternative identified in the draft and final EIS would require about 800 feet of paving to allow the track-out to occur on the Marias Creek road rather than the Toroda Creek road.

7. Cannot support paving or lower speed limit (see #11, 12 below).
    a. This comment does not provide enough information for a response, but specifics are found in comments 11 and 12 below, with responses. The preferred alternative identified in the draft and final EIS requires paving of the final 800 feet of the Marias Creek road, and allows a speed limit of 30 mph.

8. Clarification is needed on the reclamation of the new access road between FR 3575-120 and the patented land in Alt B1. The reclamation described in the EA would involve pulling the fill material onto the cut side of the road, creating unwarranted new surface disturbance and possibly destroying the utilities.
    a. Utilities are planned for the Buckhorn mine project and are not necessarily intended for long-term use, as no proposal for long-term use is included in the Crown Resources amended Plan of Operations (POO). To avoid disturbing the utilities during reclamation, such utilities will be buried on the uphill side of the road or in the middle of the road. Reclaiming this road to one lane will cause about 0.8 acres of soil disturbance but will reduce potential raveling of cut and fill slopes along the road.

9. Rationale for identifying Alternative B1 is not immediately apparent. The final EA should explain why the Forest Service is including the mitigation measures in B1.
    a. Impact differences to air quality and wildlife are described in those sections of Chapter 3 of the preliminary EA and draft and final EIS. Rationale for selection of the preferred alternative will be provided in the Record of Decision for the project.

10. Paving will not reduce emissions and may increase them. The BACT analysis as conducted in full accordance with methodologies endorsed by EPA and required by DOE. The BACT analysis clearly shows paving without routine flushing of dirt would result in higher emissions than gravel with dust suppressant. The FS use of an undocumented and unsubstantiated study from Australia was inappropriately used. Paving is not justified; rinsing the road would increase water usage and could increase sediment delivery to the stream.
    a. Tracking of dirt and dust onto the paved road would happen on the Marias Creek road, either upstream from the Toroda Creek road junction, or onto the Toroda Creek road depending on where the pavement starts. The amount of material that is tracked onto either route would be similar. Rinsing off of the road would be required at both locations, because, as noted by comment author, paving without rinsing where trackout occurs does not reduce air quality impacts. Washing off of the paving is described in the bullet statements under “Alternative B1 – Modified Proposed Action” in Chapter 2 of the EIS. Constructing paved road prior to the Toroda junction would avoid having run-on similar to what has been

seen at the Wauconda Quarry and K2 mines in the past where they came onto County roads.

A concern has been expressed about trackout dust onto pavement. Trackout dust should not be a major problem going from a graveled road treated with a dust suppressant to an asphalt road unless the graveled road is not properly maintained, the road is rutted, there is a lack of aggregate or too high a concentration of fines on the road, or too much water has been placed on top of the magnesium chloride dust suppressant so mud is created. The application of water needs to be moderated to preclude muddy conditions that would contribute to trackout onto paved road surfaces. Most trackout occurs in the first 5 revolutions of the wheel, about 25 – 30 feet for a haul truck (Bolander, personal communications). An example of this is the Siwash Creek road about 5 miles outside Tonasket on the route to Havillah.

The study from Australia was used by the Forest Technology Development Program in development of the 1999 'Dust Palliative Selection and Application Guide' and was relied on in the 'An Expert Panel Summary, Las Vegas, Nevada, May 30 – 31, 2002 in "Potential Environmental Impacts of Dust Suppressants: "Avoiding Another Times Beach".' The study is a copyrighted book that can be purchased for about $80.

11. The reduced speed limit from 30 to 25 will extend the amount of time required for trucks to make a trip and will extend environmental and social effects from haul. The lower speed limit will increase Crown/Kinross costs 1.2 million over the life of the project. The EA and DEIS do not present convincing evidence of environmental benefits. Both pages 207 and 220 state the effects of 25 v. 30 would be nearly identical.

    a. The Forest Service recognizes the lower speed limit will cost Crown/Kinross money, like almost all mitigation measures. Both 25 and 30 were considered to provide a reasonable range of alternatives. The environmental impacts to wildlife as a result of the lower speed limit are stated in Chapter 3 of the preliminary EA and the draft and final EIS and additional information has been added to the wildlife and range sections of the EIS. Because the difference in wildlife and range effects between 25 and 30 were so minimal, the preferred alternative identified in the draft and final EIS is 30 mph. Without dust control, there would be about a 17% reduction in the amount of dust produced at 25 versus 30 mph but since most dust will be controlled using dust suppression chemicals little change is expected to the environment.

12. Replacing the culvert on Nicholson Creek should be included in both Alternatives B and B1 (pg 95, paragraph 2).

    a. The Nicholson Creek culvert replacement is part of all alternatives. Page 96 of the preliminary EA describes the culvert replacement as part of Alternative B1. The culvert replacement is also listed as a mitigation measure for all alternatives on pages 80 and 81 of the draft EIS and all action alternative maps in Chapter 2.

13. Identify the selected alternative in the FEIS and Record of Decision. Given our rights to reasonable access, Kinross requests the Forest Service select Alternative B. Alternative B achieves the optimal balance of overall impacts.

    a. The preferred alternative will be identified in the FEIS, and the selected alternative will be identified in the Record of Decision in accordance with the NEPA implementing regulations

14. Alternative D has fewer impacts on NFS lands and selected resources, but does not provide reasonable access and has very compelling public safety and residential impacts, as well as economic impacts. In comparison to Alternatives B/B1, Alternative D will have a higher number of ore trucks/day before and after spring breakup greatly increasing impacts on homeowners along the route; lacks cattle fencing which will result in more cattle being killed; has 7 residents within 500 feet of the haul route as opposed to 1 in Alternatives B/B1; has higher cumulative effects on 24 residents within 500 feet of Forest Road 3575 and OCR 9495 as opposed to 11 in Alternatives B/B1; will have very serious noise impacts on 7 residences during construction as opposed to 2 in Alternatives B/B1; has a longer haul route with longer adverse grades substantially increasing energy usable and costs; would require haul through the Town of Republic, increasing the safety concerns for pedestrians, schoolchildren, and normal vehicle traffic.

    a. For many of these reasons, Alternative D is not identified as the preferred alternative.

Aquatics

1. The EA and DEIS fail to acknowledge, mitigate impacts, or downplay the long-term significance of impacts to fish and their habitat.

    a. This comment does not give any specifics regarding how the EA failed to provide this information. The effects on fish and their habitat are described in Chapter 3 of the preliminary EA and the draft and final EIS in the Aquatics section.

2. The EA does not provide enough information to support the statement that water augmentation would minimize groundwater losses and result in little change of water availability to fish and amphibians.

    a. The hydrology and aquatics sections in the EIS were supplemented with this information.

3. More should be stated about the existing condition of amphibian populations and impacts to them as a result of hydrologic changes from the infiltration gallery, impacts from the haul roads and cumulative effects with other projects. The impact section does not evaluate impacts to spotted frogs, tree frogs, western toads, and long-toed salamanders even though these are mentioned as being found in the area. No evaluation of Tiger salamander is found. More fully evaluate impacts to amphibians.

    a. The tiger salamander is not a listed, sensitive, management indicator, or focal species. They were not observed in the area. More information on

amphibians has been added to the EIS. Amphibians are discussed in the EIS under "Effects Common to All Action Alternatives," "Cumulative Effects" and under "Federal Species of Concern" in the Aquatics section.

4. Heavy ore transport will destroy fish habitat. Continual use of the road over 7 years will require new gravel, erosion of cut and fill slopes, erosion from grading and cleaning of ditches. 50 feet of separation between the road and the creek isn't enough to contain this material and prevent impacts to fish and habitat.
    a. The effects of ore and supply haul on fish are disclosed in the Aquatics section of the preliminary EA and in the draft and final EIS. Sediment control structures are expected to be 99% effective when mitigation measures are correctly implemented and properly maintained, and result in sediment delivery similar to current delivery.
5. The EA and EIS should discuss the effects of salts on aquatic resources, soils, and vegetation from salts used for dust suppression, not just salts used for winter traction. How will salting affect fish?
    a. The hydrology section of the preliminary EA estimated the amount of salt that could potentially get into the creek from both dust suppression and in the sand used for winter traction. That total amount was used in the aquatics analysis. The effects of elevated chlorides in the infiltration gallery water were added to the aquatics section of the draft and final EIS. As indicated in the EIS, predicted levels of salts are within the standards established for protection of aquatic life. The effects of increased salt levels on Forest Vegetation and other plant species are discussed in the Forest Vegetation and Botany sections of Chapter 3 of the EIS.
6. Alternative B1 requires additional fish mitigation to be acceptable.
    a. This comment doesn't provide any specificity to which an answer can be formulated. The primary mitigation for fish is stringent sediment control structures and monitoring of those structures to keep sediment from entering creeks. Sediment that does get to Marias Creek is expected to be insignificant. There is little difference in fish mitigation measures between Alternatives B and B1, or Alternative C.
7. There is insufficient information to determine approximate number of pools and if pools will fill up after first high flows. Include requirements to recover habitat in case of failure including from freeze up fish kill. If successful add 10 new structures after mine reclamation
    a. Pools were dropped from the proposal as described in the EIS. Instead, at both of the originally proposed pool locations planned in the preliminary EA, the culverts would be replaced with ones that are passable by all aquatic life. As part of the Adaptive Management Plan pools may potentially be proposed as some time in the future. If they are, environmental review will be completed on the specific locations where impacts are discovered and suitable locations and types of pools will be determined at that time.

8. Instream structure life is 10 years. Reconstruct pools at the close of mining. Coordinate design of instream structures with WADFW.
    a. Pools have been dropped from the proposal. See aquatics response #7 above.

9. Mining operations will have a profound effect on fish.
    a. No fish are located on the private lands where the mine is proposed. In recent fish surveys of area streams, no fish were located within about 2 miles of the mine site. Water from the operations will be discharged at 4 outfalls, 3 of which are on NFS lands. Water quality will meet standards set in the NPDES permit designed to protect aquatic life. During July, August, and September, water quantity may actually increase in Nicholson and Marias Creeks as a result of water infiltration and augmentation during certain time periods and at certain locations.

10. Increased sediment will smother fish food and silt up fish spawning areas. The DEIS minimizes the probable increase in sediment loading in local creeks, especially Marias, during the life of the project and beyond.
    a. The effects of ore and supply haul on fish are disclosed in the Aquatics section of the preliminary EA and in the draft and final EIS. Sediment control structures are expected to be 99% effective when mitigation measures are correctly implemented and properly maintained, and result in sediment delivery similar to current delivery. Other fish mitigation measures such as replacement of four road culverts in Marias Creek and one culvert in Nicholson Creek with structures that pass all aquatic lifeforms; the fencing of much of Marias Creek from cattle access and the hardening of three remaining cattle access points; the day-lighting of lower Marias Creek to restore hydrologic continuity during low flows; and the removal of one culvert in Nicholson Creek which is a barrier to aquatic life passage should all improve fish and aquatic habitat in Marias and Nicholson Creeks.

11. The DEIS does not adequately mitigate impacts of reduced flows and water quality on trout spawning and rearing habitat in Marias Creek.
    a. Refer to the response to Aquatic comment #10 above.

12. If fish habitat enhancement project at the base of Marias Creek is dropped, re-visit creation of instream habitat improvement projects at the beginning and end of mining to offset long term and continuing impacts. Coordinate with WDFW.
    a. The fish habitat enhancement project was dropped because of concerns about impacts to an archaeological site. WDFW has been coordinating with the proponent to include riparian planting on the private lands at the base of Marias Creek, which are not within the authority of the Forest Service. If additional stream enhancement projects are proposed at later dates, they will be required to undergo environmental review at that time..

13. Protect the fish

    a. This comment does not give any specifics regarding how the EIS failed to provide this information. The effects on fish and their habitat are described in Chapter 3 of the preliminary EA and the draft and final EIS in the Aquatics section.

14. Clearly articulate the potential impacts to the aquatic environment from the infiltration gallery in the FEIS.

    a. Information about the effect of the infiltration gallery on aquatic life can be found on pages 166-167 and 173 of the DEIS. The infiltration gallery will result in more water being available for aquatic species, although this water is offsetting water lost during mine dewatering on private lands. All water will meet aquatic life standards, so no adverse effects are expected.

15. Marias Creek already has high sediment impairing fish habitat. Although the BE predicts total loss of fish won't occur, individual fish and habitat loss will occur.

    a. This impact is acknowledged in the Aquatics section of the EIS. Sediment control structures are expected to result in sediment only slightly above current levels.

Bonding

1. Bonding needs to be adequate to cover all potential costs. The EA should include an estimate for the performance security and how the estimate was made to provide a basis for it's determination that the mitigation is highly effective.

    a. The amount of the reclamation bond can only be determined after a decision selecting the alternative and the final mitigation and monitoring requirements is made (Record of Decision). A discussion of costs considered for bond estimation is provided under Performance Securities (page 88).

    The effectiveness discussion for PFA-2, Performance Securities has been clarified. The effectiveness of reclamation bonding for the project is considered high since the bond amount would be determined by estimating actual costs for reclaiming all surface disturbance to NFS lands. The bond amount would be also be reviewed regularly to accommodate changes on the ground or changes to cost estimation factors. Forest Service experience with recent reclamation efforts and costs specific to Buckhorn Mountain provide confidence in the accuracy of bond estimation.

2. Performance securities should provide adequate funds to cover environmental damages for 40-60 years to return the environment to its pristine quality.

    a. The Forest Service has no authorities under which it can require funds to cover environmental damages. However, the proponent will be under permit to the Forest Service, and through permit administration any

problems that arise will be corrected. In addition, the State of Washington will require coverage for environmental damages in its performance securities. The references to performance securities for environmental damages have been removed from Chapter 2 of the EIS.

3. The DEIS rates the performance security as a highly effective mitigation measure. Without an estimate of the amount of the security there is no basis for this rating. Although EPA understands that final security will be established during permitting, an estimate should be provided to support the effectiveness rating.
    a. See response to Bonding #1 above.

Botany

1. Changes in hydro-period could significantly effect *Platanthera obtusata* and should be more precisely addressed relative to projected changes in hydro-period from the infiltration gallery.
    a. Effects to *Platanthera obtusata* are analyzed in the Botany section of Chapter 3 of the preliminary EA and the EIS. Additional information regarding changes to wetland areas where this species may be present was added to the EIS.

2. The EA should discuss the effects of salts on vegetation from salts used for dust suppression, not just salts used for winter traction.
    a. The hydrology section of the preliminary EA and the EIS estimated the amount of salt that could potentially get into the creek from both dust suppression and in the sand used for winter traction and from the waters flowing into the infiltration gallery. That total amount was used in the aquatics and other analyses throughout the document. The effects of increased salt levels on Forest Vegetation and other plant species are discussed in the Forest Vegetation and Botany sections of Chapter 3 of the EIS. This information in the final EIS was revised based on the higher predicted chloride levels in infiltrated water in the State's FSEIS, and an error in predicted levels from road salts in the Forest Service DEIS.

3. Mining operations will have a profound impact on cultural plants.
    a. Impacts on cultural plants are described in the Botany section of the EIS. Impacts are expected to be minimal.

Connected Actions

1. The EA and DEIS do not adequately address direct, indirect, and cumulative effects of the mine proposal on NFS lands. The DEIS fails to acknowledge the interconnectedness of impacts between the mine and the project on NFS lands. The project enables the mine to happen and the Forest Service cannot abandon responsibility for impacts by allowing facilities to be abandoned. Impacts to private and NFS lands are interrelated and predicted to continue 25 or more than 60 years and some permanently.

a. The mine, mill, and other activities on private lands are not Federal connected actions. The Forest Service has no authority over activities on private or State lands. The mine and facilities are included in the cumulative effects sections for resources *where they have overlapping effects* with effects of project activities under Forest Service authority. If mine activities on private or State lands have no overlapping effects with a particular resource, they are appropriately not discussed, because effects are not cumulative to effects caused by Forest Service actions. For example, the Buckhorn mine itself would have no overlapping effects with the effect on soils that will be affected by clearing the road right-of-way. Project activities are those being considered for approval by the Forest Service, and are clearly described in the proposed action in Chapter 1 of the EIS. As noted above, the amended Plan of Operation is for the "Proposed Buckhorn Mountain Project *on lands administered by the Forest Service.*" Only the access road, infiltration gallery, and several other activities are on lands administered by the Forest Service.

   Additionally, in 2004, the United States Supreme Court found in Department of Transportation et al. v. Public Citizen et al. that where an agency has no ability to prevent a certain effect, the agency cannot be considered a legally relevant "cause" of the effect. In this case, the Forest Service is obligated under ANILCA to provide reasonable access to the private lands where the mine is located. Hence, under NEPA and the implementing CEQ regulations, the agency need not consider these effects in its analysis when determining whether its action is a "major Federal action" (emphasis added).

   The Forest Service does not intend to "abandon" any surface facilities on NFS lands. As described in the reclamation plan in Chapter 2, the fence, infiltration gallery, pipelines and a portion of the road will be reclaimed. The remaining road will be maintained for use. Water monitoring locations and temporary roads accessing them will be reclaimed when they no longer are need.

Cumulative Effects

1. The FS must consider the cumulative effects of the entire mine proposal including air quality, road impacts, wildlife impacts, quality of life, geochemical, geophysical and water issues.
   a. The mine, mill, and other activities on private lands are not Federal connected actions. The Forest Service has no authority over activities on private or State lands. The mine and facilities are included in the cumulative effects sections for resources *where they have overlapping effects* with effects of project activities under Forest Service authority. If mine activities on private or State lands have no overlapping effects with a particular resource, they are appropriately not discussed, because effects are not cumulative to effects caused by Forest Service actions. For example, the Buckhorn mine itself would have no overlapping effects with the effect on the soils that would be affected from clearing the road

right-of-way. Project activities are those being considered for approval under by the Forest Service, and are clearly described in the proposed action in Chapter 1 of the EIS. As noted above, the amended Plan of Operation is for the "Proposed Buckhorn Mountain Project *on lands administered by the Forest Service.*" Only the access road, infiltration gallery and several other activities are on lands administered by the Forest Service.

Additionally, in 2004, the United States Supreme Court found in Department of Transportation et al. v. Public Citizen et al. that where an agency has no ability to prevent a certain effect, the agency cannot be considered a legally relevant "cause" of the effect. In this case, the Forest Service is obligated under ANILCA to provide reasonable access to the private lands where the mine is located. Hence, under NEPA and the implementing CEQ regulations, the agency need not consider these effects in its analysis when determining whether its action is a "major Federal action."

2. Future logging, including logging out the right-of-way on both State and BLM land should be considered as a reasonably foreseeable future action. The DNR land is forested with mature trees that are a source of winter thermal and hiding cover for deer.

    a. The Forest Service consulted with both the DNR and BLM about any plans they had proposed to log nearby State or BLM land. Only the Little Nicky Timber Sale was identified by the DNR, and has been included in the cumulative effects analysis. Right-of-way and tractor logging volume has been already removed. Cable logging volume is proposed to be removed in 2007 according to Boise Cascade, the purchaser. Actions that have not yet been proposed are not reasonably foreseeable. Approximately 40 acres of private land habitat will be lost for the construction on the mine site. Approximately 7 acres of private land and 11 acres of DNR land habitat will be lost from the creation of the access/haul road. This has been discussed in the forest vegetation and wildlife cumulative effects discussion in the final EIS.

3. The EA fails to take advantage of available data such as the quantitative data on Little Nicky in the Toroda WSA.

    a. Quantitative information regarding Little Nicky was provided in the preliminary EA and EIS based on more recent information than that provided in the Toroda WSA. Right-of-way and tractor logging volume has been already removed. Cable logging volume is proposed to be removed in 2007 according to Boise Cascade, the purchaser (September 2006).

4. Incorporating the State's DEIS by reference without any analysis in the EA does not achieve the goal of cumulative effects analysis to evaluate the synergistic effects of all projects, not just defer to the direct and indirect effects in other documents. The Forest Service should complete a more thorough cumulative effects analysis.

    a. In 2004, the United States Supreme Court found in *Department of Transportation et al. v. Public Citizen et al.* that where an agency has no ability to prevent a certain effect, the agency cannot be considered a

legally relevant "cause" of the effect. In this case, the Forest Service is obligated under ANILCA to provide reasonable access to the private lands where the mine is located. Hence, under NEPA and the implementing CEQ regulations, the agency need not consider these effects in its analysis when determining whether its action is a "major Federal action." The mine, mill, and other activities on private lands are not Federal connected actions. The Forest Service has no authority over activities on private or State lands. The mine and facilities are included in the cumulative effects sections for resources *where they have overlapping effects* with effects of project activities under Forest Service authority. If mine activities on private or State lands have no overlapping effects with a particular resource, they are appropriately not discussed, because effects are not cumulative to effects caused by Forest Service actions. For example, the Buckhorn mine itself would have no overlapping effects with the effect on the soils that would be affected from clearing the road right-of-way. In the cited paragraph, Forest Service activities would not have any effect on flows in Myers Creek, and therefore cannot have any synergistic effects with the flow decreases from the mine.

5. EPA appreciates the more detailed cumulative effects analysis and understand more analysis on water quality and quantity based on the latest modeling received after the DEIS will be incorporated into the FEIS. We look forward to reviewing the document with more accurate data.
    a. Information based on final modeling results by WADOE will be incorporated into the FEIS.

6. Fully discuss compensatory impact included in WADOEs FSEIS in the cumulative effects section of the FEIS.
    a. Information about WADOEs compensatory impacts are summarized, and cited. 40 CFR 1500.4 and 1502.21 from the CEQ implementing regulations require agencies to reduce excessive paperwork by using incorporation by reference and cite the material in the statement and briefly describe its contents. Full discussion of the compensatory impacts is not required.

DOE DSEIS

1. DOE's DSEIS doesn't clarify the controversy and is full of missing, incomplete, or incorrect information according to EPA.
    a. The State Department of Ecology's DSEIS is outside the scope of the analysis in the Forest Service EIS.
2. As recognized by EPA (attached), the DOE's DSEIS is flawed and fails to thoroughly examine a number of effects, particularly those involving water quality and quantity, wetlands, and aquatic resources.
    a. The State Department of Ecology's DSEIS, and comments made to it are outside the scope of the analysis in the Forest Service EIS. EPA sent a letter to the Forest Service about its preliminary EA and the draft DEIS and those comments are responded to in this document.

3. Comments on DOE DEIS mitigation measures.
    a. The State Department of Ecology's DSEIS is outside the scope of the analysis in the Forest Service EIS.
4. Comments on the DOE DEIS.
    a. The State Department of Ecology's DSEIS is outside the scope of the analysis in the Forest Service EIS.
5. DOE's DSEIS does a good job of explaining impacts and mitigation discussing measures used to reduce or eliminate impacts, and shows the project is clearly protective of the environment.
    a. The State Department of Ecology's DSEIS is outside the scope of the analysis in the Forest Service EIS.
6. URS should be prepared to share expected decibel levels for ascending and descending trucks on the Marias road at the public meeting on 8/10/06, where they are expected to exceed standards.
    a. URS is the contractor for Washington State Department of Ecology and has no connection with the Forest Service EIS. The public meeting mention has already passed.
7. Why is it OK to proceed with permits before SEPA guidelines are met? Data collected will be incomplete and inaccurate
    a. The State of Washington, Department of Ecology published its final supplemental EIS for the Buckhorn Mountain Project in mid September, 2006, and the first permits were issued 7 days later. SEPA for the project had been completed.
8. The lights used on private lands are bright, obnoxious and annoying, including after dawn when I don't even need to use my headlights in the morning. Can adjustments be made to this blinding light?
    a. These activities are on private lands at the base of the Pontiac Ridge road and relate to activities covered by the State of Washington, Department of Ecology's FSEIS. The Forest Service forwarded a copy of this letter to DOE.

Economics

Comments 1-13 and 15 below relate to jobs created by and the economic value of the project to workers. The Forest Service acknowledges that the entire project would provide employment for many people for the life of the mine and the value of that employment to the local, regional and state economies. However, such employment is beyond the scope of the Forest Service's proposal to construct/reconstruct a road, provide for infiltration/augmentation of water, and other related activities.

1. The Buckhorn project is critically needed for high paying jobs in this economically depressed area of Washington State.
2. The Kettle River operations recently laid off a significant portion of its workforce because Ferry County ran out of ore, which has had devastating consequences for Republic. Buckhorn jobs are needed so employees can continue to work or go back to work, or the mill will have to close permanently. Delays will be

detrimental to the community.

3. Current and laid off employees need continued employment so they don't have to move from the area.
4. The Buckhorn proposal provides good local employment opportunities for both Okanogan and Ferry Counties
5. The Kettle River operations are an important customer to us and loss of their business would hurt our company.
6. The Buckhorn project is essential to our regional economy, the State economy, and Washington State businesses.
7. Local business is suffering because of layoffs at the Kettle River operations; unemployed workers spend less at local businesses. Secondary jobs are disappearing.
8. Layoffs at the Kettle River Mill were necessary because Ferry County ran out of ore. Buckhorn ore is critical to the future of Kettle River because without ore the mill will have to close permanently.
9. Losing the large number of people employed by Kettle River operations would be catastrophic to our City and County because of our small tax base.
10. Project jobs are critical to Ferry County, which is on the verge of bankruptcy. Bankruptcy will have adverse effects throughout the State and the legislature will have to assist the County.
11. School enrollment is down because of layoffs.
12. The project means the difference between being on welfare and being self-sufficient.
13. The company has been part of the social and economic fabric of our community.
14. The EA and DEIS fail to acknowledge, fail to mitigate, or downplay long-term impacts on property values along the transportation route.
    a. A section on the potential impacts to property values along each haul route on NFS land or right-of-way was added to the EIS under "Other Required Disclosures," "Socio-Economic Effects."
15. The mine will employ many people and is in the best interest of the people it hires.
16. Those who will make a profit from this extraction based project care little for the impact they will make on all existing systems and residents.
    a. This comment fails to give specifics to which a response can be formulated.
17. Every 6 months or so some idiot gets the idea to mine this area. Usually the idiot has lots of money to burn and doesn't care that the citizens that own property surrounding the mine don't want to deal with the environmental impacts of the project. These companies come and go, and as soon as they make their money they are gone, leaving a huge environmental mess for everyone who actually lives or vacations in the area to clean it up.
    a. This comment fails to give specifics to which a response can be formulated. The impacts of actions on National Forest System lands are described in the EIS, and adequate mitigation and reclamation is required.

18. The environmental risks of this mine far outweigh the small benefits that the local community will see in the small number of short term jobs created. We don't want the few short term, relatively low paying jobs at the expense of our water quality, beautiful environment and wildlife habitat.
    a. This comment fails to give specifics to which a response can be formulated. Effects on water quality, scenery and wildlife, can be found respectively in the Hydrology, Scenery and Wildlife sections of the EIS.
19. What defines local hiring? Will they be from Chesaw/Buckhorn or will they bring in their existing employees?
    a. Local hire generally refers to employees from Ferry and Okanogan Counties but has never been specifically defined.
20. Timber is being removed and transported off the mountain. Who benefits from the sale of this timber?
    a. Any timber currently being removed is likely from Kinross' private lands. Timber cleared from National Forest System lands for the infiltration gallery, the road or other facilities will likely be handled through a settlement contract with Kinross who will pay fair market value for the timber.

Fire/Fuels

1. If Buckhorn Mountain is replumbed and the water table declines from underground mining, won't this increase fire hazard on NFS lands?
    a. The State of Washington is conducting a water balance and will ensure that water would be sufficient for vegetation. Minimal impacts are expected based on their final SEIS. The FEFLOW groundwater model indicates that the post-closure phase equilibrium water level at year 50 (approximately 42.5 years after mining ceases) would be approximately 110 feet lower in the western portion of the mine area and 10 feet higher in the eastern portion as compared to pre-mining conditions.

Forest Vegetation

1. Protect the forests.
    a. Non-substantive. No specifics are given for which an answer can be formulated. As described in the EIS in the Forest Vegetation section forest clearing ranges from 16 to 47 acres depending on the alternative. This is also documented as an irretrievable commitment of resources at the end of Chapter 3.

General

1. The ecological consequences of the proposal would be harmful for generations to come. It is more important to consider the public interest in the long-term rather than short-term profits.
    a. No specifics are given for which an answer can be formulated. Environmental effects of each of the alternatives are presented in Chapter 3 of the EIS.

2. The EA and DEIS fail to acknowledge, fail to mitigate, or downplay long-term environmental effects. Much of the information in the DEIS is misleading, inaccurate or just plain missing. There is not enough information for the responsible official to understand the impacts or come to a good decision.
    a. No specifics are given for which an answer can be formulated. Environmental effects of each of the alternatives are presented in Chapter 3 of the preliminary EA and the EIS.
3. I support OHAs comments and answer them thoroughly.
    a. All of OHAs comments on the preliminary EA and the Draft EIS have been responded to in this response appendix.
4. The Buckhorn project is a good project with small effects that can be mitigated.
    a. The effects of the project are analyzed in Chapter 3 of the preliminary EA and the EIS.
5. Environmental impacts will be minimal and of short duration.
    a. The effects of the project are analyzed in Chapter 3 of the preliminary EA and the EIS.
6. Concern about ground pollution.
    a. No specifics are given by this comment for which an answer can be formulated. Environmental effects of each of the alternatives are presented in Chapter 3 of the preliminary EA and the EIS.
7. We agree with OHAs comments. Mining companies have never extracted gold in an environmentally friendly manner. Putting lipstick on a pig doesn't make it attractive.
    a. All OHAs comments have been responded to in this response appendix.
8. The EA diminishes or denies far reaching negative, irretrievable, unmitigatable and costly impacts to resources. Only Alternative A will protect resources.
    a. No specifics are given by this comment for which an answer can be formulated. The effects of the alternatives on resources are presented in Chapter 3 of the preliminary EA and the EIS.
9. The redesigned proposal to an underground mine with off-site processing eliminates concerns about the open pit mine, and has significant public support. The revised proposal for an underground mine and offsite milling represents a significant opportunity to develop a mine with the least possible impact to the environment both on and off public land.
    a. No specifics are given by this comment for which an answer can be formulated.
10. Use of public lands is modest and will have no significant impact on or off public lands.
    a. No specifics are given by this comment for which an answer can be formulated.
11. Rewrite the DEIS to be proactive from the start to protect the public so that public resources are not wasted clearing up a mess that should not have happened in the first place.

a. No specifics are given by this comment for which an answer can be formulated, although mitigation and reclamation for this project are adequate.

12. The DEIS is inadequate to protect Okanogan County including the unique and pristine quality of the earth, plants, animals, streams, rivers, groundwater and residents who have carefully stewarded this land. The DEIS should be designed to protect what little we have left of this small planet, retain clean surface and ground water, a rich and varied biological network of plant, animal, fish and human life, and air quality. Along with precious water, comes vegetation and animal life, scenic qualities, water purification and infiltration, and impacts on fishing, hunting, tourism, farming, ranching and other quality of life issues.

    a. No specifics are given by this comment for which an answer can be formulated. Impacts on soils, botany, wildlife, hydrology, recreation, and air quality are disclosed in their respective sections of the EIS.

13. I hope the Forest Service and Ecology are feeling shame over selling out what is beautiful, precious and rare for short term profit. You are no different than the long list of those who have steadily degraded life and health unless you revisit the vast and serious problems with the DEIS, which is built on a flawed foundation EIS used in the previous mine proposal.

    a. No specifics are given by this comment for which an answer can be formulated. The Crown Jewel Mine EIS was not used as the foundation of the Forest Service EIS, although factual data from that study was used and cited in some cases.

14. This proposal is not designed to be sensitive to this area of high desert and you must begin a thorough and delicate investigation of why agencies designed to protect our country are not functioning.

    a. No specifics are given by this comment for which an answer can be formulated.

15. The DEIS fails to take a hard look and seriously respond to the issues and concerns the public has brought up. It appears to put the private interest of a mining company over the public interest. Carefully consider these comments. We do not want to live with the repercussions of poor decision making.

    a. No specifics are given by this comment for which an answer can be formulated.

16. The DEIS does not adequately address potential impacts that would be caused by development of the access road and facilities related to the mine.

    a. No specifics are given by this comment for which an answer can be formulated. Impacts from the road and facilities are discussed in Chapter 3 of the EIS.

17. I strongly oppose any mining in the Okanogan Highlands, but particularly the most recent Buckhorn mine proposal. The environmental impact of cyanide lead mining process has been downplayed by Crown/Kinross and the Forest Service.

    a. No specifics are given by this comment for which an answer can be formulated. No cyanide will be used on NFS lands. Cyanide will be used at an existing mill and tailings facility 47 miles away near Republic.

18. This is a prime example of special interests stomping on the interests of the general public.

    a. No specifics are given by this comment for which an answer can be formulated.

19. Stop trying to justify the environmentally disastrous, irresponsible and immoral practice of mining Buckhorn Mountain for personal gain. No more mining on Buckhorn Mountain. Your arguments are weak, scientifically unsupported and unsound in the extreme.

    a. No specifics are given by this comment for which an answer can be formulated.

20. The Forest Service should take a greater role in protecting our nation's most precious resources from ill-conceived projects such as this mine. What recourse will citizens have when there is damage to private and public property resulting from this mine?

    a. No specifics are given by this comment for which an answer can be formulated. Sufficient mitigation and reclamation is in place to protect resources on NFS lands. Impacts on private lands are described in the State of Washington's FSEIS, although some are described in this EIS where they have overlapping effects with the effects from activities on NFS lands. Environmental effects will be monitored. WADOE and DNR will require performance securities to ensure that that required mitigation and reclamation is carried out as required.

21. Geoscience references document.

    a. No specific comments on project attached to document, so no response is required.

22. The document was prepared to conclude that the impacts were not significant rather than an objective examination of the data or an objective projection of the impacts. There is not sufficient basis for the responsible official to come to an objective decision.

    a. No specifics are given by the comment for which an answer can be formulated. An EIS was prepared because there might be significant impacts, and contains sufficient information to inform the public and responsible official.

23. Along with precious water, come vegetation and animal life, scenic qualities, water purification and infiltration, and impacts on fishing, hunting, tourism, farming, ranching, and other quality of life issues.

    a. No specifics are given by the comment for which an answer can be formulated. Impacts to water, water purification and infiltration can be found in the Hydrology section of Chapter 3 of the EIS. Impacts to animal life can be found in the Wildlife section of Chapter 3 of the EIS. Impacts to recreation, which includes fishing, hunting and tourism can be found in the Recreation section of Chapter 3 of the EIS. No impacts from Forest Service activities are expected to farming or ranching. Quality of life impacts can be found in the Scenery, Noise, Air Quality and Socio-economic sections of Chapter 3 of the EIS.

Health and Safety

1. The EA and DEIS fail to adequately acknowledge, fail to mitigate and/or downplay impacts on health and safety.
    a. No specifics are given by this comment for which an answer can be formulated. The effects of the alternatives on public health and safety are presented through Chapter 3 of the preliminary EA and the EIS.

Inventoried Roadless

1. More information should be presented on how the Forest Service will protect adjacent roadless areas which will likely have increased human visitors from increased population. Impacts to potential wilderness lands displayed on the attached map should be document.
    a. The inventoried roadless/unroaded/undeveloped character section has been supplemented with information regarding increased pressure from increased populations in the cumulative effects analysis. Potential impacts to the lands on the map attached to this comment were included in the preliminary EA and the EIS. However, no analysis of the area west of Buckhorn Mountain is included because project activities would not have any impact on this area. This area is roaded, though access to this area was temporarily closed to the public as mitigation for the impacts from the Crown Jewel exploration. The only activities proposed on National Forest System lands in this area are the installation of guzzlers on already disturbed sites, the installation of piezometers in the edge of roads to monitor the depth to the water table, and surface water monitoring activities.

Mitigation

1. The EA and DEIS do not offer sufficient mitigation to make impacts acceptable. The document appears to conclude impacts are not significant rather than an objective projection of the impacts
    a. No specific information is given in this comment to which a specific answer can be given. The mitigation included for the project is presented in Chapter 2 of the preliminary EA and the EIS, and effects are disclosed in Chapter 3 of the preliminary EA and the EIS with this mitigation in place. The DEIS does not conclude impacts would not be significant.
2. Require truck numbers to be readable from 1/4 mile away so residents can report law breakers.
    a. Truck numbers will be large enough so someone near the truck can read them. The State's final SEIS require truck numbers that are 12 inches high (TR-15). The Forest Service NEPA document requires large, visible identifying numbers (WF-9). To make them readable from ¼ mile away would require that truck numbers be about 2 feet tall. 12" numbers should be readable from about 685' for someone with 20/20 vision.
3. Proponent monitoring speed limits is an honor system.
    a. Forest Service and County law enforcement officers will monitor the speed of vehicles besides the Proponent.

4. Kinross has not filed a mitigation plan.

    a. The Forest Service's required mitigation and monitoring are included in Chapter 2 of the preliminary EA and the EIS, and Appendix D of the EIS. The proponent is working through the specifics of final mitigation with the State of Washington, but that is outside the scope of this analysis. The specifics of Forest Service mitigation and monitoring will be included in the Plan of Operations and permits.

5. Additional discussion and reference supporting information on effectiveness of mitigation measures such as a table that describes environmental impacts, how impacts are mitigated, and a complete list of mitigations to better convey insignificant impacts as opposed to unmitigated greater impacts.

    a. Chapter 2 of the preliminary EA and the EIS only discuss the components and requirements of each alternative, including mitigation, which is an integral part of the alternatives; effects analysis is not provided in Chapter 2, although a comparison of alternatives is presented at the end of this chapter. That comparison is contained in each resource area in Chapter 3 of the preliminary EA and the EIS, which discusses the impacts that are expected *with mitigation in place.* Impacts without mitigation in place are not disclosed because mitigation is an integral part of the alternatives.

6. The EA should clarify that appropriate sediment control measures will be implemented along the road. It is not clear where or how sediment traps will be placed below unrevegetated slopes. The only sediment traps proposed by Crown/Kinross are at cross relief culverts on the access road.

    a. This has been clarified in the EIS. Erosion and sediment control structures are listed in mitigation measure WQ-1 in Chapter 2. Sediment control structures include wattles or straw bales in the ditches, and rock aprons and silt fences backed by straw bales placed below each ditch relief culvert within RHCAs. Additionally continuous silt fence would be required where the toe of the fill is within 100 feet of the stream.

7. Requiring snow to be blown uphill or end-hauled off site does not seem reasonable. Why can't it be stockpiled above or below the road? Would this be required if salt is not used. Removing snow could alter watershed characteristics.

    a. The Forest Service operates within the sideboards of the amended Forest Plan. The Inland Native Fish Strategy standard and guideline RF-2(f) states that sidecasting of snow should be avoided in RHCAs. Although not a requirement since these streams are not within priority watersheds, the IDT included uphill sidecasting or end haul out of the RHCA within 100 feet of streams as a protection measure for adjacent streams.

8. Crown/Kinross proposed straw bale check dams for sediment control in ditches, not wattles. Wattles are effective but more expensive and usually sold in longer lengths.

    a. Either straw bales or wattles could be used. Straw bales have a tendency to dam up water if the bales are too tight, which would somewhat defeat

the purpose of allowing water to flow through the ditches, while leaving behind sediment. Although wattles are more expensive, they are more effective than straw bales.

9. We appreciate the EA disclosing the effectiveness of mitigation measures but have questions about how the effectiveness was determined.

    a. Page 52 of the preliminary EA and page 58 of the draft EIS explain how effectiveness was rated. Additional information on effectiveness ratings was been added to the DEIS.

10. The full scope of effects to wetlands, riparian areas, and aquatic resources may not be mitigated since the COE will process nationwide permits, so we recommend a robust mitigation plan to fully address all direct and indirect aquatic effects.

    a. NEPA does not require that all effects be mitigated. The Forest Service operates within the sideboards set by the Forest Plan, which considers multiple use of the Forest. Mitigating effects to one resource may cause undesirable effects to another resource, which is why the Forest Plan provides a framework for projects. The Supreme Court found in 1989 in *Robertson v. Methow Valley Citizens Council* that:

        > NEPA does not impose a substantive duty on agencies to mitigate adverse environmental effects or to include in each EIS a fully developed mitigation plan. Although the EIS requirement and NEPA's other "action-forcing" procedures implement that statute's sweeping policy goals by ensuring that agencies will take a "hard look" at environmental consequences and by guaranteeing broad public dissemination of relevant information, it is well settled that NEPA itself does not impose substantive duties mandating particular results, but simply prescribes the necessary process for preventing uninformed - rather than unwise - agency action.

    Mitigation of all effects is neither necessary nor warranted. Reasonable mitigation is required under the 1872 Mining Law. The Forest Service will meet the requirements of the Corps of Engineers permit.

11. The DEIS underestimates the potential for significant sediment transport along Marias Creek. A mitigation goal of increased protection should be considered.

    a. Mitigation measures are included in all alternatives to capture road construction and reconstructed generated sediment. Effectiveness of the mitigation is discussed in the DEIS on page 141-148. Sediment control structures are expected to be 99% effective when mitigation measures are correctly implemented and properly maintained, and result in sediment delivery similar to current delivery. This is described in the Hydrology section of Chapter 3. The effects of ore and supply haul on aquatic species are disclosed in the Aquatics section of the preliminary EA and in the draft and final EIS. Other aquatic mitigation measures such as replacement of four road culverts in Marias Creek and one culvert in Nicholson Creek with structures that pass all aquatic lifeforms; the fencing of much of Marias Creek from cattle access and the hardening of three remaining cattle access points; the day-lighting of lower Marias Creek to restore hydrologic continuity during low flows; and the removal of one

culvert in Nicholson Creek which is a barrier to aquatic life passage should all improve aquatic habitat in Marias and Nicholson Creeks.

12. No clear enforcement mechanism is included to ensure that all mitigation and monitoring measures are implemented. Include frequency, location, who and how monitoring will be performed and how monitoring would trigger contingency or adaptive management measures. Include enforcement and monitoring mechanisms with the mitigation that is included to offset impacts to aquatic resources, specifically augmenting stream flows, replacing culverts, construction of off-channel wetlands, livestock fencing, wildlife and fish enhancement, reseeding/re-vegetation with native plant species, and potential for chemicals to reach streams, wetlands, RHCAs and riparian habitat. Ideally there would be one aquatic resources mitigation plan that includes all the details of a typical compensatory mitigation plan, including goals and objectives, performance standards, a monitoring plan and schedule, contingencies and adaptive management decision making process, performance bonds and reporting schedules. Reference the Aquatic Resources Mitigation Plan being developed by the company and how it will be implemented.

    a. Not all mitigation requires monitoring, only those where outcomes are less than certain. Enforcement mechanisms were added to each mitigation and monitoring measure in Chapter 2 of the FEIS. Although some of this information is provided, it is appropriate for the Plan of Operations, not the EIS.

    Detailed mitigation plans are not required by NEPA. This is also settled caselaw that NEPA does not require agencies to mitigate adverse environmental effects. As the U. S. Supreme Court found in *Robertson v. MVCC* [490 U.S. 332 (1989)]:

    > While a reasonably complete discussion of possible mitigation measures is an important ingredient of an EIS, and its omission therefrom would undermine NEPA's "action-forcing" function, there is a fundamental distinction between a requirement that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated and a substantive requirement that a complete mitigation plan be actually formulated and adopted. Here, since the off-site environmental effects of the project cannot be mitigated unless the nonfederal government agencies having jurisdiction over the off-site area take appropriate action, it would be incongruous to conclude that the Service has no power to act until the local agencies have finally determined what mitigation measures are necessary. More significantly, it would be inconsistent with NEPA's reliance on procedural mechanisms - as opposed to substantive, result-based standards - to demand the presence of a fully developed mitigation plan before the agency can act.

    The information presented in the DEIS and FEIS is adequate to meet this standard.

13. Include a table in the FEIS that lists each mitigation and monitoring measure, and reclamation requirement, and show which permits or mechanism will be used to enforce these measures.
    a. Enforcement mechanisms were added to each mitigation and monitoring measure in Chapter 2 in the FEIS.

Monitoring

1. Develop an adaptive management strategy for water resources with triggers and goals.
    a. A water monitoring plan with objectives and thresholds of change was added as an appendix to the EIS. The State's NPDES permit, establishes effluent limits for water quality, and establishes required responses.

2. Water sampling for composition including NaCl, MgCl and dissolved solids should occur pre-project and every year from Kettle River at Toroda Creek. Planned monitoring is insufficient to prevent or minimize impacts from mobilization of these salts on aquatic resources.
    a. Water monitoring, including monitoring for chlorides and magnesium began in 1992 at most locations and will continue throughout the life of the project and for a period after the end of the project. Monitoring will be done where the highest likely impacts would occur. See the water monitoring plan in the EIS and the draft NPDES permit for the Buckhorn Mountain Project. As indicated in the EIS, predicted levels of salts are within standards established for protection of aquatic life.

3. The EA should include a detailed, enforceable monitoring plan to ensure sediment detention methods function, including the type, frequency, responsible party and mechanism for enforcement of monitoring. How will the proponent monitor and encourage responsible, respectful haul route activities from their employees and contractors? Who will monitor the Forest Service part of the haul route? The monitoring described in the DEIS amounts to self monitoring and self enforcement. The FS must take a more pro-active role to protect resources. Independent monitoring should be required.
    a. A water monitoring plan including type, frequency, responsible party, and triggers was added as an EIS appendix. The Forest Service will be issuing a road use permit to the proponent and administration of this permit will be part of our enforcement and monitoring effort. Additionally, the Forest Service will approve a Plan of Operations for all activities, which will set enforceable conditions. Monitoring will mostly be done by the Proponent. Cut and fill slope monitoring will occur as described in Chapter 2 of the DEIS and FEIS. Silt fences and straw bale monitoring is required monthly May through September and quarterly during the remainder of the year under Alternative B1. Quarterly reports are required. Monitoring of the silt fences and straw bales are also required after storm events of 0.25" of precipitation in a rolling 24-hour period. Repairs need to be made within 24 hours of the discovery of problems. A Forest Service employee, likely a transportation engineer, is expected to monitor the road, road maintenance, and sediment control structures approximately 2 times per month during operations.

4. The FS should form a citizens group to monitor haul route behavior, assist with monitoring and assess impacts with findings presented to the FS and community

advisory board.

a. The Community Advisory Board is not part of the Forest Service proposal. The Forest Service is considering becoming an ad hoc member of the Community Advisory Board but would not participate in decisions or recommendations of this board. Any complaints by the public about haul route behavior on NFS lands will be considered in our administration of the Plan of Operations and permits.

5. USFS should monitor health of roadside vegetation, Marias Creek and air quality to determine effectiveness of dust control and make data available to the public.
   a. Monitoring of water quality in Marias Creek is included in the EIS. Most water quality monitoring of Marias Creek would be done as part of the monitoring for the State's NPDES permit. Additional turbidity monitoring by the Forest Service will be required along the Marias Creek haul route and is explained in Appendix D of the EIS. In addition, monitoring of fish populations in Marias Creek is proposed. Effectiveness of dust control, culvert replacements, sediment control structures will be monitored approximately 2 times per month by the Forest Service during operations. No formal monitoring of air quality or vegetation is planned. If excess dead trees or vegetation is noticed along the haul route, this will be investigated. Monitoring of air quality will consist simply of seeing if excess dust is raised by vehicles passing over the road. If excess dust is raised, the company will need to place more water on the road or the road will need to be again be treated with the dust suppressant chemical.

6. Will detailed monitoring be done to cover all impacted systems and specific accurate tests, including monitoring of benthic macro invertebrate testing. Sedimentation is directly related to decreases in macro invertebrate density and change in diversity. The Forest Service should monitor benthic macro invertebrates as an indicator of the overall aquatic health of streams from the impacts of storm water.

   a. Monitoring is described in the monitoring section of Chapter 2 and in Appendix D of the EIS. Benthic macro invertebrate monitoring was discussed with WADOE but both agencies decided not to include it because of the extreme natural variations found in these streams during this type of monitoring in 1994 and 1995. Because of these natural variations, and the natural differences between spring and fall, such monitoring would be inconclusive. Of the 160 points of data gathered in 3 surveys, 44% fell outside assumed standards.

7. Sample water from Kettle River at Toroda Creek to determine baseline. Each year, resample and compare composition and dissolved solids coming from Toroda to determine effects.

   a. If permission is given by private landowners, turbidity will be sampled above and below the junction of Marias and Toroda Creeks in Toroda Creeks to get the best indication of the impacts from Marias Creek under Alternatives B and B1. Sampling of Marias Creek will be on-going throughout the life of the mine. This sampling is described in Appendix D of the EIS.

8. No monitoring of impacts to streams is proposed. At the end of mining, conduct monitoring of stream habitat condition, with emphasis on sediment. Provide that info to WDFW to direct stream restoration. Prepare a draft stream restoration plan.

    a. Monitoring of water quality in Marias Creek is included in the EIS. Most water quality monitoring of Marias Creek would be done as part of the monitoring for the State's NPDES permit. Additional turbidity monitoring by the Forest Service will be required along the Marias Creek haul route and is explained in Appendix D of the EIS. In addition, monitoring of fish populations in Marias Creek would be required. Sediment control structures are expected to be 99% effective when mitigation measures are correctly implemented and properly maintained, and result in sediment delivery similar to current delivery. This is described in the Hydrology section of Chapter 3. Regular inspections by the Forest Service would be done during construction, and monthly inspections by the Forest Service would be done throughout the life of the project. An Adaptive Management Plan prepared by the Proponent proposes to do stream restoration during operations if monitoring determines there are impacts above a certain level, although analysis of this proposal would have to be completed at that time because no specifics are known on which an analysis could be performed.

9. The proposed fish monitoring plan should include measurements of changes in channel dimensions, flow rates, habitat types and trout population size and composition. Specific triggers and actions should be included in the likely event that fish and their habitat show adverse impacts.

    a The present monitoring plan includes changes in flow rates and fish populations. Water augmentation is generally designed to offset water lost from mine dewatering, although at certain times of the year additional water may need to be discharged. To minimize impacts to stream channel morphology, a mitigation measure has been added that any additional discharges in streams would not be made during bank full conditions. The Proponent has prepared an Adaptive Management Plan which proposes to do stream restoration during operations if monitoring determines there are impacts above a certain threshold.

10. Page 83 requirement that exceedences of monitoring criteria need not be submitted to the Forest Service for 7 days is unacceptably lax.

    a. The seven days referred to is the statement: "Any exceedences of monitoring criteria would be brought to the attention of the Forest Service within seven days of discovery unless other timeframes are required by permit, law, or the Plan of Operations." This is a requirement to report any exceedences within 7 days of discovery which is a higher standard than required under the NPDES permit which allows all instances of noncompliance, not required to be reported within 24 hours, to be reported at the time that monitoring reports are submitted. Most serious exceedences are required by the NPDES permit to be reported with 24-hours. 24-hour notice of noncompliance is required under the NPDES

permit for: any non-compliance that may endanger health or the environment; any unanticipated bypass that exceeds any effluent limitation in the permit; any upset that exceeds any effluent limitation in the permit; any violation of a maximum discharge limitation for any pollutants in Mine Water and Stockpile Stormwater Discharges; and any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limitations in the permit.

11. We have concerns about water quality monitoring on this project. A scientific approach is required. Establish baseline conditions for all water flows that will be impacted by mining. Include a comprehensive understanding of the Marias Creek ecology such as aquatic invertebrate life, fish, amphibians, sediment, pH, salt balance, as well as turbidity. Baseline measurements are needed for all these factors to understand impacts and develop criteria for environmental protection.

    a. Baseline monitoring at the site has been going on intermittently since 1992 so baseline conditions have been established for all water flows that would likely be impacted by mining. The State's NPDES permit will set the water quality standards for this project and will determine most monitoring of water quality. Information about expected water quality values and standards are discussed in the hydrology section of Chapter 3 of this FEIS. The Forest Service proposes to require additional water turbidity, salt and fish population monitoring along the ore and supply haul route (see Appendix D of the DEIS and FEIS). Based on all of the baseline studies completed on the site over the past 15 years, the ecology of the site is well understood. Aquatic invertebrate monitoring at the site were completed in 1994 and 1995. Refer to comment response to number 6 above to better understand aquatic invertebrates at the site.

12. Careful monitoring must be done for many years even after the minerals are extracted.

    a. Mining is not a part of the Forest Service activities. WADOE's NPDES permit will determine the length of monitoring in relation to mine dewatering and water quality. The Hydrologic Monitoring Plan will determine the length and extent of water quantity measurements. The length of monitoring has not been determined at this time. Monitoring will likely run for at least 2 – 3 years after the end of reclamation but will be based on conditions on the ground and could extend much longer.

13. The proponent is allowed to set the inspection schedule for roads with 3 a year, no monitoring will be done of fill slopes, there is no requirement to notify the Forest Service if sediment controls are not effective, all of which is unacceptably lax. What frequency of monitoring will the Forest Service perform to assure compliance with the specified protection standards?

    b. Monitoring of cut and fill slopes was included in the DEIS on page 87-88. Notification of the Forest Service regarding sediment control structures that aren't working and problems with cut and fill slopes has been added in the FEIS.

Noise

1. The project fails to acknowledge, fail to mitigate and/or downplay the significance of impacts of noise.

    a. No specifics are given in this comment to which a response can be formulated. Mitigation requirements for noise are included in Chapter 2 of the EIS. The effects of noise on people are presented in that section and the Recreation section in Chapter 3 of the EIS. Noise impacts on the wildlife resource are modeled and disclosed in the Wildlife section of the EIS.

2. Impacts to noise are irreversible and unmitigated.

    a. No specifics are given in this comment to which a response can be formulated. Noise impacts are not irreversible since noise ceases when the project or activity ceases. The effects on noise on people are presented in that section and the Recreation section in Chapter 3 of the EIS. Noise impacts on the wildlife resource are modeled and disclosed in the Wildlife section of the EIS.

3. Concern about sound pollution.

    a. No specifics are given in this comment to which a response can be formulated. The effects of noise on people are presented in that section and the Recreation section in Chapter 3 of the EIS. Noise impacts on the wildlife resource are modeled and disclosed in the Wildlife Section of the EIS.

4. Jake brakes will be used descending Marias Road and will resonate and down Toroda Valley, and trucks climbing or descending Marias will result in a noise problem. The EA says noise will exceed standard going uphill. Require proponent to pay for quietest available. Require the quietest mufflers for engine and compression brake noise. Install Donaldson Silent Partner mufflers on all haul trucks at start of project, not later if there is a problem.

    a. Mitigation measure NO-1 requires the use of “quiet” type mufflers on ore haul trucks and the use of mufflers on compression brakes.

        The EIS anticipates increases of noise right up to the limits allowed by Washington State Noise Standards. It also states, “None of the ore haul truck sound levels exceeded the criterion at speeds over 45, but there were exceedences for trucks traveling under that speed. The three dBA exceedences of 86 dBA were for full ore trucks on the hill at the Kettle River mill (2 exceedences) or traveling at 45 mph (1 exceedence for a full ore truck out of a sample of 19 trucks)”. These three trucks were hauling ore from K2 to the mill and the exceedences were in the range of 0.6 to 1.6 dBA, which is minor. Exceedences are not expected on the Buckhorn Access Project since trucks would be required to be equipped with quiet type mufflers (mitigation measure NO-1).

        Forest Service mitigation sets standards that have to be met which are to

"comply with all Washington State and Okanogan County health and safety requirements pertaining to noise generation. All supply and ore haul trucks would meet Motor Vehicle Noise Performance Standards, Chapter 173-62 WAC" and does not determine how they will be meet and does not endorse one company's products over another. Donaldson Silent Partner mufflers are advertised to be approximately 2.5 dBA quieter than the original equipment muffler on a single vertical muffler system and 3 dBA on a dual vertical muffler system for diesel engines with engine brakes. The improvement is greater when comparing aftermarket mufflers to the Donaldson Silent Partner Mufflers.

5. Appropriate guidelines for noise should be identified. Terms are used in the environmental consequences without clear definition. Terms need to be placed in the proper context, and it should be specified that no significant effects were found. Emphasize mitigation measures and identify relationship to compliance value or health effects.

    a. The EIS anticipates increases of noise right up to the limits allowed by Washington State Noise Standards. Mitigation measure NO-1 requires the use of "quiet" type mufflers on ore haul trucks and the use of mufflers on compression brakes. It also requires that supply and ore haul trucks meet Washington State Motor Vehicle Noise Standards, Chapter 173-62 WAC. Appropriate guidelines for noise have been moved out of the Noise Discipline Report and included in the EIS. This should also place terms in the proper context.

6. What is the decibel level for muffler options on compression brakes going downhill on Marias? Use actual decibel levels for trucks ascending and descending Marias Road and monitor for success of quiet mufflers and engines. Require the quietest muffler available.

    a. The decibel standard for these types of vehicles is 86 dBA at 50 feet. Quiet type mufflers meeting the standard are required. Compression brake mufflers are required on vehicles having compression brakes (NO-1).

7. Noise studies should include areas where truckers will use air brakes and areas with steep hills.

    a. The noise studies sampled ore haul trucks climbing the hill to the Kettle River mill which produced the highest noise levels for trucks traveling under 45 mph. Mitigation measure NO-1 requires the use of "quiet" type mufflers on ore haul trucks and the use of compression brake mufflers. It also requires that supply and ore haul trucks meet Washington State Motor Vehicle Noise Standards, Chapter 173-62 WAC. The use of compression brake mufflers, will assure that noise levels meet Vehicle Noise standards.

8. Use Tier 3 2006 truck engines to reduce noise and emit fewer emissions.

    a. It is not known if tier 3 engines are quieter since this was not part of the 2000 or 2004 rules relating to engines by EPA. This was nowhere stated in the literature reviewed.

In December 2000, EPA issued the final rule for a two-part strategy to reduce diesel emissions from heavy-duty trucks and buses. This included new diesel-engine standards in model year 2004 for all diesel vehicles over 8,500 pounds. Additional diesel standards and test procedures will begin in 2007. Because emission-control devices are damaged by sulfur, EPA also initiated a program requiring cleaner diesel fuels. Refiners are required to start producing diesel fuel for highway vehicles with a sulfur content of no more than 15 ppm, beginning on July 15, 2006 with this fuel being to the retail outlets by October 15, 2006. Though 20 percent of highway diesel fuel may continue to be produced at the existing 500 ppm sulfur maximum standard, it must be segregated from 15 ppm fuel in the distribution system, and may only be used in pre-2007 model year heavy-duty vehicles. In order to ensure a smooth transition, these rules will be phased in between 2006 to 2010. Due to the haul distances from this project, the haul contractor is likely to replace at least one haul truck yearly, if they do not buy a number of new trucks at the start of the project.

In general, Tier 2, 3, or 4 engines refer to off road diesel engines and/or gasoline engines for light-duty vehicles so these vehicles would not be in haul trucks transporting ore to the Kettle River mill. The 2006 tier 3 engines generally refer to off road diesel engines below 750 h.p. and refer to an engine standard rule that has to be met in 2006.

The health effects of diesel exhaust are discussed in the EIS under the air quality section. The amount present from this project is substantially less than the annual source impact level. If the haul vehicles meet EPA guidelines and there is no known health risk identified from the use of the vehicles, the Forest Service can not require the haul contractor to meet higher standards. The haul contractor is required to meet Federal Highway Standards for their vehicles.

9. I can hear the sounds from trucks backing up coming from Tollefson's land, which is only the beginning.
    a. This is likely related to the beginning of construction activities up at the mine site, and required Forest Service maintenance of Forest roads 3575-120 and 3575-140 in order for the Company to access their private lands. Effects on these private lands and relate to activities covered by the State of Washington, Department of Ecology's FSEIS. The Forest Service forwarded this comment letter to WADOE.

10. Noise is being used to stop road construction for the mine in relationship to a potential wilderness area. Groups who advocate wilderness have gone too far. What makes wilderness more important than a road for mining?
    a. The impacts on inventoried roadless and unroaded/undeveloped areas, including noise impacts are disclosed in that section of Chapter 3 of the EIS.

Noxious Weeds

1. How will the proponent ensure that the gravel from weed infested Beal rock pit is weed free?

a. The Forest Service is requiring noxious weed free gravel. Although it is outside the authority of the Forest Service to determine where gravel comes from, the proponent has indicated that they intend to scrape the top 12-24" of soil off the gravel at Beal rock pit to get to gravel that is weed free as described in the EIS in the noxious weed section of Chapter 3. The Beal site has to be inspected by the Forest Service before any material from this site can be placed on National Forest lands or right-of-ways.

2. Measures for minimizing noxious weed control are not specific. The grass seed mixture is not specified, nor the amount and duration of herbicide use. Herbicides would contaminate groundwater. Seed source removal described but no method was given.

    a. Specifics relating to noxious weed prevention are included in the mitigation measures in Chapter 2 of the EIS. Herbicides would be used in accordance with existing integrated weed management decisions, and the effects of herbicide use are described in those documents. A vegetation management plan has been written for this project and is located in the project file. The grass seed mixture will be detailed in the Plan of Operation. Two mixtures are proposed, a high elevation mixture and a lower elevation mixture. The mixtures will likely include a combination of yarrow, fireweed, silky lupine, sheep fescue, Streambank Wheatgrass (Pryor), blue wildrye, Mountain brome (Bromar), Junegrass, and Sherman big bluegrass depending on elevation and aspect.

3. I oppose use of herbicides on National Forest lands that would affect non-target species and/or wildlife and water.

    a. Any herbicide use would be under already approved separate NEPA documents, existing integrated weed management decisions, and restrictions in those documents.

4. Plant seeds are blown from one location to another by nature. Aren't agencies required to use biodegradable herbicides, so why worry? Won't monitoring and enforcement spread weeds? Can't weeds spread from local land resident's land and contaminate the mine site?

    a. Vectors of spread and existing populations of weeds are discussed in the Noxious Weed section of Chapter 3 of the EIS. Herbicide use would be done under existing Integrated Weed Management decisions, the effects of which are analyzed in the NEPA documents for those decisions.

Other

1. The company has listened to concerns and developed an underground mine with offsite milling at Kettle River with many environmental protection and enhancement measures. There will be no significant impact on or off public lands. Don't let a few vocal detractors delay this project.

    a. The effects of the alternatives are included in Chapter 3 of the EIS.

2. The EA should include a convenient list of references.
    a. A list of references was included in the EIS.

3. The terms “reserves” and “ore” are not accurately used in the Other Required Disclosures section on page 340. Disclose that additional material could be mined if metal prices increase or cut off grades decrease, but additional analysis won’t necessarily be required.
    a. This section was corrected in the EIS.

4. OHAs comments on the EA indicate a number of instances where the EA fails to fully examine likely effects.
    a. No specifics are provided with this comment to which an answer can be formulated. All OHA comments have been responded to in this response appendix.

5. I’ve been to other Kinross sites and would be hard pressed to find portals.
    a. This comment does not relate to the activities under consideration in this proposal. All underground mines have portals to access underground workings.

6. The company has an excellent track record of good corporate citizenship and environmental stewardship.
    a. This comment does not relate to the activities under consideration in this proposal.

7. The project can be built, operated and reclaimed in a manner that is fully protective of the environment with few environmental concerns and with the least possible impact to the environment.
    a. The effects of the alternatives are included in Chapter 3 of the EIS.

8. You have failed your responsibility to taxpayer, or are you working for the mining company. Do corporations run America or does the Forest Service take the best interest of citizens into account?
    a. This comment does not give specifics to which a response can be formulated.

9. It appears the DEIS was prepared to conclude the impacts were not significant rather than an objective examination of the potential impacts. Information is misleading because it extrapolates data inappropriately, draws conclusions or fails to draw conclusions or fails to mitigate situations. There is insufficient basis for the responsible official to come to an objective decision.
    a. This comment does not give specifics to which a response can be formulated. An EIS was prepared because of potential significant effects, and the Forest Service was not certain it could support a Finding of No Significant Impact. No specific information is given regarding data used inappropriately, conclusions drawn or not drawn or failure to mitigate

specific effects, so no response is possible. The DEIS and FEIS contains sufficient information for an informed decision.

10. In contrast to the previous proposal for an open pit mine, there is no big controversy over this underground mine.
    a. Non-substantive. This comment does not relate to the Forest Service proposal to approve access to private lands.

11. I've lived in Okanogan County since 1973 and live along the transportation route. Kinross has a record of taking care of the environment and is an important part of the local economy.
    a. Non-substantive. This comment does not relate to the Forest Service proposal to approve access to private lands.

12. This isn't a popularity contest, nor should it be.
    a. Non-substantive. Does not relate to the environmental effects of the Forest Service proposal to approve access to private lands and other activities.

13. Let's not let this project be killed by politics.
    a. Non-substantive. Does not relate to the environmental effects of the Forest Service proposal to approve access to private lands and other activities.

14. Saddened to see such a large document over a project with such small impacts.
    a. Non-substantive. Does not relate to the environmental effects of the Forest Service proposal to approve access to private lands and other activities.

15. This project will demonstrate that responsible mining can occur on NFS lands and co-exist with other multiple uses on public lands as intended by federal policy.
    a. The environmental effects of the proposal are presented in Chapter 3 of the EIS.

16. The FS employee responsible for monitoring Marias Creek road should attend Kinross community advisory board meetings and share data.
    a. The Forest Service is considering being an ad hoc member of CAB. We will not participate in any decision making or recommendations of CAB. Most Forest Service updating about the project will be through news releases to the local papers and radio stations.

17. The EIS should include full disclosure of the mining proponent's ability to follow through with the commitments in the document. Include all bankruptcies, violations, or forfeitures and that it is a shell company for a Canadian company. SEC has held up the deal for years because of irregular accounting practices.
    a. A financial assurance in the form of a reclamation bond is required prior to the start of operations on National Forest System lands to ensure that

sufficient funds would be available to properly reclaim the areas disturbed on NFS lands and rights-of-ways in the event that the Proponent would be unable or unwilling to meet reclamation and post-closure obligations. The amount of the reclamation performance security would be sufficient to assure completion of the reclamation if such work had to be performed by the Forest Service in the event of forfeiture by the Proponent. Because of this, the information requested above is not relevant to the environmental effects of this decision.

18. Kinross appreciates efforts in developing DEIS and that it was completed in a timely fashion.
    a. Non-substantive. No response necessary.

19. Update the FEIS with information that came out after the DEIS from Ecology's FSEIS and technical documents. This will ensure consistency and reflect the degree of coordination and collaboration between USFS and Ecology on these documents.
    a. The Forest Service fully intends to update the FEIS with information that became available with the completion of transient modeling after completion of the Forest Service DEIS. Only final information developed since the State's DSEIS was used in the development of the Forest Service DEIS since information was changing almost weekly over the summer.

20. If I were wealthy I would consider suing your department for the many times as you have wanted to mess up this beautiful area by allowing mining. I would do my best to get NRDC involved. It's your job to protect the community and its quality of life. If is not your job to serve special interests.
    a. Non-substantive. Does not relate to the environmental effects of the Forest Service proposal to approve access to private lands and other activities. Impacts on quality of life are described in the EIS in Chapter 3 under the Noise, Air Quality, Recreation, and Socio-Economic sections.

21. USDI does not have any comments to offer
    a. Non-substantive.

22. URS did a study of the 55 acre wetland. He came with others from the mine and hardly seemed independent. He called ahead but didn't mention he'd bring mine people. We were friendly and showed him around but we feel tricked. He should have asked us if he could bring mine people.
    a. Non-substantive. Does not relate to the environmental effects of the Forest Service proposal to approve access to private lands and other activities.

23. I do not believe this mine is in the best interests of the residents of Washington State.
    a. Non-substantive. This comment does not give specifics to which a response can be formulated.

24. I do not know anyone involved in the mining adventure and would not have any economic gain from it. I am pro-mining. I have fond memories of growing up and discovering old mines.
    a. Non-substantive. Does not relate to the environmental effects of the Forest Service proposal to approve access to private lands and other activities.

25. Some people despise mineral extraction, and if they prevailed we'd be swinging from tree limbs, huddled in caves with stick and stones for protection from wild beasts.
    a. Non-substantive. Does not relate to the environmental effects of the Forest Service proposal to approve access to private lands and other activities.

26. Man's creative activities always have trade-offs. Those who oppose land use conveniently forget that this land was withdrawn from mans' use for wildlife benefit, which is another land use. Those claiming that land is being taken from recreationists are not being forthright, because I have never heard of any land management agency consulting with recreationists.
    a. The effects of the alternatives on resources, including wildlife and recreation, are disclosed in Chapter 3 of the EIS. The Forest Service routinely involves people interested in recreational activities in planning efforts, including this project.

PCHB ruling

1. The EA fails to address deficiencies identified by the PCHB regarding water rights, water rights mitigation, hydrologic and geochemical modeling.
    a. The PCHB decision addressed Washington State permits and certifications and did not affect the USFS decision on the Crown Jewel Project. The USFS' decision was upheld through the Federal 9th Circuit Court of Appeals. The Appeals court agreed with the USFS that the EIS could rely on other agencies (e.g. WADOE) to carry out their legal responsibilities for environmental protection. In the present case, the USFS properly relies on the WADOE to determine water quality requirements for discharge at the infiltration site. WADOE has been delegated authority for the Federal Clean Water Act by the USEPA in the State of Washington. As such it is the WADOE's responsibility to address any applicable PCHB issues raised in the previous project in their permits and certifications for the current proposal. It is the Forest Service's responsibility and intent to disclose the accumulation of any associated impacts with those direct and indirect impacts connected with the USFS project.

Process

1. The EA and DEIS show the Buckhorn project can be built, operated and reclaimed in an environmentally responsible manner with few environmental concerns that cannot be mitigated, and the least possible impact on the environment.

a. The effects of the alternatives are included in Chapter 3 of the EIS.

2. Incorporating the State's DSEIS/FSEIS does not release the Forest Service from considering significant environmental impacts under NEPA. Most of these issues were brought up during scoping.

    a. The Forest Service EIS discloses impacts for all project activities, and information is analyzed relating to issues developed during scoping. These are limited to the activities over which the Forest Service has authority. To the extent that activities on private or State lands have overlapping effects with project activities on National Forest System lands, those are analyzed in the appropriate cumulative effects sections of the EIS.

3. The Forest Service has wasted my tax dollars because I have never received a reply from my comments. I don't know if they are logged or considered.

    a. The Forest Service does not respond directly to comment authors. As required by the Forest Service appeal regulations, comments must be considered. Response to comments on past projects is outside the scope of this analysis. In this case, we have documented our consideration of all comments in this document which is published with the final EIS.

4. The e-mail address is too long and increases the chance that the general public will fail to comment.

    a. The e-mail address used is the standard e-mail address set up by the Forest Service Washington Office for commenting on projects.

5. The road access and related activities project are part of a larger project and would have significant environmental effects requiring an EIS. The Forest Service has a responsibility under NEPA to consider the environmental impacts of the whole project because the road is an integral part of the Buckhorn mine proposal. The EA appears to be prepared to justify the finding of no significant impact.

    a. The Forest Service made the decision to document the analysis in an EIS. The Forest Service EIS discloses impacts for all project activities. These are limited to the activities over which the Forest Service has authority. To the extent that activities on private or State lands have overlapping effects with project activities on National Forest System lands, those are analyzed in the appropriate cumulative effects sections of the EIS.

6. The Amended Plan of Operations is for the Buckhorn project on National Forest System lands, not an access road with related activities.

    a. The key to the title is the Buckhorn project <u>on NFS lands</u>, which <u>are</u> the access road, infiltration pipeline and gallery, and related activities.

7. The EA is inadequate and should determine that the direct, indirect, and cumulative impacts caused by the mine are significant and merit an EIS.

    a. NEPA requires the consideration of cumulative effects where the effects of the proposed action have overlapping effects with other activities not related to the

proposed action. However, it is the incremental effect of the proposed action that is analyzed over the effects of other activities. An EIS was prepared for this project.

8. The EA is incomplete because it does not include analysis of the 1.5 mile road that crosses State land which will link the Marias Creek road to the mine site.
    a. The road on State land is not on NFS lands and is considered in the cumulative effects sections for resources that have overlapping effects with that road.

9. WADFW was not identified in the Chapter 4 list of agencies consulted in preparation of the report.
    a. This is an oversight and was corrected in the EIS.

10. We do not oppose the mine but want the Forest Service to remain neutral and maintain integrity in assessing all issues despite the political pressure regarding the project.
    a. The Forest Service has analyzed the impacts of the activities that would be approved on NFS lands, and also those activities related to the mine that overlap with the effects on NFS lands.

11. The EA is slanted and appears to be prepared to conclude impacts are not significant, rather than an objective evaluation.
    a. An EIS was ultimately prepared for this project.

12. To limit the scope of your analysis to the access road while failing to comment on the total impact to the forest, its wildlife, flora and water systems in the surrounding forest feels like you've abandoned your post.
    a. The analysis was not limited to the access road. Activities planned on NFS lands were evaluated for all resource areas, including forest vegetation, wildlife, botany and water. To the extent that activities on non-NFS lands had overlapping effects with impacts on NFS lands they were evaluated in the cumulative effects sections.

13. The environmental effects of Alternative B confirm the effects to NFS lands are not significant.
    a. Non-substantive. The effects of Alternative B are analyzed in Chapter 3 of the EIS.

14. The final EA should clarify that significant effects are not expected.
    a. The Forest Service made the decision to document the analysis in an EIS, and no findings of non-significance are required.

15. EPA believes the project has potentially significant impacts to water quality, air quality and habitat on Forest Service lands that are not sufficiently mitigated to support a Finding of No Significant Impact and would be best handled in an EIS.
    a. The Forest Service made the decision to document the analysis in an

EIS, and no findings of significance or non-significance are required.

16. The DEIS presents a thorough analysis of project components, alternatives and minor impacts. Project will be protective of the environment both on and off public land.
    a. This comment does not give specifics to which a response can be formulated.

17. The DEIS fails to use the latest information available and instead presents the public with outdated information by relying on Ecology's DEIS instead of documents produced after that.
    a. The Forest Service fully intends to update the FEIS with information that became available with the completion of transient modeling after completion of the Forest Service DEIS. Only final information developed since the State's DSEIS was used in the development of the Forest Service DEIS since information was changing almost weekly over the summer. As described in the footnote on page 156 of the DEIS, transient modeling was not yet complete when the Forest Service issued its DEIS.

18. It is insufficient to simply change the name from an EA to an EIS without thoughtful analysis that should accompany the more detailed analysis. The FS must acknowledge that the project would cause significant adverse impacts, not simply assert that the public raised concerns that it might. The Forest Service has created an undue burden on the public by duplicating efforts by making a second EIS for the same project, making the public repeat many of the same issue and concerns brought up in the past even as they continue to be ignored. The DEIS states that it contains outdated information that will be updated in the States FEIS.
    a. The DEIS was not simply a conversion of an EA to an EIS. The DEIS contains over 40 pages more analysis than the preliminary EA, and incorporates two new issues, one of which was added as a key issue. The DEIS and FEIS fully disclose all impacts from the project. The Forest Service and WADOE decided to prepare separate documents, because decision authorities and requirements for alternative formulation were so different under SEPA and NEPA.

19. Preparation of a 500 page plus document is unprecedented in length and scope for a project with such small impacts on NFS lands and we hope it does not set a precedent for other similarly minor projects on NFS lands.
    a. The analysis is commensurate with the direct, indirect and cumulative effects of the project.

20. Although NEPA requires the no-action alternative, it is not selectable because the Mining Law and ANILCA require the Forest Service to provide Crown with access across public land for both unpatented claims and private lands. Emphasize this in the No-Action alternative.
    a. Information has been added to the no-action alternative about the requirements of the Mining Law and ANILCA.

21. EPAs main concern is the need to correct information about water resources and enforcement of monitoring and mitigation to be consistent with the latest information in WADOEs FSEIS. The draft relies on incorrect data in the draft SEIS which was corrected in the final SEIS. We understand the Forest Service DEIS was developed when the DSEIS information was the most current, however additional modeling and analysis is now available.
    a. EPA appears to be referencing a phone conversation with the Forest Service where Forest Service staff informed EPA that the values in water quality tables in WADOEs FSEIS were incorrect. These values were not included in the DEIS, and new values were not available at the time the DEIS was published. Instead the Forest Service relied on information provided by WADOEs NPDES Coordinator. The water flow information in WADOEs DEIS was not "incorrect" although it was preliminary because transient models had not yet been finished. As stated in the DEIS in a footnote on page 156, the Forest Service acknowledged that information that would be contained in the Department of Ecology's FSEIS would be incorporated into the Forest Service FEIS. Final modeling information is provided in the Forest Service FEIS.

22. Ideally the federal NEPA and State SEIS process would have been coordinated so that a review of both documents could be conducted concurrently since they refer to one another. Unfortunately since they appear to not have been coordinated the DEIS contains incorrect information and analysis which limits our ability to make relevant comment about completeness or prediction of impacts.
    a. The EIS processes between the State and Forest Service were fully coordinated. The agencies conducted weekly or bi-weekly conference calls throughout 2006, and before that, to resolve problems or inconsistencies. However, the Forest Service did not feel it was necessary to delay the Draft EIS for the State's Final SEIS since the Forest Service document was a draft. Waiting for the State's FSEIS would have delayed release of the Forest Service decision unnecessarily. The Forest Service Final EIS will incorporate the information from the State's Final SEIS, as appropriate. EPA will have the ability to review the Forest Service Final EIS with the State's Final SEIS.

23. EPA is concerned about mitigation and monitoring. Although the DEIS contains mitigation to offset aquatic resource impacts, it in unclear what enforcement mechanism would ensure implementation.
    a. The enforcement mechanism that the Forest Service has is to require the Proponent, and others, to follow the Plan of Operations and permits. If the mitigation is not completed in a timely manner, the Forest Service would enforce the Plan of Operations, shutting down commercial use of Forest Service roads, i.e. ore and supply haul.

24. We believe a thorough review of the DEIS would require the FSEIS. Because comment periods did not overlap, this was difficult to accomplish, although we appreciate the time Forest Service staff took to help us identify inconsistencies and discuss our concerns.
    a. See response to comment #2 above. In addition, the State's FSEIS was released to the public on September 15th so the overlap between the

State's document and the Forest Service DEIS was about 30 days based on when comments were received from EPA. This should have been adequate time for EPA to compare the two documents, if that was needed.

25. We are reviewing the FSEIS and will be providing comments to the Department of Ecology and recommend that the Forest Service also consider these comments in development of the FEIS. EPA is currently reviewing WADOEs FSEIS and will be providing comments on aspects such as the more recent modeling that may be relevant to the Forest Service FEIS. EPA recommends that the FEIS incorporate information from WADOEs FSEIS and EPAs comments on the FSEIS, for example in relation to water quantity and quality, NPDES outfalls, monitoring, wetlands, and additional mitigation.

    a. WADOEs EIS is a final supplemental EIS, and WADOE does not intend to supplement their analysis. The Forest Service reviewed EPAs comment letter to WADOE on their FSEIS and made changes or clarifications in the Forest Service EIS where comments also addressed Forest Service analysis and where appropriate.

26. We recommend that where the FEIS cites to WADOEs FSEIS, sections and page numbers be included.

    a. This has been done in the final EIS.

Purpose and Need

1. The effects of traffic on residents cannot be "minimized" with the amount of traffic planned.

    a. The Marias Creek road has been identified as the preferred alternative in part because only one home on Forest Service land or right-of-way is within 500 feet of the ore and supply haul road. This minimizes the effects of the proposal on residents along National Forest System roads.

Public Involvement

1. The Forest Service shows little respect, consideration or appreciation for the public's role in helping the agency's review effort.

    a. The author of this comment has not indicated how the Forest Service has not included the public in the review effort. This project was scoped in the spring of 2005, and all comment letters were reviewed, and issues were developed in response to them. An EA was released in accordance with Forest Service regulations for a 30-day comment period, and all comments from the public were reviewed and considered. The Forest Service re-scoped the effort in the summer of 2006, considered comments received, adding two new issues, and published a DEIS for public comment. Response to the comments on the preliminary EA and on the DEIS are included in this appendix.

2. Have a USFS representative periodically update the public and share any monitoring data associated with the haul route and mine area, especially since Marias road will be off limits to the public. Suggest using the Community Advisory Board.

    a. The lower portion of the Marias Creek road will not be off limits to the public. A portion of Forest Road 3550-125 and all new construction (not reconstructed) roads on National Forest System lands will be closed to the public. The public will be able to use Forest Roads 3550 and 3550-130, to access the upper part of the drainage. The Forest Service is considering being an ad hoc member of CAB. We will not participate in any decision making or recommendations of CAB. Most Forest Service updating about the project will be through news releases to the local papers and radio stations.

3. No meetings have been held in Chesaw regarding the start up of construction. Meetings should be offered locally.

    a. This comment should be directed to WADOE because they have issued the permits to begin construction. No construction permits have been issued by the Forest Service, although the proponent was required to maintain the Forest Service Cow Camp road prior to its use.

Quality of Life

1. Ferry County offers a sense of community, with kind and loving people and a good quality of life.

    a. Non-substantive. Statement doesn't relate to environmental effects of the proposal.

2. The EA and DEIS fail to acknowledge, fail to mitigate, and/or downplay the long-term significance to quality of life

    a. Non-substantive. Statement fails to give any specifics for which a response can be prepared. Quality of life issues are covered in the EIS under the air quality, scenery, noise and socio-economic sections.

3. The EA and EIS fail to acknowledge, fail to mitigate, and/or downplay the long-term effects on residents.

    a. Non-substantive. The statement fails to give any specifics for which a response can be prepared. Quality of life issues are covered in the EIS under the air quality, scenery, noise, and socio-economic sections. Alternative B1 has been identified as the preferred alternative in part to reduce impacts to residents. Only one residence is located along the Forest Service road/right-of-way within 500 feet of the ore and supply haul route during operations.

4. Impacts on residents are irreversible and unmitigated. Noise and dust from 12 hour a day ore haul will ruin a beautiful country home as the base of Marias Creek.

a. Impacts to residents are covered in the EA and EIS under the air quality, scenery, noise, and socio-economic sections. Impacts are mitigated as disclosed in mitigation measures in Chapter 2, and the analysis in Chapter 3. Impacts are irretrievable but not irreversible, because most will cease once haul and mine operations have been completed. Alternative B1 has been identified as the preferred alternative in part to reduce impacts to residents. Only one residence is located along the Forest Service road/right-of-way within 500 feet of the ore and supply haul route and impacts to that residence are disclosed in the EA and EIS.

5. The Forest Service must consider the cumulative impacts with the entire mine proposal including quality of life impacts. Protect human residents of this area.
    a. Direct and indirect effects from activities planned on NFS lands are disclosed in the air quality, scenery, noise and socio-economic sections of the EIS. To the extent that activities planned on NFS lands overlap with effects from the mine proposal, those impacts are disclosed in the cumulative effects sections of those same sections in the EIS.

6. My quality of life and solitude will be impacted by heavy mine traffic on Pontiac Ridge Road, and noise from ore haul on new road in Marias drainage. I expect adequate mitigation.
    a. Use of the Pontiac Ridge Road is analyzed in the WADOE's FSEIS, and is not within the Forest Service authority. Impacts from noise on the Marias Creek road are described in the Noise section of Chapter 3 of the EIS. Noise mitigation is described in the mitigation section of Chapter 2 of the EIS.

7. 6 to 6 operating time greatly affected residents quality of life and impacts should be considered
    a. Impacts on quality of life are disclosed in the DEIS and FEIS under the air quality, scenery, noise, and socio-economic sections.

8. Does timing restriction apply to only the ore haul or all traffic including employee traffic? Will residents get a break on Saturday mornings to enjoy our pristine properties?
    a. The 6AM to 6PM operating restriction applies to loaded and unloaded trucks operating on NFS lands and rights-of-way, although the Company has indicated there may be reduced haul on weekends. Other traffic is not subject to any restrictions.

Range

1. Haul may kill cows which may cause ranchers financial loss, but would also cause losses to vehicle owners. Vehicle operators won't seek confrontation with cows so fencing seems reasonable and responsible to minimize altercations with livestock.
    a. Fencing the Marias Creek road is included in Alternatives B and B1. Estimates of effects on range management and cow mortality are presented in Chapter 3 of the EIS and in the Alternative Comparison chart at the end of Chapter 2.

Reclamation

1. The reclamation plan does not address long-term site monitoring and care with regard to erosion, stream flows, and water quality.
    a. Long term site monitoring for water quality and stream flows are included in the State's FSEIS as part of the mining project. Erosion monitoring following mine closure and reclamation, include final cleanout of sediment control structures. Maintenance for erosion after that point will be part of the Forest Service normal maintenance program. Re-vegetation standards for reclamation are listed in the monitoring section of Chapter 2 of the EIS.

2. Reclamation should narrow and re-contour the Marias road to one lane with intervisible turnouts to decrease runoff and long term erosion. Leaving the road two lanes will guarantee ongoing degradation of Marias Creek, fish habitat, water quality and riparian resources. Will there be an increase in the maintenance budget to take care of this oversized road and minimize water quality/habitat impacts?
    a. The reasons for not re-contouring the Marias Road to one-lane are stated in the alternatives considered but not fully developed section of Chapter 2. However, since publication of the DEIS, the Forest Service has decided to reduce the maintained width of the Marias Road to 17-18 feet with intervisible turnouts to reduce future maintenance costs.

Recreation

1. The EA and DEIS fail to acknowledge, fail to mitigate, and/or downplay the long-term effects on recreation and tourists.
    a. Non-substantive. The statement fails to give any specifics for which a response can be prepared. Recreation impacts are disclosed in the recreation and inventoried roadless/unroaded/ undeveloped character section of the EIS.

2. The project would cause a safety risk near Beth and Beaver Lakes in addition to an indirect impact on dispersed and primitive recreation opportunities. This project area has high potential to impact recreation and it should be described how recreation will be protected, such as wilderness designation. Campers may be displaced from existing facilities.
    a. Impacts to Beth and Beaver Lakes are disclosed in Alternative D of the Recreation section of the EIS. Impacts on recreation are disclosed in the Recreation section of the EIS, including the potential for campers to be displaced. Effects on inventoried roadless areas and unroaded/ undeveloped character are disclosed in the EIS in that section. Wilderness designation is outside the scope of this EIS. Only Congress can designate wilderness.

3. Lumping tourism, recreational activity, viewpoints, aesthetic enjoyment, quality of life, health, safety and solitude for residents is bizarre and noxious. Suggesting that tourists and recreations will suffer from mine flies in the face of reality that

tourists and recreationists create the same impacts. Roads are essential to man's quality and enjoyment of life. Don't local residents travel on public roads to get to their homes? Solitude is constantly changing.

a. Although these are all part of one issue, the impacts on them are separately analyzed in the Noise, Air Quality, Scenery and Recreation sections of the EIS. Both positive and negative benefits are disclosed.

4. The EA claims the road system will support recreational activities, but the area will be closed to the public for 10 years.
    a. Only 74 acres of NFS lands will not be available to the public for the life of the project. All other areas of the Buckhorn Block will be available. Other areas currently open for road use now will continue to be open, except a short segment of Forest Road 3550-125 beyond Forest Road 3550-130. The reconstruction of Forest Road 3550 would allow better access to the Marias Creek drainage than currently exists.

Road Use Permit

1. Why is the Cow Camp road being upgraded before the FEIS is out. Large pit and equipment at base of Pontiac Ridge road is an eyesore. Increase in heavy traffic causing noise, dust and poor road conditions from this construction, & no mitigation provided. Why take comments if FS already made decision to allow construction. Why not public meeting in Chesaw about this. I am concerned that we are being asked to make comments when it is perfectly obvious that the preliminary construction is already underway. Both Pontiac Ridge Road and Toroda Creek routes have been greatly impacted and many changes are taking place. A new road surface has been placed on the Cow Camp road. Will this road be utilized in the preparation stages and thereafter for the mine? Why are trucks running long after 6 pm and before 6 am?
    a. In September, 2006, the Forest Service issued Crown/Kinross a Road Use Permit for continued use and plowing of Forest Roads 3575-120 and 3575-140 to access their private lands as is their right under ANILCA. Crown/Kinross has been using this road for many years, but in order for them to begin activities on their private lands approved by the State of Washington in September 2006, the Forest Service required them to first perform deferred maintenance on the road. Impacts of this construction activity relate to activities covered by the State of Washington, Department of Ecology's FSEIS. Operating hours for non-Forest Service activities are part of DOE's FSEIS. Operating for commercial haul trucks on NFS portions of this route are 6am to 6pm except in emergencies.

2. Water is being diverted from Chesaw well from dust abatement on the Pontiac Ridge/Cow Camp roads, which only permits limited use.
    a. The Forest Service contacted WADOE regarding this comment. WADOE issued letters to Kinross and its primary contractor on October 6, 2006 informing them that the use of this well was not permitted under existing water rights and to stop use of the well, unless they could show they did have water rights.

Scenery

1. The EA and DEIS fails to acknowledge, fail to mitigate, and/or downplay the long-term significance to scenery.
    a. Non-substantive. The statement fails to give any specifics for which a response can be prepared. Scenery impacts are disclosed in the Scenery section of the EIS.

2. Concern about light pollution.
    a. As disclosed in the mitigation and scenery sections of the EIS, lighting would be kept to a minimum, and the only stationary lights that will be used on NFS lands are at the infiltration gallery. These lights are required to be low intensity and downward facing to minimize glare.

Social

1. People without jobs will not have health insurance and may risk their access to health care services. Workers may be forced to leave the area and take family members who work in the health care professions, creating a void and threatening community services.
    a. Non-substantive. The statement is not about environmental effects of the proposal.

2. Kettle River Operations have been an important part of the social and economic fabric of the area.
    a. Non-substantive. The statement is not about environmental effects of the proposal.

3. Kettle River Operations recently made a huge donation to our schools extra-curricular activities, which is important because our children have little else to do.
    a. Non-substantive. The statement is not about environmental effects of the proposal.

4. Putting miners back to work will be good for our schools, hospitals and merchants of both counties.
    a. Non-substantive. The statement is not about environmental effects of the proposal.

5. The current decrease in school enrollment has already been attributed to layoffs at Kettle River Operations. KRO contributes to the tax base to support schools and other tax dependent entities. Working families help maintain or increase school enrollment and increase state matching funds to help rural school districts maintain a quality education.
    a. Non-substantive. The statement is not about environmental effects of the proposal.

6. The DEIS and supporting documents fail to acknowledge, fail to mitigate, and or downplay the long-term significance to residents, or impact on human use from industrialization on formerly wild lands.
    a. Non-substantive. The statement fails to give any specifics for which a response can be prepared. Effects on residents can be found in the DEIS and FEIS in the air quality, scenery, noise and socio-economic sections.

7. During this project, the facilitators need to work with the interest of local residents in mind. Landowners will be greatly impacted by daily operations. I hope the Forest Service is kind to the public and takes into consideration the livelihood of those who will be greatly affected for many years.
    a. Non substantive. The statement fails to give any specifics for which a response can be prepared. Public comments were solicited on this proposal and have been addressed in the analysis. This statement is not about the environmental effects of the proposal.

Soils

1. The EA should discuss the effects of salts on soils from salts used for dust abatement, not just salts used for winter traction.
    a. The hydrology section of the EA estimated the amount of salt that could potentially get into the creek from both dust suppression and in the sand used for winter traction. Additional information has been provided on the effects of salts on soils in the soils section of the EIS. The effects of increased salt levels on Forest Vegetation and other plant species are discussed in the Forest Vegetation and Botany sections of Chapter 3 of the EIS.

2. What is the possibility of a massive earth slump from saturated conditions caused by the infiltration pit?
    a. No slumps are anticipated where water from the infiltration gallery comes to the surface because water is not expected to be of a volume or velocity to cause slumping. This has been clarified in the EIS. Monitoring of the cut and fill slopes for Forest Road 3575-125 below the infiltration gallery as been added to the monitoring requirements in Chapter 2 to ensure stability of the road.

Support for Alternative

1. Support for Buckhorn project Alternative B and approve/permit as soon as possible.
    a. Non-substantive. The Forest Service intends to proceed with publication of a final EIS and decision once comment response and the final EIS are completed.

2. Support for No Action, Alternative A.
    a. Non-substantive, although the Forest Service preferred alternative identified in the DEIS and FEIS is Alternative B1.

3. Thank you for switching to an underground mine from the open pit mine. Glad that paving is included to stop off-tracking, no unloaded trucks from 6PM to 6AM and specifics about spring breakup are included.
    a. The underground mine is part of the State of Washington FSEIS and will not occur on National Forest System lands. All of these are included in both the DEIS and FEIS.

4. EPA supports Alternative D because it has the least environmentally damaging components and appears to be the most protective. No rationale is given for identifying Alternative B1 as the preferred alternative. Alternative D has fewer environmental impacts, particularly to aquatic resources, and we recommend that FEIS describe the rationale for selecting B1. Alternative D would have fewer impacts by avoiding 3.9 miles of construction in RHCAs, avoiding direct loss of 0.1 acres of riparian and 0.1 acres of wetlands impacts, lower the potential for salts to enter streams, and eliminate impacts to 16 threatened, endangered or sensitive plant species.
    a. Alternative D has fewer impacts on some resources on National Forest system lands such as hydrology, aquatics, botany, recreation, and wildlife, but more impacts on others such as noise and quality of life to residents along the Cow Camp, Forest Road 3575-120, road right-of-way. Additionally, this would mean that many more residents along County roads would be cumulatively impacted. The haul route under Alternatives B and B1 is 6 – 13% shorter, depending on route used under Alternative D. Alternative D would have associated impacts to resources off NFSL such as to wetlands, streams, aquatics, and recreation along that route.

    Rationale is not appropriate for an EIS. This is the purview of a Record of Decision and the reasons for selecting an alternative for this project will be identified in the ROD as required by CEQs NEPA Implementing Regulations at 40 CFR 1505.2: “An agency may discuss preferences among the alternatives based on relevant factors including economic and technical considerations and agency statutory authorities. An agency shall identify and discuss all such factors including any essential considerations of national policy which were balanced by the agency in making its decision and state how those considerations entered into its decision.” This is also settled caselaw that NEPA does not require agencies to mitigate adverse environmental effects. As the U. S. Supreme Court found in Robertson v. MVCC [490 U.S. 332 (1989)]:

    > NEPA does not impose a substantive duty on agencies to mitigate adverse environmental effects or to include in each EIS a fully developed mitigation plan. Although the EIS requirement and NEPA's other "action-forcing" procedures implement that statute's sweeping policy goals by ensuring that agencies will take a "hard look" at environmental consequences and by guaranteeing broad public dissemination of relevant information, it is well settled that NEPA itself does not impose substantive duties mandating particular results, but simply prescribes the necessary process for preventing uninformed - rather than unwise - agency action.

As also required by 1505.2, the Forest Service will identify alternatives that are

environmentally preferable in the Record of Decision.

Tailings Disposal Facility

1. The tailings disposal facility design is flawed regarding seismic risk and upstream construction with potential catastrophic effects on fisheries, rivers and streams. Failure of the pipeline across to the optional tdf and hydrogeology information are not adequately considered.
    a. The tailings disposal facility is at the Kettle River Mill, nearly 40 road miles from the proposed activities on NFS lands and outside the scope of the EA analysis.

Toxic Substances

1. The final EA should indicate that with proper mitigation the potential for toxic substance impacts is low.
    a. The fuel storage, hazardous substance handling and spill response plan are rated in Chapter 2 of the EIS as being highly effective in preventing and/or responding quickly to spills. The effects of Accidents and Spills, Transportation Spills have been discussed in the "Other Required Disclosures" section of Chapter 3.

2. The high potential for toxics to enter streams, riparian areas and wetlands is a significant issue that should be mitigated to prevent fish kill and contamination of water resources.
    a. Although the EIS predicts a high potential for salts to enter streams, riparian areas & wetlands, the actual impacts predicted from chlorides and magnesium are within standards. This information was clarified in the EIS. The potential for spills is low. The fuel storage, hazardous substance handling and spill response plan are rated in Chapter 2 of the EIS as being highly effective in preventing and/or responding quickly to spills. The effects of Accidents and Spills, Transportation Spills have been discussed in the "Other Required Disclosures" section of Chapter 3.

Transportation

1. We own land on both sides of Toroda Creek road and have never had a problem with the logging trucks. Drivers are careful and don't want to run over cows or deer.
    a. Haul activities on the Toroda road are outside the scope of this analysis, except where cumulative effects occur.

2. The project fails to acknowledge, fail to mitigate, and/or downplay the long term significant impacts to transportation.
    a. Non-substantive. The comment fails to give any specifics to which a response can be prepared. Effects on the transportation system are disclosed in the EIS in the transportation section.

3. The existing Marias Creek road design and stormwater controls are substandard and the road is too close to the creek to prevent road construction and maintenance impacts in the stream. There may be insufficient area between the road and the creek for stormwater treatment before discharge. The proposal to rebuild the road worsens the commitment to a less than desirable alignment.

    a. The Forest Service has included stormwater controls for the new and reconstructed road that exceed State standards. According to the engineering design drawings, the closest point at which Marias Creek is to the toe of the road fill is about 5 feet which would still allow for the sediment control structures, which would be placed 3-5 feet from the toe of the road fill. There is sufficient space between the road and the stream to provide room for these stormwater controls where they are needed. At the base of Marias Creek, portions of the road are directly adjacent to the stream but because the road grade is flat, relief culverts can be spaced far enough apart to avoid these areas. Almost the entire reconstruction would be built to the uphill side of the existing road and most new fills would not go below existing fill slopes when within the RHCA.

4. The proponent should explore vanpooling to cut down on daily passenger vehicles.

    a. The Forest Service has discussed vanpooling with the proponent. However, because of the remote location, variations on start and stop times, appointments and other activities that result in adjustments to employee work schedules, this may not be reasonable. The road use permit would require the proponent to encourage car/van pooling (AQ-4, TR-4) as disclosed in the EIS.

5. For the residents quality of life along the haul route, it is not necessary to run trucks, even empty, before 6AM and after 6PM.

    a. Alternatives B1, C, and D do not allow the company to run ore trucks, even empties, before of after these hours on National Forest System lands. Only emergency supply deliveries would be outside of these hours under the above listed alternatives.

6. Spell out what hours, what pass rates and what days truck rates may increase during spring. How many days of no-haul will there be?

    a. Possible scenarios for spring break up are analyzed in the EIS in the transportation section. However, it is not possible to know how long spring break up would be or how many days of no haul would occur, because it is not possible to predict future weather. Spring breakup is generally during the months of February, March, and/or April. For the 3 weeks prior and the 3 weeks after spring breakup, haul could increase by an estimated 25 truck loads/day under Alternatives B and B1 (7 days/week), 30 truck loads/day under Alternative C (6 days/week), and 35 truck loads/day under Alternative D (5 days/week). This equates to an ore haul truck going by a given point every 3.6 minutes for Alternatives B and B1, 3.1 minutes for Alternative C, and 2.2 minutes for Alternative D between the hours of 6:00 a.m. to 6:00 p.m.

7. Position and keep truck numbers readable high on backs and sides of trucks; require drivers to wash their license plates and ID numbers each day if obscured.

    a. Numbers on trucks will be at least 12" in size (State's Final EIS, TR-15) which should make them readable by someone with 20/20 vision from a distance of about 685 feet. Mitigation measure WF-09 of the Forest Service's EIS has been modified to call for a minimum size of 12" instead of just saying "large, visible identifying numbers. Requiring washing of license plates and truck identify numbers is not necessary since identifying numbers on doors or hoods are seldom obscured unless trucks are operating off gravel roads, which this trucks will not be doing. License plates on trucks are frequently not visible because of location on trailers and trucks, but these trucks would need to meet required highway vehicle standards.

8. DEIS should discuss traffic impacts to Marias Creek and wetlands from noise, dust, water runoff, changes in water quality and quantity, including impacts to fish and amphibians.
    a. Traffic impacts to Marias Creek and wetlands are discussed in the Hydrology and Aquatics sections of the EIS.

9. Pave at least 0.5 mile of Marias Road at intersection with Toroda Creek road to keep dust and mud from tracking onto the Toroda road and improve visibility at the intersection.
    a. The final 800 feet of the Marias Road would be paved under the preferred alternative to allow track-off to happen on the Marias Road. This distance was deemed adequate to allow for track-off before trucks reach the Toroda road, which would also minimize dust at the junction.

10. Which roads will be maintained and plowed for the public and which will be used for the proposal?
    a. Under Alternatives B and B1, the lower Marias Creek road up to road 3550-130 will be plowed and open to the public for dual use during winter. Forest Road 3550-130 will be open to the public when snow free; the 3550-125 road above Forest Road 3550-130 will not be available for public use until after cessation of ore haul, at which time the 3550-130 road will be closed, except to administrative traffic, and Forest Road 3550-125 and the new construction will become the long term route. The new road into the mine site above the 3550-125 road will remain closed to the public during and after mine operations. Forest Road 3575-120 may be snowplowed during winter if the proponent exercises that option. Under Alternative C, the haul route portion of Forest Road 3575 would be plowed open and available for public use. Under Alternative D, the haul route portion of Forest Road 3575-120 would be plowed open and available for public use.

11. Include information on re-closing roads that have been opened by the public in the wildlife road closure section.
    a. This information can be found in the wildlife section "Cumulative Effects Common to All Species" in the DEIS on page 257.

12. The DEIS indicates the road width will be 28 feet with a 24 foot running surface, which significantly underestimates the total road prism and acreage, all of which is highly susceptible to erosion. The full road prism includes the running surface, shoulders, fill and cut slope area, decrease the separation between road and creek, and reduce the riparian buffer. Road runoff will be increased and can create channels downslope of each cross drain point, funneling runoff, sediment, and road related chemicals to Marias Creek.
    a. Acres of disturbance consist of all new disturbance including new cut and fill slopes. The WEPP used a 33 foot road, including shoulders and ditch, plus 50 of disturbance for cut and fill slopes. Internet-WEPP model does not permit input of a cut slope parameter, so fill slopes were increased to compensate. URS, the WADOEs contractor for their FSEIS ran the Windows WEPP model which did allow for input of cut slopes, and differences were relatively small to the total amount.

13. The EIS needs to address the impacts of heavy, constant use by large trucks on small, windy, steep mountain roads and the effect to inhabitants' safety. How will these be mitigated?
    a. The ore haul route will be a 24 foot running surface, and the windy, steep section is eliminated by a new road construction. Effects to residents are minimized by the preferred alternative since only one residence is within 500 feet of the Marias road, a 30 mile per hour speed limit, and paving to prevent track-off on mud onto the Toroda Creek Road.

14. What kind of standard is high densities measured by/with the concerns and consensus of the entire American people versus what a minority desires?
    a. Road density standards are set by the 1989 Okanogan National Forest Land and Resource Management Plan, which balanced the sustainability of wildlife requiring low road densities with access desired by the public.

15. Road construction does not degrade the landscape. Gravel roads are common and haven't resulted in the disappearance of plants, fish and amphibians. Perhaps the wind that transport dust from continent to continent, or se water salts constantly being deposited over land and lakes should be regulated. Labeling roads to and from mines as bad for plants and fish is just plain silly.
    a. The effect of roads and sediment on aquatic species is well understood, and high levels of sedimentation can effect sustainability of these species. Effects of these species are disclosed in the Aquatic Resources section of Chapter 3 of the EIS. Effects on plants are disclosed in the Botany section of Chapter 3 of the EIS.

Tribal

1. The EA and DEIS don't mention Tribes right to hunt, fish and gather on these lands. The EA and DEIS say Tribes won't be affected because Tribal members can go elsewhere, which may violate the 1891 agreement with Congress. The USFS has a Trust Responsibility to preserve and protect the cultural and traditional gathering, hunting, fishing and water rights within the north half of the Colville Indian Reservation. The project interferes with American Indian rights.

a. Page 226 of the preliminary EA specifically discloses information about Tribal rights, and this was expanded in both the DEIS and FEIS in the Cultural Resources and Other Required Disclosure sections. The Colville's 1891 agreement, ratified by Congress in the Act of 1906 and subsequent acts, ceded the north half of the former Colville Reservation to Public Domain. In so doing, Article 6 of the Agreement says that "the right to hunt and fish in common with other persons on lands not allotted to said Indians shall not be taken away or in anywise abridged". The agreement was approved by Congress and was most recently acknowledged in the Antoine Decision. Rights secured under the 1872 Executive Order (which established the CCT Reservation) and the 1891 agreement includes gathering rights and reserved water rights.

   This issue was raised by the Tribes as plaintiff-intervenor during the litigation on the Crown Jewel Mine lawsuit (*OHA et al. and Confederated Tribes of the Colville Reservation v. Williams, et al.).* The Ninth Circuit Court of Appeals addressed this issue as raised by the Tribes and concluded that "the Forest Service took the requisite 'hard look' at the issues that will affect the Colville's reserved rights" citing the fact that the Forest Service had discussed in the Record of Decision that "Approximately 2000 acres of hunting and fishing territory will not be available to Tribal members over the life of the project. This is less than 1% of the total acreage of Federal lands available for Tribal hunting within the North Half." The Buckhorn Access Project will have far less impact on Tribal members, with only 74 acres being fenced off. As with the Crown Jewel Mine FEIS, the Buckhorn Access Project FEIS discusses impacts to fish in the water in the hydrology and aquatics sections, plants important to the Tribes in the botany section, wildlife in the wildlife section, hunting and fishing in the recreation section, archaeological sites in the Cultural Resource section, and American Indians and Tribal rights in the Socio-economic and Tribal Rights sections.

2. The mine will disrupt hunting, fish and gathering due to area closures. DEIS does not adequately address the impacts of reduced access to traditional water, hunting and fishing rights, herb gathering, berry picking, and spiritual significance of the North Half of the Colville Reservation to Tribal members. Our Tribal right to gather, fish and hunt is "supreme law of the land" and therefore a greater amount of attention and focus should be paid to this fact. The Tribes rely on deer, elk, fish and gathering of roots and berries to sustain their cultural diversity, as well as supplement their low incomes. Colville Tribes prior right was reduced to an existing forest "activity" on par with grazing permittees and forest recreations within the DEIS.
   a. Information on impacts to water quality and quantity, wildlife, fish, botanical resources, religious or spiritual settings, and environmental justice is covered in the DEIS and FEIS in Chapter 3, in the following sections: hydrology, aquatics, recreation, wildlife, botany, socio-economics and American Indian Rights. See also response to Tribal #1 above.

3. The proposed action will interfere with my individual right, as an enrolled member of the Colville Confederated Tribes, to hunt, fish and gather unobstructed within

all public lands within the Colville Confederated Tribe's North-Half ceded territories. Only Congress can take away these reserved rights - the lesser Executive branch cannot allow obstruction of these reserved rights. Establishment of the Colville Indian Reservation and the agreement to cede the lands pre-date the opening of the North-half for mineral exploration. No claim, including Kinross', predates the establishment of the reservation or North-half cession and the United States may be prohibited by law from issuing any permits that interfere rights lawfully obtained by another person, party or Tribe. The DEIS admits that the Tribes reserved rights would be impacted by the proposed haul route. The fact that only a small percentage of the land would be impacted does not mean it is ok to "take away" prior rights without compensation or an agreement with the Tribes. No patents have been issued for this land and the Tribes have a valid right to gather, hunt and fish on all public lands within the former North-half of the reservation according to executive order, Congressional statutes, and the US Supreme Court decision.

a. See response to Tribal comment #1 above.

4. Are the Indian Tribes against this road construction?
    a. The Forest Service has conducted consultation with the Confederated Tribes of the Colville Indian Reservation throughout the planning process. Although the Forest Service has not received any letters from the Tribal Council objecting to the project, according to local newspapers, the Council passed a unanimous resolution in November 2006 objecting to the Buckhorn Mining project. On December 20, 2006, the Forest Service received a consultation letter from the Tribal Heritage Preservation Office stating: "Please note at the outset that this letter is intended only to comment on the adequacy of steps taken by the US Forest Service (USFS) in complying with Section 106 of the National Historic Preservation Act. Nothing herein should be construed as providing any kind of approval or support by the Confederated Tribes of the Colville Reservation (also known as the 'Colville Confederated Tribes [CCT]') for the Buckhorn Mountain project."

5. The Tribes originally used this specific site as a sacred spiritual and religious prayer site. Mining claims before 1872 removed this area from the original Reservation, therefore the Tribes were not allowed to visit their aboriginal sacred sites in the north half.
    a. Non-substantive. The statement is not about environmental effects of the proposal, although see response to comments 1-4 above.

6. The mine will impact the environment, leaving a hole filled with contaminated tailings, disruption of the eco-system, ground water contamination and disturbance, transportation of material to Republic and the scenic San Poil River where the initial dump Is located. The San Poil River is a major water body within the Reservation with many fish the Tribes rely on. The San Poil River would be contaminated, affecting many generations from environmental pollution of land, air and water.
    a. Impacts to the environment and "land" are disclosed throughout Chapter 3 of the EIS. No tailings facility will be placed on NFS lands, either in and around Buckhorn Mountain, or near Republic. The proposed tailings facility is on private lands, and is an expansion of the existing facility at

the Kettle River Mill. Impacts to ground water from activities on NFS lands are disclosed in the Hydrology section of Chapter 3, and to the extent that those impacts have cumulative effects with the mine on private land, are discussed in the Hydrology cumulative effects section. Impacts on fish from activities on NFS lands are disclosed in the Aquatic Resources section of Chapter 3 of the EIS. No impacts to water quality to the San Poil River from activities on NFS are anticipated. The Fish Biological Assessment did cover all activities, including the tailings facility at the Kettle River Mill, and determined that the project "may affect, but was not likely to adversely affect" listed bull trout. The US Fish and Wildlife Service concurred with this finding. Impacts to air quality are also discussed in Chapter 3 of the EIS.

7. Tribal people insist on a full EIS under NEPA. The EA does not offer sufficient mitigation to all impacts, and the long-term significance of the environment and quality of life of all humankind
    a. An EIS was prepared for this project. Additional mitigation has been added since the preliminary EA. The impacts of the project are disclosed in Chapter 3 of the EIS.

Water Quality

1.The EA and DEIS fail to acknowledge, fail to mitigate, and/or downplay the long-term significance to impacts to water quality.

    a. Non-substantive. The comment fails to give any specifics to which a response can be prepared. Effects on water quality are disclosed in the EIS in the Hydrology section.

2. Water quality coming from the pipeline would cause significant environmental effects and requires an EIS. How will ground water be protected?
    a. The Forest Service made the decision in the summer of 2006 to document the analysis in an EIS. The quality of water coming from the pipeline will meet State water quality standards as set by the NPDES operating permit and water quality impacts are not considered significant by the WADOE in their FSEIS (WADOE, 2006, 3.7-2). WADOE has delegated authority for compliance with the Clean Water Act. According to the draft NPDES permit fact sheet, effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or groundwater criteria. The effluent limits shall be met at the "end-of-pipe" without regard for whether discharges are to surface or groundwater (draft NPDES Fact Sheet, page 18). WADOE's draft NPDES and Fact Sheet can be accessed at: `http://www.ecy.wa.gov/programs/wq/permits/central_permits.html`

3. The proponent proposal to reroute water to the infiltration gallery, ignores headwater streams dependent on water flow, especially Myers Creek. Filtered water should be returned to affected streams by percentage lost.
    a. Forest Service activities would have no effect on water quality or quantity in Myers Creek drainage and above the water infiltration gallery and infiltration sites and are not analyzed in the EIS. Information on water

flow impacts to Myers Creek can be found in the State's FSEIS (WADOE, 2006). Impacts to water flow in the headwaters of Nicholson and Marias Creek below the water infiltration and augmentation sites are described in the hydrology section of the EIS. WADOEs Hydrologic Mitigation Plan sets the amount of water to be infiltrated and augmented.

4. Maps should identify where water for dust suppression will come from. The EA mentions some will come from mine water. Specify where water will come from, how often, and that none will come from the Kettle River or Beal rock quarry.

    a. Water for dust suppression on National Forest System roads during operations will come year round from private lands along Toroda Creek from an existing water right approximately 4 miles upstream from the junction of the Toroda and Marias Creek roads. The existing water right is for a total annual withdrawal of 200 acre-feet per year with a maximum instantaneous pumping rate of 300 gpm. This is an irrigation water right. Yearly water use for dust suppression is estimated at 43 acre-feet/year. No dust suppression water on NFS lands would come from mine water, the Kettle River or Beal rock quarry.

5. Explain water quality trend table. Where are samples from and what is their relevance to the project? What future tests will be done and where will water come from?

    a. The relevance of the information in this table has been added to the EIS. A water quality monitoring plan has been added to Appendix D of the EIS.

6. The Forest Service must consider the cumulative impacts with the entire mine proposal including geochemical, geophysical and water rights issues.

    a. Because the Forest Service project activities will have no impact on geochemical, geophysical or water rights, there will be no cumulative impacts that need to be discussed.

7. Heavy ore transport will impact Myers Creek and the Kettle River raising sedimentation.

    a. No impacts to either Myers Creek or the Kettle River are expected from sedimentation as a result of activities on NFS lands. No ore will be transported near Myers Creek, and the Kettle River road is paved and more than 4 miles from NFS lands. Sediment from activities on NFS lands are not expected to reach the Kettle River.

8. Taking a wider view, your agency can carefully examine the water quality emanating from the pipeline to deposit on NFS lands.

    a. The quality of water coming from the pipeline will meet State water quality standards as set by the NPDES operating permit. According to the draft NPDES, effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or groundwater criteria. The effluent limits shall be met at the "end-of-pipe" without regard for whether discharges are to surface or groundwater (draft NPDES Fact Sheet, page 18).

9. The EA should clarify that sediment increases with proper road design and other BMPs will not reach the magnitude that modeling indicates.

    a. This has been clarified in the EIS. Mitigation measures in Alternative B and B1 are expected to be 99% effective and not result in sediment much above existing levels, when mitigation measures are correctly implemented and properly maintained.

10. The EA states in several places that State and Federal water quality standards would be met which is incorrect. Water quality will meet standards set by the State in the NPDES permit.

    a. The EIS has been corrected to clarify that the project will meet State water quality standards as set by the NPDES operating permit. According to the draft NPDES, effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or groundwater criteria. The effluent limits shall be met at the "end-of-pipe" without regard for whether discharges are to surface or groundwater (draft NPDES Fact Sheet, page 18).

11. It is important to address all impacts to ground and surface water quality for both wildlife and humans.

    a. These impacts are covered in the hydrology, aquatics, and wildlife sections of the EIS.

12. The EA states that water discharged into the infiltration gallery and from augmentation pipelines would meet state and federal water quality standards, but fails to estimate water quality in comparison to baseline conditions and has no description of water treatment. The DEIS should not simply rely on statements that water will be required to meet standards.

    a. Water treatment will meet State water quality standards as set by the NPDES operating permit. Effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or ground water criteria. The effluent limits shall be met at the "end-of-pipe" without regard for whether discharges are to surface or ground water (draft NPDES Fact Sheet, page 18). The treatment plant will remove metals and nitrogen by four ion-exchange columns placed in series. Each ion-exchange column is designed to remove specific pollutants or types of pollutants (draft NPDES Fact Sheet, page 7). Information on baseline values, expected treated water values, NPDES standards, and the type of water treatment has been added to the EIS.

13. Augmentation is rated as low-moderate effectiveness. The EA and state's EIS rely on this mitigation to offset stream flow reductions to determine in part that impacts will not be significant.

    a. The Forest Service EA did not rely on flow augmentation to make a determination that impacts will not be significant. Forest Service actions increase stream flows, but when considered cumulatively, simply offset reductions caused by actions on private lands during the growing season;

July, August, and September. Additional information was added to the EIS regarding cumulative effects of stream flows.

14. Although the comparison of alternatives states there would be no stream temperature changes, the 1-foot drawdown and hydro-period alterations could result in temperature change.

    a. Activities on NFS lands will not result in a drawdown of the water table. This is the impact of mine dewatering, which is outside the scope of the Forest Service analysis.

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15. Water quality should be addressed in a separate stand-alone section, not part of hydrology and should discuss the expected water quality from the infiltration gallery and cumulative water quality impacts from the mine.

    a. Water quality is appropriately a subsection in the hydrology section, and discusses the impacts of the infiltration gallery and cumulative impacts from the mine where the mine has overlapping effects with effects from activities to be approved on NFS lands. Additional information regarding the effects on water from the infiltration gallery, augmentation sites, and road has been added to the EIS. See also response to WQ #12 above.

16. The EA should disclose how often and during what times of year excess water over 40 gpm will be diverted to water augmentation sites, the magnitude of the excess flows to each of the sites, and their effect on water quality and aquatic resources.

    a. Information on the timing and amount of water discharge to the augmentation sites has been added to the hydrology section of the FEIS.

17. The EA has no analysis of the timing, duration, or magnitude of flows discharged into Nicholson or Marias Creeks. Changes in the hydroperiod can have adverse effects on biotic communities including wetlands and stream functions.

    a. Information on the timing and amount of water discharge to the augmentation sites has been added to the hydrology, aquatics, wetlands and botany sections of the EIS.

18. How will road chemicals affect water quality? The EA and DEIS should discuss the effects of salts on aquatic resources from dust suppression, not just salts used for winter traction.

    a. The hydrology section of the preliminary EA estimated the amount of salt that could potentially get into the creek from both dust suppression and in the sand used for winter traction. Additional information has been provided on the hydrologic and aquatic resource effects in those sections of the EIS.

19. The project will affect water quality and habitat in Marias and Toroda Creeks and pose a significant threat to water quality in the San Poil River from widening the Marias road and the increased tailings impoundment.

    a. Impacts on water quality and habitat in Marias Creek are disclosed in the hydrology and aquatic sections of the EIS. Potential water quality

impacts to the San Poil River from the increased tailings impoundment are outside the scope of this analysis. No direct or indirect effects from activities on NFS lands would occur from the tailings impoundment, so no cumulative impacts would occur.

20. Water quality and habitat will be significantly degraded by the project. Stream buffers aren't provided but are narrow and road sediment will reach the creek. BMPs can only partially solve this. Monitoring is unacceptably lax. Mitigation focuses on restoration following the project rather than protection.

    a. Marias Creek is an average of 78 feet from the toe of the Marias road fill, ranging from 5 feet to 280 feet. The sediment analysis in the EIS acknowledges that sediment will reach Marias Creek, although sediment control structures designed to prevent sediment from reaching the creek will intercept most sediment so that turbidity will remain within standards. Road construction induced stream sediment and winter sanding from just the Buckhorn Mountain Project over geologic and existing road sediment levels is less than a 1% increase under Alternatives B and B1 to Marias Creek. See also response to Transportation comment #3 above.

21. Narrow buffers mean chemicals and salts will migrate to streams. BMPs will only partially solve this.

    a. The EIS hydrology section acknowledges that salts will eventually reach Marias Creek, but determined that the level would be below the aquatic life standard. Water monitoring will be required to help determine if and when increased levels of chloride, magnesium or other introduced salts occur.

22. Cross drains will empty directly into the creek delivering 100% of the sediment.

    a. No cross drains will empty directly into the creek. Except at road crossings, the closest the road is to Marias Creek is where a relief culvert would be located is 5 feet, which will allow for adequate sediment control structures. Wattles or straw bales will be placed in drainage ditches to minimize sediment that gets into relief culverts. Rock aprons below the relief culverts will dissipate energy allowing sediment to settle out, and finally, silt fences, backed by straw bales where a stream is within 100 feet of the toe of the fill will provide for final filtering prior to water reaching Marias Creek. Windrows of slash with good ground contact would be placed in-between the road edge and the silt fence when readily available in the area of road construction. Additionally a continuous silt fence would be placed at the toe of the fill where it is within 100 feet of the creek. Silt fencing, including straw bales where present, would be installed immediately following the installation of each relief culvert. Additionally a continuous silt fence would be placed at the toe of the fill where it is within 100 feet of the creek. T Road maintenance practices will minimize disturbance of vegetation in ditches. Information on effectiveness of these measures has been added to the hydrology section of the EIS. This will greatly reduce the amount of sediment reaching the creek. See also response to Transportation Comment response #3 and Water Quality comment response #20 above.

23. Long cut slopes are unlikely to re-vegetate.
    a. This is correct for the first year and has been acknowledged in the EIS. Hydromuching will be used to provide cover, but sediment control structures are relied on to capture most of the sediment.

24. WEPP uses average conditions, but traffic will be heavy and continuous through spring breakup, substantially increasing sediment.
    a. The WEPP analysis used heavy traffic conditions.

25. Establish easily measured sediment thresholds to allow daily on-site decisions regarding haul.
    a. A Water Monitoring Plan has been added to Appendix D of the EIS. An automatic sampler would collect turbidity data on a predetermined schedule, likely every day, to be analyzed on a monthly basis. In addition, the NPDES permit will likely require daily turbidity monitoring Monday through Thursday of each week during the initial period of ore haul.

26. Stream proximity means chemical spills will be delivered to the stream.
    a. As described in Chapter 2, the mitigation measures to prevent spills, or contain them in the unlikely event they do occur are considered highly effective. Non-liquid spills would likely remain on the road and could be easily cleaned up. Stormwater control structures would likely trap any viscous spills. This is further discussed under the Accidents and Spills – Transportation Spills, in the Other Required Disclosures section of Chapter 3 of the EIS. This section was expanded between the preliminary EA and the EIS.

27. Concern about water pollution.
    a. Effects on water quality are disclosed in the EIS in the hydrology section.

28. The proponent includes significant improvements in upstream migration and fish use, but impacts of the larger road will compromise benefits without higher standards of stormwater control.
    a. The Forest Service is requiring higher standards of stormwater control than proposed by the proponent. Relief culvert spacing, for example is much closer than proposed by the proponent. Sediment control structures are expected reduce 99% of the sediment delivered to the ditches prior to water reaching Marias Creek when mitigation measures are correctly implemented and properly maintained.

29. Using 2-, 3- and 24-hour storms for detention and runoff from the road may underestimate storage required for long-term storm snowmelt or rain on snow events. Larger storage capacity may be needed for sediment control and water quality treatment of oils, grease and metals.
    a. This area is not generally subject to rain on snow events, because

temperatures rarely get above freezing during wintertime storms though rain can fall during any month of the year. Stormwater controls installed in the Goldbowl drainage as part of the Crown Jewel exploration never captured enough sediment to require removal of sediment during approximately 10 years of use. In most cases, the rocks installed to line the bottom of these structures were still visible when they were reclaimed. High precipitation events in this area are usually from summer thunderstorms, and the Forest Service is requiring higher standards for stormwater control than proposed by the proponent. Relief culvert spacing, for example, is much closer than proposed by the proponent. The WDFW clarified to the Forest Service that this comment was not intended to imply that water treatment of oils, grease and metals was needed, but rather that stormwater controls needed to be in place to capture as much as possible of these materials. As noted above, stormwater control standards are very high for this project; as such they are expected to capture viscous spills, which has been clarified in the EIS.

30. We recommend that additional sediment control measures such as off-stream sediment traps, tree/shrub planting be designed upfront into the project.

    a. The Forest Service hydrologist conducted a literature review and consulted with the State contractor's hydrologist and determined that off-stream sediment traps are too subject to immediate filling and failure during high precipitation events. Because sediment concerns are mostly related to the first 1-3 years after road construction, trees and shrubs planting would be ineffective at capturing sediment because of their long time for establishment. Instead the Forest Service is requiring frequently spaced relief culverts, and additional sediment control structures including wattles or straw bales in ditches until vegetation establishes in the ditches (with establishment of vegetation in ditches over the longer term), relief culverts placed on the natural slope grade to prevent water from eroding fill slopes, rock aprons at the exit of relief culverts to dissipate energy so that sediment settles out, slash windrows, and straw bales placed behind the silt fences to help filter sediment. Additionally a continuous silt fence would be placed at the toe of the fill where it is within 100 feet of the creek.

31. Require additional measures to avoid, lessen or replace potential impacts from toxic material.

    a. As described in Chapter 2, the mitigation measures to prevent spills, or contain them in the unlikely event they do occur are considered highly effective. Non-liquid spills would likely remain on the road and could be easily cleaned up. Stormwater control structures would likely trap any viscous spills. This is further discussed under the Accidents and Spills – Transportation Spills, in the Other Required Disclosures section of Chapter 3 of the EIS. This section was expanded between the preliminary EA and the EIS.

32. Only sand, and not snow removal chemicals should be used to avoid impacts to streams, wetlands, and riparian areas.

a. One of the changes in the FEIS was to drop the addition of sodium chloride (salt) to sand because it was determined not to be necessary to prevent clumping of sand in trucks. Chloride levels from water infiltration, augmentation and dust suppression will be within standards for aquatic life.

33. The DEIS states that the erosion control model used is at best 50% accurate and that absent mitigation, sediment levels would exceed standards. Any failure of sediment control structures or extreme weather event would likely spread contaminants and degrade an already degraded aquatic system in violation of law. The DEIS lacks any specific monitoring plan for water quality in Marias Creek and more stringent monitoring is required
    a. Turbidity, a measure of sediment delivery, is expected to increase by less than 1 NTU, well within standard of less than 5 NTU increase. Even with a 50% or 100% increase over the modeled amounts, the increase would be less than 2 NTU, again well with the standard. Monitoring of sediment control structures is required after any 24-hour rolling precipitation of 0.25 inch or more. Specific monitoring of water quality in Marias Creek is detailed in Chapter 2 and Appendix D of the DEIS.

34. Insloped road will collect all road runoff in ditches and focuses all runoff discharge to relief culverts. This increases the probability of runoff channels between the road and the creek. BMPs will only be partially effective due to precipitation, snowmelt, proximity to creek, hillslopes, erodibility and difficulty of stabilizing cut and fill slopes, extent of the road prism, and extent of heavy traffic. Tons of sediment will be imported each winter and spread on the road, which will wash into Marias Creek during runoff and snowmelt events. The “high” effectiveness rating of BMPs seems subjective and optimistic.
    a. Insloping the road was specifically chosen to focus all runoff to the ditches, where water will be routed through a series of sediment control structures. Modeling and BMP effectiveness that cannot be modeled indicate that BMPs will be 99% effective in stopping sediment from reaching the creek under Alternatives B and B1 (the preferred alternative) when mitigation measures are correctly implemented and properly maintained. Estimates for sand for winter road traction was added to the WEPP modeling between DEIS and FEIS and total sediment estimates in the FEIS now include this. Monitoring of sediment control structures is required after any precipitation of 0.25 inch or more.

35. The only real protection offered from road storm water impacts is to monitor turbidity. Sedimentation is widely acknowledged as a major cause of degradation of instream habitat. Dirt, salts and gravel will bleed into the stream during rainstorms and snow melt despite BMPs and these streams already have high sediment loads.
    a. This is incorrect. 99% of the sediment created is expected to be captured by sediment control structures when mitigation measures are correctly implemented and properly maintained. These include insloping the road to a ditch to capture road runoff, and direct it through wattles or straw bales, relief culverts placed on the original slope grade (to prevent spilling on to fill slopes), a rock apron at the outlet of the relief culvert inside the RHCA to dissipate energy, and finally a silt fence backed by straw bales

inside RHCAs. Additionally a continuous silt fence would be placed at the toe of the fill where it is within 100 feet of the creek. Turbidity monitoring will determine the overall effectiveness of these measures. Modeling of salt mobility indicates that they will be within standards set for aquatic life.

36. The DEIS minimizes the increase in sediment loading in creeks during mining and long term.
    a. The comment fails to give any specifics to which a response can be prepared. Mitigation measures for decreasing sediment delivery to streams are expected to be 99% effective when mitigation measures are correctly implemented and properly maintained, and result in less than 1 NTU increase in turbidity.

37. I hate to think about the impacts that this mine could have on Marias and Toroda Creek, and the Kettle River.
    a. Impacts to these creeks and rivers from NFS activities are documented in the Hydrology section of the DEIS and FEIS.

38. Please do not approve the current proposal. Redraft it, taking into account the impacts this will have on sensitive water sources in the areas.
    a. The comment fails to give any specifics to which a response can be prepared. Impacts to water are disclosed in the hydrology section of the DEIS and FEIS.

39. The DEIS indicates grading will remove silt from the road surface (page 35), which means silt will be bladed to the fill slope or stream side of the road. Each grading will result in sediment free to wash into the stream, carried by rain, snowmelt, road runoff, or dry ravel in places where fill slopes are directly adjacent to the stream channel. Heavy truck traffic also loosens sediment. A greatly expanded road prism exposes more sediment.
    a. This error has been corrected in the FEIS. The silt and debris will be removed from the roadside ditch and hauled off-site. Road grading is designed to smooth the road surface, not remove silt.

40. WQ-1's claim that road components will be designed to prevent erosion is inaccurate since BMPs are likely only to be partially successful, reducing but not eliminating erosion. What are the performance requirements? The statement regarding stopping activities responsible for "substantial sedimentation" seem quite subjective
    a. WQ-1s techniques are designed to minimize, not prevent erosion, as stated in the second paragraph under WQ-1. As disclosed in the hydrology section of the EIS, sediment is not expected to be completely eliminated. BMPs are expected to be 99% effective when mitigation measures are correctly implemented and properly maintained, but 1% of the sediment will get to the creeks. Monitoring with triggers, actions and goals is disclosed in Appendix D of the EIS. Further information on monitoring is also provided in the draft NPDES permit and fact sheet.

41. Water quality and habitat will be significantly degraded by the project. BMPs are utilized sometimes only "where practicable." Mitigation for wetlands and streams focuses on restoration following the project, rather than protection during the

project. Monitoring program is unacceptably lax.

a. This is incorrect. Mitigation is expected to be 99% effective in preventing sediment when mitigation measures are correctly implemented and properly maintained, not restoring after the fact. See also response Water Quality Comments #35 and 40 above. The re-vegetation bullet under WQ-1 has been reworded to clarify that re-vegetation would be done where re-vegetation is suitable. Other places where the word "practicable" is used relate to how soon, not if, a measure is implemented.

42. The DEIS does not adequately address potential impacts of mine operation on pollution by heavy metal concentrations in our drinking water.

    a. Information on expected water quality after treatment has been added to the FEIS in the hydrology cumulative effects sections. Water quality will be treated to be within standards set in the NPDES permit. Drinking water criteria would be met except where the natural background in the creeks is currently higher than the criteria.

43. Toxic sediments will be introduced into ground water from construction.

    a. Road construction and reconstruction will not result in any toxic sediments. Road maintenance will result in increased chlorides in surface water but these will be within standards (see Hydrology section in Chapter 3 of EIS). Additionally, mitigation measure SP-1 in Chapter 2 requires: that all fuel and other petroleum products that are stored on National Forest System land during construction activities be stored in approved tanks and outside of Riparian Habitat Conservation Areas; all construction equipment, such as trucks, be fueled at least 200 feet outside of the 300 foot Riparian Habitat Conservation Area (RHCA) along Marias and Nicholson Creeks; non-mobile equipment, equipment which can not be moved outside the RHCA in under 10 minutes, have absorbent pads place below the machine prior to fueling to catch any drips or spills; and if the total oil or oil products storage exceeds 1,320 gallons in containers of 55 gallons or greater, on National Forest land or right-of-ways, the Proponent is required to prepare a Spill Prevention Control and Countermeasure Plan.

44. Based on EPAs conversations with Forest Service staff, it is our understanding that the water discharged at the infiltration gallery would be required to meet State ground water standards. The FSEIS states that water would be treated to meet surface water standards. The FEIS should reflect the correct information and discuss the treatment that will be utilized to ensure the standards are met.

    a. The final EIS has been revised to state what is in the draft NPDES permit. The treatment plant will remove metals and nitrogen with a series of ion-exchange columns. Information on baseline values, expected treated water values, and NPDES standards has been added to the Hydrology cumulative effects section of the FEIS. Water treatment information was already included in the Hydrology cumulative effects section of the DEIS. Water treatment will meet State water quality standards as set by the NPDES operating permit. Effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or ground water criteria. The effluent limits shall be met

at the “end-of-pipe” without regard for whether discharges are to surface or ground water (draft NPDES Fact Sheet, page 18).

45. The DEIS predicts impacts in streams from salt treatment of roads to be less than 1 ppm chloride. This appears to be in error by up to five orders of magnitude.
    a. We appreciate the input. This error has been corrected in the FEIS.

46. Include actual chloride calculations in an appendix for clarity. Ensure consistency with the engineering report cited in WADOE FSEIS.
    a. The chloride calculations are available in the project record at the District office. The Forest Service contacted Kinross on receipt of this comment. The figure in the document cited by EPA considers the entire haul route including DNR lands and at the mine site, and the amount in that document was for the total solution, not just the magnesium chloride. The Forest Service only considered the magnesium chloride that would be applied within the 300 foot RHCA because that is the only chloride likely to be delivered to creeks. The company plans to use 20,000 gallons of magnesium chloride (which is about 60,000 gallons of solution) on the haul route, but only 7,960 of those gallons would be applied within the 300 foot RHCA.

Water Quantity

1. The quantity of water coming from the pipeline would cause significant impacts especially when considering cumulative effects with the entire proposal.
    a. The quantity of water coming from the pipeline is intended to partially or fully offset water lost through mine dewatering during the growing season and with little change from existing conditions in the amount of water in drainages where Forest Service activities take place. WADOEs FSEIS determined that senior water rights could potentially be impaired, but that those impacts have been mitigated (WADOE, 2006, 3.17-2).

2. The EA fails to acknowledge, fail to mitigate, and/or downplay impacts on water quantity.
    a. Non-substantive. The comment fails to give any specifics to which a response can be prepared. Effects on water quantity are disclosed in the EIS in the hydrology section.

3. Water quantity impacts are irreversible and unmitigated.
    a. Activities on NFS lands increase, not decrease water quantity in the Nicholson and Marias Creek drainages. Water quantity impacts as a result of mine dewatering on private lands are mitigated as described in WADOE’s Buckhorn Access Project FSEIS.

4. What is the effect of the infiltration pit on the whole Toroda and Kettle River watersheds?
    a. The infiltration gallery (which is not a “pit”, but rather a buried drainfield) would meet State water quality standards as set by the NPDES operating

permit. Effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or ground water criteria. Hence, the effluent limits shall be met at the "end-of-pipe" without regard for whether discharges are to surface or ground water (draft NPDES Fact Sheet, page 18). The gallery will partially to fully offset flows to Nicholson Creek lost from mine dewatering. No effect to the whole Toroda or Kettle River watersheds is expected from the infiltration gallery.

5. If the mine becomes a reality, the dust and silts will settle into pools in Marias Creek, slowing it to a trickle and it will be too late to rethink how much this shortsighted project is worth.
    a. Dust abatement is expected to be between 75-90 percent effective in controlling dust on the Marias road. Sediment control structures are expected to be 99% effective in capturing sediment prior to reaching Marias Creek when mitigation measures are correctly implemented and properly maintained. Forest Service activities would not decrease flows in Marias Creek, but would rather increase flows through water augmentation. Four culverts on Marias Creek (three as a part of the Buckhorn Access Project, and one by Okanogan County as part of reconstruction of the Toroda Creek Road) would be replaced with culverts that improve aquatic life passage thus improving aquatic habitat.

6. Impacts to water tables in Okanogan and Ferry Counties will have a significant impact on NFS lands.
    a. See response to water quantity comment #5 above. The FEFLOW groundwater model indicates that the post-closure phase equilibrium water level at year 50 (approximately 42.5 years after mining ceases) would be approximately 110 feet lower in the western portion of the mine area and 10 feet higher in the eastern portion as compared to pre-mining conditions.

7. Heavy ore transport will reduce water availability for forest growth.
    a. Ore transport would have no effect on water availability to forest growth. The only reduction of water availability caused by Forest Service activities is water removed from Toroda Creek, which is not on NFS lands, for dust suppression. This would be from an existing, currently used irrigation water right. The timing of the withdraw would reduce water in Toroda Creek by 12 gpm during winter but increase water during the irrigation season. This has been added to the final EIS.

8. Taking a wider view, your agency can carefully examine the water quantity emanating from the pipeline to be deposited on NFS lands.
    a. Information regarding the timing and amount of water to be infiltrated or augmented on NFS lands has been added to the hydrology section of the EIS.

9. It is important to address all impacts to ground and surface water quantity for wildlife and humans.
    a. Effects on surface water quantity have been addressed in the hydrology, aquatic, and wildlife sections of the EIS.

10. There is no water left for the newcomer. No person has the right to reroute the hydrological water flows above or below ground that effect fish, wildlife and residents.
    a. Water rights are not within the authority of the Forest Service, and no impacts to water rights would result from Forest Service activities. WADOE is responsible for issuance of water rights, and this is addressed in WADOEs FSEIS starting on pages 3.7-29 and 3.7-85. Crown/Kinross will get their water rights from existing or changed water rights. Water law in Washington State is based on prior appropriation (first come, first served), until there is no longer water available for use. Late comers are at a disadvantage under this system, and generally have to purchase water rights or land with water rights from previous owners.

11. There is no sufficient or reliable information gathered as to the hydrogeological, hydrologic or weather data, background stream levels, or groundwater levels that would be impacted by the mine. The SEIS approach to predict water quality is said to be flawed. Why does Ecology rely on draft information?
    a. This comment refers to WADOEs FSEIS and the comment author should refer to that document, Chapter 3, sections 3.7, Water Resource, 3.4.1.2, Meteorology, .

12. The impacts of mine dewatering on streamflows in local creeks is understated and has not been adequately researched. DEIS fails to mitigate the impacts of short and long term reductions in seeps, springs, and creeks on wetlands, amphibians, fish, aquatic resources, and wildlife.
    a. The Forest Service FEIS has been updated with final information from WADOEs FSEIS regarding these impacts. Forest Service activities will actually increase, not decrease, flows. Effects on seeps, springs, creeks and wetlands are described in the Hydrology section of the Forest Service EIS. Effects on fish, amphibians and aquatic resources are described in the Aquatics section of the EIS, and effects on wildlife are described in the wildlife section of the EIS.

13. The FEIS should acknowledge the 1992 diversion of Marias Creek near the Roosevelt Mine adit into Nicholson Creek that resulted in changes to stream flow.
    a. The Forest Service found no basis for the claim that flows from Marias Creek were diverted to Nicholson Creek in 1992. According to Forest Service records from that time, records from the 1980s indicated that water coming out of Roosevelt adit flowed into Nicholson Creek. The FEIS has been clarified to recognize that flows can be diverted through road construction and maintenance.

14. Hydrologic modeling does not indicate the company understands the hydrology of the region. The DEIS fails to accurately explain baseflows and surface runoff in the Buckhorn system and reliably characterizes the hydrogeology of the

groundwater system. The latest groundwater modeling shows significant increase in impacts not reflected in the DEIS. Underground mine shafts would cause preferential shifts in the way water flows off the mountain, adversely affecting wetlands, fish and wildlife, and senior water rights.

a. The Forest Service did not perform any hydrologic modeling, although the EIS relies on information provided in WADOEs SEIS. The latest information on groundwater modeling and wetland impacts is incorporated into the Hydrology cumulative effects section. Impacts to fish and wildlife are addressed in the Aquatics and Wildlife sections. Forest Service activities will not affect water rights, although information on water rights can be found in WADOEs FSEIS in the Water Resources section, 3.7.

15. The State's FSEIS states the maximum impacts would happen long after mining and infiltration cease. Nicholson and Marias Creeks would be depleted by streamflows diverted to refill the aquifer. The Forest Service DEIS cannot ignore these impacts to NFS lands, and there is no mitigation in the DEIS to offset these impacts.
    a. Forest Service activities will not have any effect on water quantity after infiltration and augmentation cease, so no cumulative effects will occur. Streamflows will not be diverted to refill the aquifer, although water infiltration and augmentation will continue for 2-3 years post-mining to minimize stream impacts. This will decrease mine filling by less than 4 gpm and result in about a one year delay in reaching equilibrium (WADOE, 2006, 3.7-67). This information has been added to the FEIS Hydrology section.

16. I am concerned that the long term consequences of the mine will have detrimental effects on the Bolster watershed. There has been no proper mitigation for, or even investigation into, the probable loss of water that will result from this proposed mine.
    a. Forest Service activities will not impact the Bolster drainage. Information on impacts to water in that drainage are in the State of Washington, Department of Ecology's FSEIS.

17. The DEIS does not adequately address potential impacts of mine operation on actual water usages.
    a. Mine dewatering is not a Forest Service activity, and those effects are covered in WADOE's FSEIS. Forest Service activities will actually increase the availability of water in Nicholson and Marias Creeks at certain times of the year. Information has been added to the Forest Service FEIS regarding water quantity cumulative effects.

18. What are the impacts to NFS lands from diversion of the Marian (sic) and Micholson (sic) Creeks to the Buckhorn aquifer instead of the National Forest?
    a. Water will not be diverted from Marias and Nicholson Creeks to the Buckhorn aquifer.

19. WADOEs FSEIS identifies four outfalls, while the Forest Service DEIS only identifies 1 NPDES outfall and 3 augmentation locations. The FEIS should use the same terminology as the FSEIS and describe clearly each outfall, the

location, discharge characteristics and effectiveness of treatment technology for meeting limits. If outfalls are on NFS lands the DEIS needs to discuss the impact on water and aquatic resources from these discharges.

a. Information about water outfalls, locations characteristics, treatment, and impact on water quality are included in the FEIS. The augmentation locations were not shown in the State's Draft SEIS. All documentation until the FSEIS was published called them water augmentation sites or the infiltration gallery. The locations of these "outfalls" will be shown on the maps for alternatives in the final EIS.

   Water treatment will meet State water quality standards as set by the NPDES operating permit. Effluent limits for all wastewater parameters are established as equal to the comparison of the most restrictive of relevant surface or ground water criteria. The effluent limits shall be met at the "end-of-pipe" without regard for whether discharges are to surface or ground water (draft NPDES Fact Sheet, page 18). The treatment plant will remove metals and nitrogen with a series of ion-exchange columns. Information on baseline values, expected treated water values, NPDES standards, and the type of water treatment has been added to the Hydrology cumulative effects section in the FEIS.

20. The DEIS rates flow augmentation as moderate because flows would only be replaced during the growing season in some creeks and some loss in Myers Creek would not be augmented. WADOEs FSEIS states flow augmentation would be highly effective. Flow augmentation can be highly effective if it occurs whenever needed at a location, volume and quality that is consistent with the flow that is being replaced. The FEIS needs to discuss whether or not this will occur, and how, including permitting requirements.

    a. This was inadvertently listed as mitigation in the DEIS. Although it is mitigation in WADOEs FSEIS, it does not mitigate any Forest Service activities and is therefore simply a part of the Forest Service project. It has been moved to under the section in Chapter 2 entitled "Components Common to All Alternatives" in the FEIS.

21. Discuss how the impacts to Gold Bowl Creek will be mitigated.

    a. Impacts to Gold Bowl are caused by dewatering on private lands and are not within agency authority. Forest Service activities would not affect flows in the Gold Bowl drainage, so no mitigation is needed. The WADOE FEIS does plan to supplement flows in the Gold Bowl drainage when the infiltration gallery is at capacity, but Forest Service activities would not have any affect on this dewatering.

22. Include in the comparison of alternatives table a line that summarizes the impacts to aquatic resources due to change in base flows.

    a. Forest Service activities will increase, not decrease, baseflows. No impacts to aquatic species are expected, although cumulative effect information regarding baseflows is discussed in the Aquatic cumulative effects section of the EIS.

Water Rights

1. The EA fails to acknowledge, fail to minimize, and/or downplay impacts on downstream water users.
    a. Except for water removed from Toroda Creek for dust suppression, no impacts from Forest Service activities to downstream water users are expected. The hydrology and aquatic sections have been expanded in the EIS to analyze the effects to Toroda Creek from dust suppression.

2. If the mine becomes a reality, senior water rights holders will no longer be able to irrigate from reduced flows in Marias Creek and it will be too late to rethink how much this shortsighted project is worth. There does not appear to be water to spare for a project this size. How can you give away senior water rights or allow underground water flows to stop flowing to fish, wildlife or homes and farms. If someone comes into a drought ridden area and starts messing around with underground water sources and flows, it will alter water pathways for miles around, affecting private homes in the area set up on previously untampered ground water flow. The DEIS fails to address the permanent impacts to senior water users from the water going to the infiltration gallery, nor does it offer impacts for those impacts.
    a. Activities on NFS lands will have no impact on water rights and will not result in any decrease in flows during the irrigation season in the Toroda watershed. Water availability during the irrigation season will actually increase as a result of dust abatement on NFS lands because the water right will be changed from an irrigation water right to a year round water right, allowing the withdraw of water that would normally have occurred during the irrigation season to be spread out over the entire year. The existing water right is for a total annual withdrawal of 200 acre-feet per year with a maximum instantaneous pumping rate of 300 gpm. This is an irrigation water right. Yearly water use for dust suppression is estimated at 43 acre-feet/year. This has been clarified in the EIS. Water rights affected by mine dewatering are not affected by Forest Service activities, and are disclosed in the SFEIS by WADOE, who has responsibility for water rights. Information on water rights mitigation are also disclosed in WADOEs FSEIS. Water flows on Buckhorn Mountain are not “previously untampered” because past mining activities have affected the amount of water that goes into each drainage. This has been clarified in the Hydrology cumulative effects section of the FEIS. Cumulative effects to water flows, aquatic and wildlife species are discussed in the hydrology, aquatic and wildlife sections of the EIS, respectively.

3. How will our well be affected? We need a study by someone independent of the mine
    a. Effects to water rights are discussed in the State of Washington, Department of Ecology’s FSEIS. That FSEIS was prepared by an independent contractor under the direction of the Department of Ecology.

Wetlands

1. If the mine becomes a reality, wetlands along Myers, Toroda and Bolster Creeks will be gone in 25-60 years and it will be too late to rethink how much this shortsighted project is worth.

    a. Activities on NFS lands will have no impact on wetlands in Myers, Toroda or Bolster Creeks. Wetland losses in these areas are a result of mine dewatering on private lands, not activities on NFS lands. A small amount of wetlands would be lost as a result of road construction and replacement of culverts along Marias Creek. This loss is estimated to be 0.08 acres, 3,331 square feet. Two new small wetlands would be created at the two culvert crossings of Marias Creek on Forest Road 3550 under the Corps of Engineers permit.

2. We recommend the EA clarify and describe the method, location and proposed size of wetlands to be constructed above culverts on live streams to compensate for wetlands lost from culvert replacement.

    a. The Forest Service has received clarification and drawings of the wetland compensation, and this information has been added to the EIS in the Hydrology section. These wetlands would be off-channel habitat, and may fill in, but under these circumstances, the COE feels the event that filled the wetlands would likely result in others developing elsewhere.

3. Hydroperiod changes should be evaluated relative to impacts to wetlands, seeps/springs, and riparian areas, including linear feet downstream for streams and duration of drawdown.

    a. Activities on NFS lands will not affect drawdown. Water infiltration and augmentation on NFS lands will partially offset drawdown impacts to wetlands, seeps/springs and riparian areas below the infiltration and augmentation sites, depending on the site and/or time of year. Information on wetlands has been expanded in the EIS.

4. What will be the effect to slope and wetlands from 40 gpm of water infiltration?

    a. The infiltration gallery and augmentation sites will partially offset impacts to wetlands, seeps/spring and riparian areas below the infiltration and augmentation sites, depending on the site and/or time of year. Information on wetlands has been expanded in the EIS. See also Soils response #2 above. Monitoring of the cut and fill slopes for Forest Road 3575-125 below the infiltration gallery as been added to the monitoring requirements in Chapter 2 to ensure stability of the road.

5. I am concerned about the hydrological shift and drying on the Bolster Creek side, including the wetlands on our property. They are unique, have a least 5 rare species and once had a heron colony we'd like to see return. It seems we'll lose water to the wetlands, and I question if anyone is really sure what will happen water wise. Lyn Doremus did a study a few years back and concluded that Bolster Creek is important in feeding the Triple Creek wetlands, with the alluvial fan at the base of the creek spreading water into the swamp. Myers Creek actually gains water in this stretch. How will these wetlands and habitat be

affected and this whole side of Buckhorn.

a. Activities on National Forest System lands will not have any impact on water availability on the Myers Creek side of Buckhorn Mountain, including Bolster Creek. Information regarding impacts on wetlands on the Myers Creek side of Buckhorn Mountain are available in the State of Washington, Department of Ecology's FSEIS (2006).

6. WS-2 does not appear to have a goal of maximizing protection of wetlands and streams, rather the goal is to maximize restoration of degraded aquatic resources after damage is done.
    a. Wetlands impacted by right-of-way construction cannot be avoided, so only compensatory mitigation is possible. WS-2 as described in the DEIS has been eliminated.

7. How and where will wetlands be replaced?
    a. Wetlands affected by culvert replacements on stream crossings of Marias Creek will be partially replaced by developing off-channel wetlands above each of the culverts. Wetlands impacted by mine dewatering are not caused by Forest Service activities and are covered by the WADOE FSEIS, although some information has been added to the FEIS Hydrology cumulative effects section.

8. The DEIS does not look at alternatives that would minimize impacts nor does it offer suitable mitigation to offset impacts to short and long term damage to seeps, springs, creeks and sub-irrigated areas that feed the wetlands in our area (Bolster/Myers).
    a. See response to #5 above.

Wildlife

1. You have bent over backwards to appease groups of people who pulled off the snail-darter scam, spotted owl fiasco, and lynx scandal. These people aren't interested in letting any project go forward.

    a. Non-substantive. Not a comment about environmental effects of the proposal.

2. The wildlife section tiers to out of date CJM and Kettle River FEISs.

    a. The wildlife information that is incorporated by reference (not tiered to) from the CJM is not out of date, and is supplemented by information collected since that document. The Crown Jewel Mine FEIS (1997) was utilized in the wildlife section of this EIS in order to ensure that all wildlife occurrences within the project area documented prior to 1997, and thus included in the Crown Jewel Mine analysis, were also included in the analysis for this project. This was done to ensure that representative species potentially present and impacted by this project were analyzed in this EIS. Documented wildlife occurrences since 1997 were also included in this EIS to further ensure that species potentially present and impacted by this project were analyzed in this EIS. The State's FSEIS (2006) was used to analyze the cumulative effects of the tailings disposal facility, as well as other project components, on wildlife. The Kettle River FEIS is

not used in the wildlife section.

3. The EA and DEIS fail to acknowledge, fail to mitigation, and/or downplay effect to wildlife and their habitat, including from industrialization of formerly wild areas.
    a. Non-substantive. The comment fails to give any specifics to which a response can be prepared. Effects on wildlife are disclosed in the EIS in the wildlife section.

4. A grizzly bear was sighted on State land near the mine site. What are the impacts to turning this undisturbed forest stand into a well-traveled highway?
    a. Impacts to grizzly bears are discussed in the threatened and endangered wildlife section. The project was determined “may affect, but not likely to adversely affect” grizzly bears and this determination was concurred with by USFWS.

5. Alternative B1 requires additional wildlife mitigation to be acceptable.
    a. The wildlife mitigation, except for road closures, is similar between Alternatives B and B1, and mitigation is required to meet Forest Plan standards, except where infeasible. It is important to realize that the WDFW looks at mitigation differently than the Forest Service. The Forest Service operates under multiple use mandates, not single resource mandates, and sideboards are set by the Okanogan National Forest Land and Resource Management Plan (1989). The Forest Plan sets requirements for wildlife in standards and guidelines, and does not require offsetting of all potential impacts. Additionally, the U. S. Supreme Court found in *Robertson v. Methow Valley Citizens Council* that:

        > NEPA does not impose a substantive duty on agencies to mitigate adverse environmental effects or to include in each EIS a fully developed mitigation plan. Although the EIS requirement and NEPA's other "action-forcing" procedures implement that statute's sweeping policy goals by ensuring that agencies will take a "hard look" at environmental consequences and by guaranteeing broad public dissemination of relevant information, it is well settled that NEPA itself does not impose substantive duties mandating particular results, but simply prescribes the necessary process for preventing uninformed - rather than unwise - agency action.

        Additionally, one resource’s mitigation can be a problem for another resource. This is well demonstrated by the WDFW suggested mitigation for “daylighting” of Marias Creek in an important archaeological site.

6. We recommend that actions be taken to reduce wildlife/truck interactions.
    a. The primary mitigation to reduce these interactions is to require a speed limit of 25 or 30 mph, depending on the alternative. See response to wildlife comment #5 above. Wildlife/truck interactions will be monitored through notification procedures in the event of wildlife road kill and an adaptive management strategy will be considered to reduce road kills (WF-12). Strategies that might be considered include signing of wildlife congregation areas, modifications of existing fencing to discourage wildlife use of an area, and lowering speed limits through an area.

Wildlife run-outs would be created, at least every 1,000 feet, on both sides of plowed project roads when snow banks along the roads become greater than 2 feet high so animals that use project roads can escape.

7. Deer may be impacted within ½ mile of haul routes, particularly on deer winter range. Include prescribed burning or timber stand improvement of decadent winter range to rejuvenate browse on 100 acres per year of winter range to draw deer away from the haul route and reduce vehicle/deer interactions and increase palatability and availability to mule deer. Roll acres forward in years where weather conditions do not permit burning and consult with WDFW. Kinross has agreed to provide $40,000 for this, and USFS is eligible to receive some of these funds. Include this in the FEIS.

    a. See response to wildlife comment #5 above. Impacts to mule deer from the project are discussed in the wildlife section of Chapter 3. Creation of wildlife habitat though prescribed burning is not part of the purpose and need for this project, would require substantial additional analysis, and is not necessary mitigation under the Forest Plan. The Forest Service is willing to consider actions which generally improve deer winter range conditions in the 2010 Cache project or other projects that have not yet been proposed. This project or others are not yet actually proposed, and planning and scoping won't begin for several more years, so the project is not considered "reasonably foreseeable" under NEPA.

8. Additional seasonal or year-round road closures are needed to lessen impacts. Consider closures for the 3575-040, 3575-200, 3575-150 roads.

    a. Portions of Forest Road 3575-150 road are already closed except to administrative traffic. All but the first 150 yards of the 3575-200 road is closed by an earthen barrier. Closure of system roads such as those recommended requires that decisions be informed by roads analysis and effects analysis. As described in the response to comment 5 above, the Forest Plan sets sideboards for acceptable impacts Forestwide and in specific management areas. WDFW has suggested that the Forest Service close additional roads north of the 3575 road to offset impacts from the Marias road. The management area where the roads suggested for closure by WDFW are found includes a good portion of the Marias Creek road and that management area is currently well below the Forest Plan road density of 3.0 miles per square mile and would continue be after implementation of the Marias Creek route. The road density requirements in the Forest Plan were set to find a balance between the resources designated as important in the management area. In this case, the road density requirement of 3.0 miles per square mile were designed, in part, to allow for roaded access for recreational opportunities while requiring a cap on road density to minimize impacts to wildlife. As required by the Forest Plan, the Forest Service instead is closing roads in Bear Trap Canyon to decrease road density in the Marias deer winter range areas to provide refuge for wildlife. Although this project will amend the Plan to designate the Marias road as a designated through route, the Forest Plan specifically recognizes that through routes in deer winter range are appropriate. In addition, the Forest Service has committed to include as mitigation proponent closure of breached non-system roads in the Buckhorn Block. Many non-system roads in the Buckhorn block have been closed, but subsequently breached by

firewood cutters or by the recreating public. The Forest Service will require proponent re-closure of breached non-system roads that are not currently needed as part of this project. No roads analysis or NEPA analysis is needed for this because the decision to close these roads had already been made.

9. We recommend the private land where the mine is located by protected for wildlife post-project
    a. It is outside the authority of the Forest Service, and the scope of this document to determine uses of private lands.

10. Develop an adaptive strategy with triggers and goals for wildlife road kill. Include a system of mileage markers or require GPS to track mortalities with daily reporting by drivers to monitor high use areas and establish warning areas.
    a. Mileage markers are being required every ½ mile (preliminary EA, page 78; draft EIS, page 87, Transportation Monitoring). Any threatened or endangered species killed must be reported immediately. Reporting of other wildlife kills will be done quarterly. If monitoring shows a substantial road kill, the Forest Service would consult with WDFW to determine a course of action (WF-12 in draft EIS). See wildlife comment 6 above.

11. Mitigation should be included for 760 acres of migratory bird habitat impacted, which could include riparian enhancement through planting or cattle exclusion.
    a. As part of this project, a substantial amount of fence will be constructed by the proponent to keep cattle off the Marias road, and out of Marias Creek. Livestock water developments would be constructed above the Marias Creek road to draw cattle away from Marias Creek (RA-1). Cattle will be excluded to the vast majority of Marias Creek by this fencing (see preliminary EA, pages 28 and 32; draft EIS pages 65 and 66), except where water gaps are installed at hardened areas to provide for watering. Other areas along Marias Creek are generally inaccessible to livestock because of natural barriers. In addition the whole road system into the Bear Trap Canyon area will be closed, which will enhance migratory bird habitat in this area of over 1,000 acres through reduction of disturbance by vehicles (WF-1). In addition, 3.5 snags would be created for each acre cleared on NFS land on the project (WF-4). Creation of migratory bird habitat near Marias Creek is not proposed so wildlife are not encouraged to use areas near the Marias Creek road, and potentially injured or killed.

12. WDFW also recommends that more fish and wildlife mitigation occur on State and private lands.
    a. It is outside the authority of the Forest Service, and the scope of this document to determine uses of state and private lands.

13. The Forest Service must consider cumulative impacts with the entire mine proposal including wildlife impacts.
    a. Where impacts from the mine would overlap with impacts from direct and indirect effects of Forest Service activities, those impacts are considered

in the cumulative effects sections for wildlife.

14. Heavy ore transport will destroy wildlife habitat.
    a. Effects on wildlife from ore haul are disclosed in the wildlife section of the EIS in Chapter 3. Approximately 27 acres of wildlife habitat will be directly eliminated by road construction. Use of the haul route will cause disturbance of wildlife during the life of the project, but this disturbance will be eliminated once the project is completed.

15. Clearly state that wildlife impacts will be insignificant. The wildlife section could be shortened.
    a. The effects to wildlife are disclosed on the wildlife section of the EIS in Chapter 3. Findings of non-significance are not required for an EIS. The wildlife section documents the required analysis.

16. The DEIS fails to mitigate the impacts of increased road kill from and avoidance of mine traffic.
    a. The primary mitigation to avoid road kill is a speed limit of 25 or 30 mph, depending on alternative. The primary mitigation for avoidance of habitat near the haul route is providing a secure area through road closures in Bear Trap Canyon. Other mitigation for wildlife includes snag creation away from the haul route and fencing livestock from Marias Creek. Monitoring of the road is required and if substantial increases in road kill are found, additional appropriate action would be considered at that time.

17. The impact of noise on wildlife species is merely an excuse to curtail or stop road construction. How is this claim validated? Don't animals adapt to changing environments? All critters generate some level of noise as well as a semi-permeable trails/paths to accomplish their desires. Roads are important to man and animal.
    a. Scientific literature documents that the effect of noise on wildlife species varies from species to species as disclosed in the Wildlife section of Chapter 3 of the EIS. The effect of actual roads on animals also differs depending on the species as disclosed in Chapter 3 of the EIS.

Appendix G
Comment Letters from
Elected Officials and Federal, State and Local Agencies
Buckhorn Access Project

The Council on Environmental Quality's implementing regulations for the National Environmental Policy Act require that, at a minimum, comment letters on draft Environmental Impact Statements (EIS) by elected officials, and Federal, State and local agencies be published with the final EIS. Because of the volume of comments, comments are summarized and responded to in Appendix F of this final EIS, and only letters from elected officials, and Federal, State and local agencies are published here. A complete set of all comment letters is included in the project file at the Tonasket Ranger District Office.

#2

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Washington State Senate

Senator Bob Morton
7th Legislative District

District Office:
3278 Pierre Lake Road
Kettle Falls, WA 99141
Phone: (509) 684-5132

December 27, 2005

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As the State Senator representing District 7, which covers the Buckhorn Mountain project area in Okanogan County and the Kettle River Operations in Ferry County, I am writing to urge the U.S. Forest Service, Okanogan and Wenatchee National Forest to issue the final Environmental Assessment (EA) and to approve Alternative B (Crown Resources Corporation's proposal) for the Buckhorn Mountain Project. The Forest Service should consider the Buckhorn Mountain Project is a very simple project proposal to use public lands for access to the project, a utility corridor, fences, and an infiltration gallery.

The EA is a comprehensive document that clearly reveals this is an environmentally responsible project. As explained in the EA, the Buckhorn Mountain Project will have minimal environmental impacts on and off of National Forest System lands. This document confirms my long-held belief that the Buckhorn Mountain Project can be built, operated, and reclaimed in a manner that is fully protective of the environment.

This area has patiently waited while studies and research have been completed. It now needs this project to become a reality. We need the jobs and economic activity this project will provide. I cannot imagine a more thoroughly studied project. Without a doubt, it is one of the most carefully studied projects in the history of Washington State. The Buckhorn Mountain Project should not have to do any more studies or jump over any more hurdles. It should be approved.

We all remember the controversy over the Crown Jewel Project. Those days are gone. The vast majority of my constituents support the Buckhorn Mountain Project and are anxious to see this project developed. People understand that the revised project proposal for an underground mine and off-site milling represents a significant opportunity to develop a mine with the least possible impact upon the environment. It also represents the best opportunity to maintain and create high-paying jobs, which are sorely needed in this economically challenged part of Washington State. With the mine in Okanogan County and the mill in Ferry County, this project is a win-win for both areas.

Please do not let the few vocal detractors delay approval of this project. The company has gone the extra mile to work with the community and to address residents' concerns about traffic along the road. We should all recognize that there are a few anti-mining activists in the area who simply don't want to see this project or any mining project developed.

Putting the Buckhorn Mountain Project into production will allow the continued operation of the Kettle River Operation milling facility. In addition to being an essential component of the economy of the region, the Kettle River Operations is an excellent corporate neighbor that has contributed much to the community for more than a decade. It is thus essential that this project be permitted as soon as possible in order for the recently laid-off Kettle River mill workers to be put back on the payroll and to allow the laid-off mine workers to start working at the mine in Okanogan County.

Once again, I wish to stress the importance of issuing the Final EA and approving Alternative B for the Buckhorn Mountain Project as soon as possible.

Cordially yours,

Bob Morton

BOB MORTON
State Senator

#3

Bob Morton

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Ave. South
Okanogan, Washington 98840

December 27, 2005

Dear Supervisor Boynton,

As the State Senator representing District 7, which covers the Buckhorn Mountain project area in Okanogan County and the Kettle River Operations in Ferry County, I am writing to urge the United States Forest Service to issue the final Environment Assessment (EA) and to approve alternate B (Crown Resources Corporation's proposal) for the Buckhorn Mountain project. The Buckhorn Mountain project is a very simple proposal to use public lands for access of a utility corridor, fences, and an infiltration gallery.

The EA is a comprehensive document that clearly reveals this is an environmentally responsible project. As explained in the EA, the Buckhorn Mountain Project will have minimal environmental impacts on and off of National Forest Systems Lands. This document confirms my long held belief that the Buckhorn Mountain Project can be built, operated and reclaimed in a manner that is fully protective of the environment.

The citizens of this area have patiently waited for numerous studies and research to be completed and the project to become a reality. We need the jobs and economic activity this project will provide. I cannot imagine a more thoroughly studied project. Without a doubt it is one of the most carefully studied projects in the history of the State of Washington. The Buckhorn Mountain Project should not have to do any more studies or jump over any more hurdles. It should be approved.

The vast majority of my constituents support the Buckhorn Mountain Project and are anxious to see the project developed. People understand and are comfortable that the revised project proposal for an underground mine and off-setting milling represents a significant opportunity to develop a mine with the least possible impact upon the environment. It also represents the best opportunity to maintain and create high-paying jobs, which are sorely needed in this economically challenged part of Washington State. With the mine in Okanogan County and the mill in Ferry County, this project is a win-win for both areas.

Paid for by the Committee for Bob Morton (R) 3278 Pierre Lake Road Kettle Falls, WA 99141

Bob Morton

Please do not let the few vocal detractors delay approval of this project. The company has gone the extra mile in working with the community and to address residents' concerns about traffic along the road. We should all recognize that there are a few anti-mining activists in the area who simply don't want to see this project or any mining project developed.

Putting the Buckhorn Mountain Project into production will allow the continued operation of the Kettle River Operation milling facility. In addition to being an essential component of the economy of the region, the Kettle River Operations is an excellent corporate neighbor that has contributed much to the community for more than a decade. It is thus essential that this project be permitted as soon as possible in order for the recently laid-off Kettle River mill workers to be put back on the payroll and to allow the laid-off mine workers to start working the mine in Okanogan.

Once again, I want to stress the importance of issuing the final EA and approving alternate B for the Buckhorn Mountain project as soon as possible.

Cordially yours,

Bob Morton
State Senator

Cc: an open public letter

Paid for by the Committee for Bob Morton (R) 3278 Pierre Lake Road Kettle Falls, WA 99141

#12

STATE REPRESENTATIVE
7th DISTRICT
BOB SUMP

State of
Washington
House of
Representatives

STATE GOVERNMENT
COMMERCE & LABOR
TECHNOLOGY,
TELECOMMUNICATIONS
& ENERGY

December 29, 2005

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As the elected representative for District 7, Position No. 1, I am writing to express my support for the Buckhorn Mountain Project and to urge you in your official capacity as Forest Supervisor for the Okanogan and Wenatchee National Forests to issue the final Environmental Assessment (EA) for the Buckhorn Mountain Project as soon as possible. Your approval should authorize Crown Resources Corporation's project proposal, which is described as Alternative B in the EA.

The economic well being of the town of Republic is largely dependent on the Kettle River Operations, which recently had to layoff a substantial portion of its workforce. I am very concerned about the adverse economic effects of this layoff. I want to make sure that you are aware of the urgent need issue to the permits for the Buckhorn Mountain Project so these people can go back to work.

Your agency's EA proves there is simply no reason to delay the approval of this project. The proposed use of National Forest lands for the access road, utility corridor, fencing, and the infiltration basin strike me as very straightforward, easy to understand, and obviously necessary and appropriate. The EA thoroughly examines all aspects of these facilities and clearly reveals that there are very few environmental concerns associated with the Buckhorn Mountain Project either on or off of public land.

Once again, I urge the Forest Service to issue the Final EA and to approve the Buckhorn Mountain Project as soon as possible This community and my constituents simply cannot afford to wait any longer for this project to start.

Sincerely yours,

BOB SUMP
State Representative
7th Legislative District

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#31

STATE REPRESENTATIVE
7th DISTRICT
JOEL KRETZ

State of
Washington
House of
Representatives

CAPITOL BUDGET
ECONOMICAL DEVELOPMENT, AGRICULTURE & TRADE
NATURAL RESOURCES, ECOLOGY & PARKS

January 3, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

I represent District 7, Position No. 2 and the areas in which both the Buckhorn Mountain Project and the Kettle River Operations are located. I am writing as an elected official from these areas to stress the importance of the Buckhorn Mountain Project to this economically challenged region of Washington. It is critically important that the U.S. Forest Service/ Okanogan and Wenatchee National Forests issue the final Environmental Assessment (EA) and approve Alternative B for the Buckhorn Mountain Project as soon as possible.

It is very clear from the recently issued Preliminary EA that the Buckhorn Mountain Project will directly benefit Ferry and Okanogan Counties, and will indirectly benefit the rest of the State of Washington. This environmentally responsible project should be approved immediately so the workers recently laid off from the Kettle River Operations can go back to work and the new jobs associated with the Buckhorn Mountain mine in Okanogan County can become a reality.

My constituents have waited for well over a decade for this mining project to bring a measure of economic growth and prosperity to the region. Frankly, we are out of patience and see no reason why we should wait any longer.

In considering the Final EA, it is hard to imagine that anything more could be said about the roads, utility corridor, fencing, and infiltration area that will be on public lands. The 343-page Preliminary EA examines these facilities in great detail. Consequently, the Forest Service has properly taken into account all relevant factors and has examined all aspects of the proposed project. It is also evident that the proposed project will have minimal environmental impacts both on and off of National Forest System lands. Given the thoroughness of the Preliminary EA, I would hope the Final Ea can be issued promptly.

The U.S. Forest Service should understand that there is a great deal of public support for the Buckhorn Mountain Project. Area residents recognize the need for this project and the benefits it will bring to Ferry and Okanogan counties. There is widespread awareness that the revised project proposal represents a significant opportunity to develop a mine with the least possible impact upon the environment. It also represents the best opportunity to maintain and create high-paying jobs, which are sorely needed in this economically depressed part of Washington State.

Once again, I strongly urge the U.S. Forest Service/ Okanogan and Wenatchee National Forests to issue the Final EA and approve Alternative B for the Buckhorn Mountain Project as soon as possible.

Respectfully,

Joel

Representative Joel Kretz

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E-MAIL: kretz.joel@leg.wa.gov
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#33

FCPHD #1

"COUNT ON US TO CARE"

FERRY COUNTY PUBLIC HOSPITAL DISTRICT #1

dba Ferry County Memorial Hospital (509) 775-3333 fax 775-3866
Republic Medical Clinic (509) 775-3153 fax 775-8929
Curlew Medical Clinic (509) 779-4049 fax 779-4004

Mr. James L. Boynton,
Forest Supervisor
Okanogan and Wenatchee National Forest
1240 Second Avenue South
Okanogan, WA 98840

January 3, 2006

Dear Mr. Boynton:

Ferry County Public Hospital District supports the Buckhorn Mountain Project and requests that the U.S. Forest Service encourage the Washington Department of Ecology to complete the permitting process for the Buckhorn Mountain Project in a timely manner.

KinRoss Gold Corporation's Kettle River Operations of Republic in Ferry County recently had to lay off a number of employees because the mines in Ferry County have run out of ore. The Buckhorn Mountain Project is critical to the future of Kettle River Operations in Republic and the viability of Ferry County.

Loss of this operation will severely cripple the economic base of Ferry County. Therefore, the Board of Commissioners of Ferry County Public Hospital District are keenly interested in seeing the Buckhorn Mountain Project start up as soon as possible so milling activities can resume at the Republic milling site.

We provide health care services to the miners and their family members. The loss of these jobs will cause many to be without healthcare insurance and put them at risk of access to healthcare services. Also if mining operations are permanently closed and these workers are forced to leave the county to find adequate paying jobs, they take with them family members who may be nurses, healthcare technicians, teachers, etc. leaving critical voids in these professions thus threatening right of entry to healthcare, education and other important community services for the remaining residents.

The Supplemental Environmental Impact Statement (SEIS) that the Department of Ecology and the Environmental Assessment the U.S. Forest Service recently published does a good job of explaining the impacts associated with the project and the mitigation measures that will be used to eliminate or reduce minimal adverse impacts. These documents clearly show that this project will be protective of the environment.

The start up of the mine at the Buckhorn Mountain Project and the continued operation of the Kettle River Operations milling facility are obviously essential to the regional economy, specifically Ferry County.

The Hospital District wishes to emphasize the importance of issuing the permits for the Buckhorn Mountain Project as soon as possible. In addition to our concern for protecting our environment, we are equally concerned for the economic well being of our residents. They do not receive financial support from outside lobbyists; they work hard for their families to have a rural life. This is an environmentally responsible project. It should move forward now.

Sincerely yours,

Ron O'Halloran
Administrator

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fcmh@fcphd.org • www.fcphd.org

#35

City of Republic
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P.O. Box 331
Republic, WA 99166-0331

City Hall (509) 775-3216
Public Works 775-2929
Police: 775-2812
TDD: 1-800-833-6388

January 3, 2006

James L. Boynton Forest Supervisor
C/O Ms. Jan Flatten
Okanogan & Wenatchee National Forest
1240 Second Avenue South
Okanogan, WA. 98840

Dear Mr. Boynton:

The Kettle River Operations in Ferry County, Washington is the largest employer in Ferry County. This letter is being sent to inform you that the City of Republic fully supports the Buckhorn Mountain Project, and to implore the U.S. Forest Service to finalize the Environmental Assessment and approve Kettle River's project proposal (Alternative B in the EA) for the Buckhorn Mountain Project as soon as possible.

The Kettle River Operations recently had to lay off a number of employees because the mines in Ferry County have run out of ore. We also understand that the Buckhorn Mountain project is very critical to the future of The Kettle River Operations and the citizens of Ferry County. Without the Buckhorn Mountain Project, which is located in adjacent Okanogan County, The Kettle River Operations will not have ore to process in their milling facility in Ferry County and will have to close permanently.

The loss of this company would severely impact our City and County. We are very interested in seeing the Buckhorn Mountain Project begin as soon as possible so milling activities can resume at The Kettle River Operations and we can continue to count on their providing jobs to the citizens of our city and county.

The Kettle River Operations employs a large number of people; the impact of not having them would be catastrophic to our City and County. Both the City and County governments are barely surviving with the small tax base that we have, and the loss of another large employer would finally finish off what economy we do have at this time.

The Draft Supplemental Environmental Assessment (EA) that the Forest Service recently published does a good job of explaining the impacts associated with the project and the mitigation measures that will be used to eliminate or reduce these impacts. This document clearly shows that this project will be protective of the environment.

We cannot emphasize strongly enough the fact that this project is extremely important to the economic survival of The City of Republic, Ferry County, but also to Okanogan County and the State of Washington.

With these economic factors and the fact that this is an environmentally responsible project, we ask you to issue the permits for the Buckhorn Mountain Project as soon as possible.

Sincerely,

Shirley A. Couse

Shirley A Couse
Mayor of Republic

Steven L. Russ
Council Person, Position #1

Linda Hall
Council Person, Position #2

Fred Bremner
Council Person, Position #3

DiAnne Hewitt
Council Person, Position #4

Alex W. Wirt
Council Person, Position #5

#61

STATE REPRESENTATIVE
24th DISTRICT
JIM BUCK

State of
Washington
House of
Representatives

NATURAL RESOURCES,
ECOLOGY & PARKS
RANKING MEMBER
TRANSPORTATION

January 3, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As a member of the Washington State Legislature, I am writing to inform you of my support for the Buckhorn Mountain Project and to urge you, in your role as Forest Supervisor of the Okanogan and Wenatchee National Forests, to expedite issuance of the final Environmental Assessment (EA) and to approve the Buckhorn Mountain Project as soon as possible.

Although I do not represent the areas in which the mine and milling facilities are located, I believe this project is important to the entire state, which is why I am requesting that the permitting process be completed in the shortest amount of time possible.

The Buckhorn Mountain Project will bring jobs to an economically depressed part of our state. These jobs and the economic engine that will be created by this project can make a critical difference to Ferry County, which is teetering on the verge of bankruptcy.

The Kettle River Operations is the largest private-sector employer in Ferry County. The company recently had to lay off a significant portion of its workforce because the mines in Ferry County have run out of ore. Bringing the Buckhorn Mountain Project on line will allow these workers to return to work plus generate new jobs. Given the dire economic circumstances in Ferry County, these jobs are essential.

If Ferry County is forced to declare bankruptcy, there will be an adverse ripple effect throughout the state. The State Legislature will have to find a way to assist the county in this financial crisis. As a state legislator, my responsibilities extend beyond the boundaries of my district when it comes to economic issues that have statewide importance. I am thus very anxious to see the Buckhorn Mountain Project approved so it can become a partial solution to the financial challenges facing this region.

I understand that there is significant public support for the Buckhorn Mountain Project in Okanogan and Ferry Counties. The redesigned project proposal for an underground mine and off-

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site processing at the existing Kettle River Operations eliminates the environmental concerns associated with the previous proposal for an open-pit mine.

I also understand that the use of public lands for this project is both modest and appropriate. The access roads, utility corridor, fencing, and infiltration basin that will be built on public lands administered by the U.S. Forest Service are necessary components of the mining project, which will occur on private land, and will have no significant impact on or off of public lands. There is thus no reason to delay the approval of this important project.

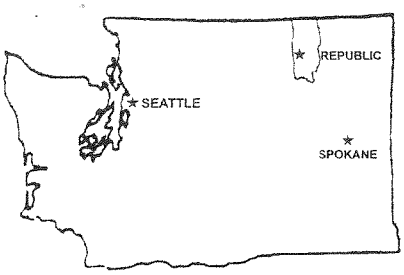
I appreciate the opportunity to provide comments regarding the proposed Buckhorn Mountain Project.

Sincerely,

Jim Buck

JIM BUCK
State Representative
24th Legislative District

#65



FERRY COUNTY
BOARD OF COMMISSIONERS

290 EAST TESSIE AVENUE
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BRAD L. MILLER, Curlew-District #1
RONALD L. BACON, Republic-District #2
MIKE L. BLANKENSHIP, Boyds-District #3

JOY OSTERBERG, Clerk of the Board
joy@co.ferry.wa.us

January 3, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

On behalf of the Ferry County Commissioners, I am writing to let you know that we unanimously support the Buckhorn Mountain Project. We strongly urge the U.S. Forest Service/Okanogan and Wenatchee National Forests to issue the final Environmental Assessment (EA) and to approve Crown Resources' Proposed Project (Alternative B) for the Buckhorn Mountain Project as soon as possible. We feel that the EA validates our support because it confirms that the Buckhorn Mountain Project can be built, operated, and reclaimed in a manner that is fully protective of the environment.

The project components for the Buckhorn Mountain Project that will be on public land (e.g., roads, utility corridors, fencing, and a water infiltration area) are well understood and, for the most part, not unique to a mining project. The lengthy EA document has examined all aspects of these facilities in every possible detail.

It is hard to imagine a more thoroughly studied project. Coupled with the multi-volume EIS that was prepared for the Crown Jewel project proposal, the Buckhorn Mountain Project is one of the most carefully studied projects in Washington State. It is time for this well understood, environmentally responsible project to become a reality.

Compared to the previous project proposal for a large open-pit mine, the underground mine will create dramatically fewer impacts. We find that Crown Resources has done an excellent job in designing the Buckhorn Mountain Project to eliminate or dramatically reduce the impacts that created the public concern and controversy surrounding the Crown Jewel Project. The EA demonstrates that this project will have minimal environmental impact both on and off of National Forest System lands.

Crown Resources' proposal to use the existing Kettle River mill near Republic rather than constructing a new mill near Buckhorn Mountain is of special interest to us. This plan represents the best of both worlds for Ferry and Okanogan Counties. Ferry County gets to keep the jobs associated with this milling facility whereas Okanogan County gets the mining jobs. This is truly a win-win situation for both counties. Crown Resources' willingness to change the project proposal to eliminate on-site milling at Buckhorn

Mountain also demonstrates the company's extraordinary efforts to work with area residents and to respond to their concerns.

Putting the Buckhorn Mountain Project into production will allow the continued operation of the Kettle River Operation milling facility. It is thus essential that this project be permitted as soon as possible in order for the recently laid-off Kettle River mill workers to be put back on the payroll and to allow the laid-off mine workers to start working at the mine in Okanogan County.

Although there remain a few vocal detractors, we know from talking to our constituents that the Buckhorn Mountain Project enjoys broad public support. This is not only due to the fact that this area sorely needs the jobs this project represents. It is also due in large measure to the widespread recognition that the revised project proposal to build the Buckhorn Mountain Project as an underground mine and to process the ore at the existing Kettle River mill represents a significant opportunity to develop a mine with the least possible impact upon the environment.

We have known the Kettle River Operations for over a decade. The company is an excellent corporate neighbor that has contributed so much to our community over the years. As an important part of the social and economic fabric of the area, it is essential that the company remain a part of this community.

Once again, we respectfully ask the U.S. Forest Service to issue the Final EA and the required project approvals for the Buckhorn Mountain Project as soon as possible in order to put the workers who have been recently laid off at the Kettle River Operations back to work, and to create the new jobs associated with the Buckhorn Mountain Project.

Sincerely yours,

Mike Blankenship, Chairman

Ron Bacon, Vice Chairman

Brad Miller, Member

#76

Washington State Senate

Senator Bob Oke
26th Legislative District

110 Irv Newhouse Building
PO Box 40426
Olympia, WA 98504-0426

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FAX: (360) 786-7651
Toll-free Hotline: 1-800-562-6000
e-mail: oke.bob@leg.wa.gov

January 3, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As a member of the Washington State Legislature, I am writing to inform you of my support for the Buckhorn Mountain Project and to urge you in your role as Forest Supervisor of the Okanogan and Wenatchee National Forests to expedite issuance of the final Environmental Assessment (EA) and to approve the Buckhorn Mountain Project as soon as possible.

Although I do not represent the areas in which the mine and milling facilities are located, I believe this project is important to the entire state, which is why I am requesting that the permitting process be completed in the shortest amount of time possible.

The Buckhorn Mountain Project will bring jobs to an economically depressed part of our state. These jobs and the economic engine that will be created by this project can make a critical difference to Ferry County, which is teetering on the verge of bankruptcy.

The Kettle River Operations is the largest private-sector employer in Ferry County. The company recently had to lay off a significant portion of its workforce because the mines in Ferry County have run out of ore. Bringing the Buckhorn Mountain Project on line will allow these workers to return to work plus generate new jobs. Given the dire economic circumstances in Ferry County, these jobs are essential.

If Ferry County is forced to declare bankruptcy, there will be an adverse ripple effect throughout the state. The State Legislature will have to find a way to assist the county in this financial crisis. As a state legislator, my responsibilities extend beyond the boundaries of my district when it comes to economic issues that have statewide importance. I am thus very anxious to see the Buckhorn Mountain Project approved so it can become a partial solution to the financial challenges facing this region.

I understand that there is significant public support for the Buckhorn Mountain Project in Okanogan and Ferry Counties. The redesigned project proposal for an underground mine and off-site processing at the existing Kettle River Operations eliminates the environmental concerns associated with the previous proposal for an open-pit mine.

I also understand that the use of public lands for this project is both modest and appropriate. The access roads, utility corridor, fencing, and infiltration basin that will be built on public lands administered by the U.S. Forest Service are necessary components of the mining project, which will occur on private land, and will have no significant impact on or off of public lands. There is thus no reason to delay the approval of this important project.

I very much appreciate the opportunity to provide comments about the proposed Buckhorn Mountain Project.

Sincerely yours,

Senator Bob Oke
26th Legislative District
Washington State Legislature

Committees: Natural Resources, Ocean and Recreation, Ranking Republican Member • Transportation

Recycled

18

STATE REPRESENTATIVE
21st DISTRICT
BRIAN SULLIVAN

State of
Washington
House of
Representatives

#78

NATURAL RESOURCES,
ECOLOGY & PARKS
CHAIR

LOCAL GOVERNMENT

TASK FORCE ON
ECONOMIC COMPETITIVENESS
VICE CHAIR

TRANSPORTATION

January 5, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As a member of the Washington State Legislature, I am writing to inform you of my support for the Buckhorn Mountain Project and to urge you in your role as Forest Supervisor of the Okanogan and Wenatchee National Forests to expedite issuance of the final Environmental Assessment (EA) and to approve the Buckhorn Mountain Project as soon as possible.

Although I do not represent the areas in which the mine and milling facilities are located, I believe this project is important to the entire state, which is why I am requesting that the permitting process be completed in the shortest amount of time possible.

The Buckhorn Mountain Project will bring jobs to an economically depressed part of our state. These jobs and the economic engine that will be created by this project can make a critical difference to Ferry County, which is teetering on the verge of bankruptcy.

The Kettle River Operations is the largest private-sector employer in Ferry County. The company recently had to lay off a significant portion of its workforce because the mines in Ferry County have run out of ore. Bringing the Buckhorn Mountain Project on line will allow these workers to return to work plus generate new jobs. Given the dire economic circumstances in Ferry County, these jobs are essential.

If Ferry County is forced to declare bankruptcy, there will be an adverse ripple effect throughout the state. The State Legislature will have to find a way to assist the county in this financial crisis. As a state legislator, my responsibilities extend beyond the boundaries of my district when it comes to economic issues that have statewide importance. I am thus very anxious to see the Buckhorn Mountain Project approved so it can become a partial solution to the financial challenges facing this region.

I understand that there is significant public support for the Buckhorn Mountain Project in Okanogan and Ferry Counties. The redesigned project proposal for an underground mine and off-site processing at the existing Kettle River Operations eliminates the environmental concerns associated with the previous proposal for an open-pit mine.

I also understand that the use of public lands for this project is both modest and appropriate. The access roads, utility corridor, fencing, and infiltration basin that will be built on public lands administered by the U.S. Forest Service are necessary components of the mining project, which will occur on private land, and will have no significant impact on or off of public lands. There is thus no reason to delay the approval of this important project.

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E-MAIL: sullivan.brian@leg.wa.gov
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STATE REPRESENTATIVE
21st DISTRICT
BRIAN SULLIVAN

State of
Washington
House of
Representatives

NATURAL RESOURCES,
ECOLOGY & PARKS
CHAIR

LOCAL GOVERNMENT

TASK FORCE ON
ECONOMIC COMPETITIVENESS
VICE CHAIR

TRANSPORTATION

I very much appreciate the opportunity to provide comments about the proposed Buckhorn Mountain Project. Please feel free to contact my office by phone, 360.786.7972, or e-mail, Sullivan.Brian@leg.wa.gov, with any questions or comments.

All My Best,

State Representative Brian Sullivan
Natural Resources, Ecology and Parks Committee, *Chair*
21st Legislative District
360/786-7972
Sullivan.Brian@leg.wa.gov

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#80

The Confederated Tribes of the Colville Reservation
P.O. Box 150, Nespelem, WA 99155
(509) 634-2200
FAX: (509) 634-4116

January 6, 2006

Jan Flatten
For Forest Supervisor James Boynton
United States Forest Service
Okanogan Valley Office
1240 Second Avenue South
Okanogan, WA 98840

RE: Buckhorn Mountain Access Road and Related Activities Project

Colville Confederated Tribes Environmental Trust program welcomes the opportunity to provide comment on the Buckhorn Mountain Access Road and Related Activities Project. The Colville Confederated Tribes are concerned about protection of water quality in both the San Poil and Kettle River drainages.

The overall mining project, of which proposed Forest Service road use is a part, will affect water quality and habitat in Marias and Toroda Creek within the Kettle drainage and pose a significant threat to water quality of the San Poil River. These will result from the widening and use of Marias Creek Road and increased tailing impoundment near Republic.

Based upon overall environmental significance of the mining project, it would seem the Forest Service has responsibility under the National Environmental Policy Act to consider environmental impacts of the entire project. Road use across National Forest is an integral and necessary part of Crown Resources Buckhorn Mine proposal, yet the Forest Service is performing an environmental assessment considering only a portion of the project.

Concerns regarding surface and ground water protection at the ore milling and tailings impoundment site were detailed previously in a letter to Department of Ecology. Some of the previous letter bears repeating because the disposal of tailings relies upon ore haul on the Forest Service Marias Creek Road. The tailing disposal facility is located beside the San Poil River approximately 13 miles north of the Colville Indian Reservation. From the facility location, the San Poil River flows through the center of the Reservation and past the community of Keller. The San Poil drains a major watershed within the Reservation, 330,000 acres. Quality of the water in this river is a matter of great concern to the Colville Tribes.

Excerpt from Colville Environmental Trust letter entitled, Comments on Draft Supplemental Environmental Impact Statement, Buckhorn Mountain Project, dated December 14, 2005:

"Tailings Disposal Facility

The DSEIS is lacking in several significant aspects related to the Kettle Mill tailings disposal facility (TDF). Tailings facility design as a function of seismic risk is manipulated to the proponent's benefit by discounting best available science on scale of the Maximum Credible Earthquake (MCE) and peak ground acceleration. Based in large part on the discounted design drivers, the DSEIS proposes the Kettle Mill TDF be expanded using a single 28 foot upstream raise. Upstream raise as a construction method for TDF is contrary to industry practice in areas of elevated seismic risk or significant uncertainty due to increased potential for liquefaction of tailings during earthquakes. Expert observers at the existing Kinross tailings facility have documented tailings are saturated and instable as evidenced by shearing and displacement during previous bank emplacement. Wick drains in combination with downstream or centerline methods of increasing tailings facility capacity are inherently more stable and should be receive technical consideration in the SEIS.

Not only is the TDF under designed but the potential effect on fisheries, rivers, and streams of catastrophic TDF failure is seriously understated. TDF design considerations warrant protective engineering now rather than adaptive management when indicators of potentially catastrophic instability become apparent. While typically deferred to the permitting process, the magnitude of adverse consequences that could result from TDF failure and their relevance under SEPA compels careful examination within the SEIS. All Known Available and Reasonable Technology (AKART) is the benchmark for tailings dam design that should be applied at the Kettle Mill expansion.

Optional Tailings Disposal Facility

The possibility of catastrophic failure of the pipeline carrying tailings across North San Poil River to the alternative TDF and the adverse impacts to aquatic resources as a consequence are not adequately considered in the DSEIS and deserve specific attention in the SEIS. Hydrogeologic information necessary to understand the potential impact of the Optional TDF is absent from the DSEIS and must be fully developed in the SEIS."

The remainder of this letter addresses impacts from delivery of fine sediment and road chemicals into Marias Creek that will result from road widening and industrial road use.

Buffer widths between the Marias Creek Road and the creek are not provided in the Environmental Assessment but are quite narrow. The document's Hydrology Section indicates 2.8 miles of road located within 300 feet of the stream. Often the road is located within 100 feet of the creek, and in places the existing single lane road is immediately adjacent the creek. With these short distances, most unsecured road sediment will reach the stream. Chemicals and salt used for road maintenance are also expected to migrate to the stream. Best management practices can at best partially solve this delivery problem caused in large part by the road location beside the stream.

Road location beside the creek dictates that sediment and chemical laden discharge from some cross drain culverts will directly enter the creek. In these instances, 100% of the sediment

generated by that portion of road draining to the cross drain culvert will be delivered to the creek. Longer cutslopes created by road widening are unlikely to revegetate incompletely. Discussion of the FS WEPP sediment erosion model indicates the analysis for this project assumed "average" conditions (pg 117), yet one of the parameters, traffic, generated by this project will be heavy for 13 to 15 years. Additionally, continued road use throughout spring breakup periods can be expected to substantially increase sedimentation over average conditions. Because of the topography and proximity to stream, any accidents or spills along this route will include a significant chance for chemical (petroleum products, coolant) delivery to the stream.

The Aquatics Section indicates that two reaches of Marias Creek currently have high levels of fine sediment, around 30%, impairing fish habitat. The document's Biological Evaluation estimates best management practices associated with the road will likely prevent total loss of Marias Creek's fish population from occurring. Yet loss of individual fish and spawning habitat is projected.

The EA document states the Forest Service would only shut haul down when haul is causing environmental damage (Pg 18). In light of the projected increase in sedimentation, it is apparently assumed the project and anticipated effects will not harm the environment. If this is the case, it is recommended a clear, easily measured threshold be established allowing daily on-site decisions regarding haul. It would be important the contractor be able to recognize this threshold.

Thank you for your careful consideration of these comments.

Sincerely,

Gary Passmore
Director
Environmental Trust Department
Colville Confederated Tribes

Cc: Derek Sandison, Director of Central Region, Department of Ecology

#82

BOARD OF COMMISSIONERS
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GREGG B. CAUDELL DISTRICT NO. 3

ROBERTA B. WELLER, MANAGER

PUBLIC UTILITY DISTRICT
PHONE (509) 775-3325 / FAX (509) 775-3326

Progress with Power
P.O. Box 1039

NO. 1 OF FERRY COUNTY
REPUBLIC, WASHINGTON 99166

January 4, 2006

Mr. James L. Boynton, Forest Supervisor
% Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Ave. S.
Okanogan WA 98840

Dear Mr. Boynton:

The Kettle River Operations in Ferry County, WA is our Utility's biggest consumer. We are contacting you to let you know that we support, whole-heartedly, the Buckhorn Mountain Project and to request that the WA Dept. of Ecology complete the permitting process for the Buckhorn Mountain Project as quickly as possible.

We know that Kettle River recently had to lay off a large number of employees because the mines in Ferry County have run out of ore. These are men and women with families who call Ferry County "home" and want to stay here. The Buckhorn Mountain Project is critical to the future of Kettle River because without that ore, the milling facility will have to close permanently.

We provide the electrical power for Kettle River Operations and have since they arrived in our area many years ago. Their accounts have been crucial to our Utility over these past years and still are today. They have been wonderful consumers and are most welcome in our area.

The preliminary Environmental Assessment recently published by the U.S. Forest Service clearly shows that the Buckhorn Mountain Project will be protective of the environment, both on and off of public land. This is an environmentally responsible project.

We urge you to realize the importance of issuing the permits for the Project as quickly as possible.

Regards,

Bobbi Weller

ROBERTA B. WELLER
Manager

#99

State of Washington
Department of Fish and Wildlife

Mailing Address: 600 Capitol Way N, Olympia WA 98501-1091, (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia WA

January 9, 2006

Mr. James Boynton, Forest Supervisor
United States Forest Service
Okanogan Valley Office
1240 Second Avenue South
Okanogan, Washington 98840

SUBJECT: BUCKHORN MOUNTAIN ACCESS ROAD AND RELATED ACTIVITIES PROJECT ENVIRONMENTAL ASSESSMENT

Dear Mr. Boynton:

The Washington Department of Fish and Wildlife (WDFW) appreciates the opportunity to review and comment on the draft Environmental Assessment (EA) for this project. Please note that WDFW was not identified in the Chapter 4 list of agencies consulted during preparation of the report and our comments are in response to some specific proposals we have become aware of only recently. This EA pertains only to that portion of the project that is on United States Forest Service lands. Please refer to our December 13, 2005, response letter to the Draft Supplemental Environmental Impact Statement prepared by the Washington Department of Ecology for our comments related to the entire project. A copy of this letter was provided to Mr. Phil Christy of your office.

General Comments

The preferred alternative (B1) presented in the document is based on reconstruction of the Marias Creek road. We feel it is important to note that the Marias Creek road was originally built to design and stormwater control standards that would be considered substandard today. For example, the Marias Creek road was built too close to the stream to provide the buffers necessary to prevent road construction and maintenance impacts to the stream. There may not be sufficient area in the alignment to provide a reasonable level of stormwater treatment prior to discharging into the stream. A proposal to rebuild the road worsens this commitment to a less than desirable alignment.

The Kinross mining project on Buckhorn Mountain proposes significant improvements in upstream migration and fish use of Marias and Nicholson creeks for mitigation of mining related impacts. The impacts of road construction, operations, and disturbance of a larger road right-of-

way (prism) for Alternative B1 will compromise these mitigation benefits. Stormwater controls for the proposed road design should meet higher standards to protect these improvements.

The EA should note that the infiltration area is for treated wastewater discharged from the mine and functions as a disposal area. The water quality of the inflow is important, but so is the water quality of the outflow. The EA should analyze the treatment of this wastewater, particularly for metals and bioaccumulation of materials hazardous to aquatic resources, the travel times, and distance to streams that could be impacted by this discharge.

The design standard of using a 2- 3- and 24-hour duration storm for detention requirements and runoff control from the road surfaces may underestimate the storage required for longer duration snowmelt or rain-on-snow events. Larger storage capacity may be necessary to provide sediment control and water quality treatment for oils, grease, and metals prior to discharge to the streams.

The ease and cost of truck use of the different road alternatives during the life of the mine should not outweigh the long-term adverse environmental effects that may last for decades. The EA describes Alternative D as having significantly less environmental impacts on National Forest lands than the other alternatives. There is no discussion of the factors that led to Alternative B1 being chosen as the preferred alternative. Our view is that Alternative B1 requires additional fish and wildlife mitigation to be considered as an acceptable alternative. We provide recommendations in this letter for this additional fish and wildlife mitigation.

Specific Comments

Pages 58, 59; LU-3, LU-4, LU-5 – This section describes actions to be taken to lessen the interactions between livestock and haul trucks that include fencing, water troughs, and a corral. We recommend that actions be taken to reduce the interactions between wildlife and haul trucks, also (specific recommendations below).

Page 64, Erosion and Sedimentation – As reported on page 137 of the EA, modeling suggests that sediment reaching Marias Creek will increase over current levels, even with the extensive sediment control measures that are proposed. Sediment levels in Marias Creek are already high enough that they are reducing the productivity of the stream. The EA suggests that additional sediment control measures, including off-stream sediment traps, tree/shrub plantings, etc., will be taken if monitoring indicates a need. We recommend that these additional measures be designed into the project upfront as the extensive road construction and use of the haul road is very likely to require them.

Page 70, Wildlife and Fish Mitigation and Enhancement – As described in the EA, mule deer will be impacted directly by vehicle/deer interactions and indirectly by loss of winter range use due to avoidance of haul road traffic. Since a large portion of the area through which the haul road passes is identified and managed for mule deer winter range, we recommend that additional mitigation measures be taken to further reduce this impact. Specifically, prescribed burning of decadent winter range areas would rejuvenate the browse, increasing its palatability and availability to mule deer. Careful siting of the prescribed burn areas could serve to draw deer

from the haul road vicinity and potentially reduce vehicle/deer interactions. We recommend approximately 100 acres/year of prescribed burns dedicated to this purpose for the life of the project, conducted by the USFS and funded by the mine proponent. If weather or permit conditions do not allow burning in any given year, those acres would roll forward. Coordination should occur between biologists of the USFS and WDFW to determine if the acres would be added to the next year's burn or to additional years following mine closure.

Page 71, Wildlife Road Closures – We recommend additional road closures to lessen the impacts of the new road and additional mine-related traffic on existing and reconstructed roads. These could be either seasonal or year-round closures depending on site-specific conditions and needs. A preliminary assessment indicates that USFS roads 3575-040, 3575-200, and 3575-150 (north of the 3575 main road) would be candidates for closure.

Page 74, Creation of Pool Habitat in Marias and Nicholson Creeks – The EA does not present enough information to determine if ten is the appropriate number of pools, or whether the proposed pools will be effective or will fill up with sand after the first high flows. We note background conditions in the streams are conducive to high rates of sand transport and the proposed roadwork will increase sediment loads. The EA should include performance standards for depth and area of the pools and steps to be taken to recover the habitat benefits lost by project failures. Additional unknowns are the linear extent of road that will have insufficient riparian buffer distance to the stream, and the potential for anchor ice or freeze-up to kill fish in the pools during the winter. If the pool projects are proven to be effective, we recommend that a new series of 10 pool structures be placed in these creeks during mine reclamation to offset long-term and continuing impacts of this project. Structures of this type usually have a maximum life expectancy of 10 – 30 years depending on the type and size of wood used, and whether the structures are impacted by storm events. Thus, the structures that are installed at the beginning of the project will be partially or mostly degraded by the time of mine closure.

Coordination is needed with WDFW on the design of the instream structures as these plans are further developed.

Page 74, Notification Procedures in the Event of Wildlife Road Kill – In addition to the notification procedure described, we suggest that adaptive management strategies, including triggers and goals, be required so that action can be taken as needed. Additionally, we recommend that a system of mile markers and/or GPS coordinates be employed to be better able to track where mortalities or observations of deer occur. Daily reporting of such information by the drivers and frequent reporting to the USFS and WDFW would be important to be able to monitor high use areas and to establish warning areas for high use crossings and direct adaptive management.

Page 76, Water Resources Monitoring – We suggest that adaptive management strategies, including triggers and goals, be required so that action can be taken if monitoring results warrant it.

We recommend that monitoring and maintenance and reporting schedules be developed and implemented for the sediment control measures that will be required. This will allow the USFS and mine proponent to take proactive action to prevent some sediment from reaching the stream.

Page 79-80, Performance Securities – In addition to reclamation and environmental protection costs, we recommend that the performance securities also provide adequate funds to cover environmental damages.

Page 82, Table II-7 – The potential for toxic material added to the haul road surface to reach streams, riparian areas, and wetlands is described as high for the preferred alternative. We suggest that additional measures be required to avoid, lessen, and replace these impacts.

Page 135, Other Direct/Indirect Effects Common to All Alternatives – Sediment loads draining off of the haul road and cut slopes and delivered to the stream are expected to be extremely high without extensive road design and strict adherence to best management practices. Monitoring of sediment loads will be conducted and additional measures such as planting of trees and shrubs to intercept sediment could be implemented. By the time that monitoring detects the problem the impact to the aquatic populations will have occurred. Since Marias Creek already has 30 percent fines in the lower reaches and information on page 137 indicates that up to a 34 percent increase in fines is expected from this project, we suggest that all practical measures, including the tree and shrub plantings, be incorporated into the original design.

Page 215, Cumulative Effects Common to All Species – The patenting of the mine claim on Buckhorn Mountain has resulted in the transfer of wildlife habitat out of public ownership into private ownership. After mine closure, it is possible that these lands could be further developed resulting in additional impacts to wildlife and habitat. WDFW had reached agreement with the previous proponent, Battle Mountain, that the mine site would be protected as wildlife habitat following reclamation. We strongly recommend a similar agreement for this proposed project.

Page 265, Mule Deer – In the discussion of the potential impact of the haul road activity on mule deer, we note that the publication entitled "Impact of Roads on Big Game Distribution in Portions of the Blue Mountains of Washington, 1972-73," by Charles Perry and Robert Overly, published in 1977 by the Washington Department of Game as Applied Research Bulletin No. 11, was not cited. This study was conducted mostly on USFS lands in the Blue Mountains and found that the impact extended up to ½ mile from the road. Since a significant portion of the haul road borders or traverses lands specifically identified as mule deer winter range, additional measures on USFS lands (prescribed burning to rejuvenate winter range browse) and on the private mitigation lands, to lessen or replace this impact should be required.

Page 290, Table III-44 – This table reports that 760 acres of migratory bird habitat will be impacted by noise along the haul route. It does not appear that any mitigation is proposed for this impact. We recommend that additional mitigation be proposed on USFS lands and on the proponent's mitigation lands. One form that this mitigation could take would be enhancement of riparian habitat through planting and cattle exclusion.

Additional Fish and Wildlife Mitigation Not On USFS Lands – This EA pertains only to impacts and mitigation occurring on USFS lands. In addition to the mitigation recommended on USFS lands, WDFW is also recommending fish and wildlife mitigation on State and private lands. This has already occurred through our comments to the Draft Supplemental Environmental Impact Statement issued by the Washington Department of Ecology and will occur in more detail as we review the proponent's Aquatic Resources Mitigation Plan and Wildlife Habitat Plan.

Thank you for the opportunity to comment on this draft environmental assessment. We hope our comments are helpful in providing a more complete understanding of impacts to the fish and wildlife resource. We look forward to continued work with the United States Forest Service and the proponent toward a more complete fish and wildlife mitigation package.

Sincerely,

Chris Parsons

Chris Parsons
Regional Habitat Program Manager

Cc: Clyde Gillespie, Kinross Gold, Republic
Holly Cushman, Ecology, Yakima
Curt Leigh, WDFW, Olympia
Teresa Eturaspe, WDFW, Olympia

#104

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

January 9, 2006

Reply To
Attn Of: ETPA-088

Ref: 95-042-AFS

James Boynton, Forest Supervisor
Okanogan Valley Office
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Assessment (EA) for the **Buckhorn Mountain Access Road and Related Activities.** We are submitting comments applicable under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

EPA believes that information in the EA indicates there are potentially significant impacts to water quality, air quality and habitat on Forest Service lands that are not sufficiently described or mitigated to support a finding of no significant impact. These issues may best be addressed in the context of an environmental impact statement. Attached are EPA's detailed comments regarding these issues. Also, the EA relies on Washington Department of Ecology's Draft Supplemental Environmental Impact Statement (DSEIS) and incorporates the DSEIS by reference. EPA provided comments to the Department of Ecology on the DSEIS and we are including those comments that are relevant to the EA as well.

If you have questions or would like to discuss these comments, please contact Lynne McWhorter at (206) 553-0205, Patty McGrath, Regional Mining Coordinator at (206) 553- 0979 or me at (206) 553-1601. Thank you for the opportunity to provide these comments.

Sincerely,

Christine B. Reichgott

Christine B. Reichgott, Manager
NEPA Review Unit

Enclosure

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EPA Detailed Comments on Buckhorn Mountain Access Road and Related Activities Environmental Assessment

Page 52, Management and Mitigation: We appreciate that the EA discloses the potential effectiveness of the proposed mitigation measures. In some cases we have questions as to how the effectiveness was determined. These are described in the comments below related to mitigation.

Page 57 and 66, WD-1 and WQ-2: In the section on Management and Mitigation Measures, the EA states that water discharged into the infiltration gallery and from augmentation pipelines would meet state and federal water quality standards. However, there is no information presented in the EA to support this finding. There are no estimates of the expected water quality in comparison to baseline conditions and there is no description of the water treatment. Without this information the "high" effectiveness of this mitigation measure is questionable.

Page 57, WD-2: The EA states that the effectiveness of flow augmentation would be low-moderate. Further explanation is needed since reduction in stream flows could have significant impact on aquatic resources and both the Draft EA and Ecology's Draft SEIS relies, in part, on this mitigation measure to determine that impacts will not be significant.

Page 63, PFA-2: We are encouraged by the statement that the performance security would include sufficient funds for correcting water quality problems, as well as reclamation, revegetation, and removal of facilities. The EA rates the effectiveness of this measure as "high". However, the effectiveness is only high if the performance security is of an adequate amount to cover the potential costs. The EA should include an estimate for the performance security and a description of how the estimate was made in order to provide a basis for its determination that it would be highly effective.

Page 69, Wetlands and Streams: This section references Section 404 of the Clean Water Act, stating that "final details of wetland mitigation would be determined in the Corps of Engineers permits in consultation with the Forest Service on National Forest System land." The Army Corps of Engineers has stated they will process Nationwide Permits for the proposed direct impacts to wetlands and streams. As a result, the full scope of impacts to wetlands, riparian areas and aquatic resources may not be mitigated within the Army Corps permit process. Therefore, we recommend that a robust mitigation plan be developed to fully addresses all direct, indirect and secondary impacts to aquatic resources.

Page 69, WS-1: Culverts in Live Streams: It is unclear what and where the "small wetlands" that "would be constructed above culverts on live streams to compensate for wetlands lost from culvert replacement" means. We recommend that the EA clarify and describe method, location and proposed size of "small wetlands".

Page 82, Comparison of Alternatives: The EA states in Table II-7 that the potential is high for toxic materials added to the road surface to enter streams, riparian areas, and wetlands on Forest Service land for Alternative B, the Proposed Action. The high potential for toxics to affect

aquatic resources is a significant issue and should be mitigated in order to prevent fish kill and contamination of water resources in addition to the monitoring discussed.

Pages 82, Table II-7, Comparison of Alternatives: Alternative D appears to be the less environmentally damaging alternative from the aquatic resource impact standpoint (acres, linear feet of riparian areas, water quality, potential for toxic spills, etc.). For example, 19.2 acres of wetland riparian habitat conservation areas would be impacted from either Alternative B or B1, whereas Alternative D would not impact any. Alternative B or Alt B1 would likewise result in 3.9 miles of construction impacts within riparian habitat conservation areas, but only 150 linear feet would be impacted in the Alternative D alignment. We recommend that Alternative D be thoroughly evaluated and considered as the preferred alternative.

Page 81-88, Table II-7 Comparison of Alternatives: Rows 5 & 6 state that there will be no ("none") stream temperature changes in either Marias or Nicholson creeks. We are concerned that there is the potential for stream temperature changes with up to 1 foot of drawdown predicted. Temperature changes can be caused by hydroperiod alterations.

Hydroperiod changes should be evaluated relative to impacts to biological communities of wetlands, seeps/springs, streams, and riparian areas in this table. This information should be provided in terms of linear feet downstream for streams, and duration of draw-down. For wetlands the estimated change in hydroperiod and seasonality should be assessed to address changes in biotic condition and communities (vegetation, amphibians, macro-invertebrates including Odonata, etc.). Such changes in hydroperiod could also significantly impact *Platanthera obtusata* (a sensitive wetland plant in the orchid family) found in this area (page 303). The impacts to this species (and other the wetland flora in general) should be assessed more precisely relative to projected hydrologic changes associated with the infiltration gallery. Such analysis should be further discussed in the Aquatic resources section (pp. 134-145); the Draft EA does not provide enough information to support the statement that the water augmentation would minimize groundwater losses and result in little change of water availability to fish. There are not enough details as to when and how augmentation would occur to support this.

Pages 111-128, Hydrology: This section describes the effects from the project on the hydrology. A portion of this section also describes water quality effects. The impacts of water quality should be addressed in a separate stand-alone section. The water quality discussion in the draft EA is limited to the impacts from the road. Expected water quality from the infiltration gallery should also be discussed (see comments above) and the cumulative water quality impacts from the Buckhorn Mine during operations and closure should be described.

Page 118, Hydrology, Water Infiltration Gallery Effects: According to the draft EA, treated water discharged into the infiltration gallery would not exceed 40 gallons per minute (gpm) and excess water would be routed to the Roosevelt Adit or wetlands in Marias Creek to supplement surface water flows. The EA should disclose how often and during what times of year excess water over 40 gpm will occur and the magnitude of the excess flows. The EA should describe when and how much of the excess flow will be routed to, each, the Roosevelt Adit and Marias Creek and the impacts this will have on water quality and aquatic resources.

Page 131, Existing Conditions, Amphibians: Page 131 and the Biological Evaluation (pp. 146-152) discusses the presence and potential impacts to the Columbia spotted frog (*Rana luteiventris*), a Federal Candidate species. No other amphibian species are addressed under the heading "Amphibians." The section goes on to describe concerns about fish passage existing conditions in Marias and Nicholson Creek. More should be stated about the existing conditions of amphibian populations and potential impacts to them as a result of hydrologic changes from the infiltration gallery, impacts from haul road routes, and cumulative effects (the combined effects of the various projects).

Page 132, Existing Conditions, Wetlands, Seeps and Springs: The statement, "These wetlands do provide excellent habitat for Columbia spotted frogs, tree frogs, western toads, and long-toed salamanders" is made for both Marias and Nicholson Creeks. However, no evaluation of impacts to these amphibians is provided in the impact section and there is no discussion of Tiger salamander in the area. Please more fully evaluate impacts to amphibian populations.

Page 134-145, Aquatic Resources Environmental Consequences: The EA states that water from mine operations that would be infiltrated into the infiltration gallery, would "result in little change to water availability to fish." It is concluded that increased flows to Nicholson and Marias Creek from the infiltration gallery will have a positive effect. However, there is no analysis of the timing, duration or magnitude of flows that would be discharged to Nicholson and Marias Creek (or their headwater wetlands). We are concerned that changes in hydroperiod can have adverse affects biotic communities including wetland and stream functions. The EA focuses on downstream populations of fish, but does not address the potential change in hydroperiod that could impact other aquatic organisms and wetland plant communities.

Page 137, Alternative B & B1: Marias Haul Route (preferred alternative): The EA states that the existing sediment load from the road along Marias creek already impairs spawning habitat for fish in Marias Creek. Modeling predicts 34% increased sediment loading over the present condition. Mitigation to address this significant increase in sediment loading is implementation of various sediment detention methods. A detailed and enforceable monitoring plan is needed to ensure these measures function. However, the type, frequency and responsible party for monitoring is not explicitly described, nor the mechanism for enforcement such monitoring. We recommend that the EA include a commitment to develop a detailed mitigation and monitoring plan that is enforceable.

General Comment (relevant to statements in cumulative impact sections, such as p. 156 5th paragraph): We believe that the EA does not thoroughly assess cumulative adverse impacts. It should look at the proposed action (and respective alternatives) in the context of existing, past and reasonably foreseeable projects in the area. The EA provides a list of other activities yet defers to the DSEIS stating, "Any water flow change ....would be a direct or indirect effect of the Buckhorn mining project, which is discussed in the Washington State DSEIS." As a result there is no analysis in the EA of these cumulative effects. This approach does not achieve the goal of a cumulative impact analysis, which in essence is to evaluate the synergistic effects of all projects rather than defer to discussion of "direct and indirect" effects in other documents.

We recommend that the Forest Service complete a thorough cumulative effects analysis in the document.

Page 160, Air Quality, Environmental Consequences: The EA states that the proponent is proposing to use water and salts to aid in dust stabilization. We are concerned about the impacts to air quality from emissions and dust and the fact that the EA states that the airshed is currently "unclassified" because there is not sufficient information available to provide a classification and therefore, we are unsure at the ability of the project to determine the extent of air quality impact. We are also concerned of the use of water and magnesium chloride and their potential impacts to surface and ground water quality, soils, and vegetation. The EA discusses the use of salt in the winter for traction and the potential impacts to aquatic resources. However, the EA does not discuss the additional and cumulative impacts to aquatic resources, soils, or vegetation from salt use for dust suppression during other seasons. We recommend that the EA discuss the potential impacts from this activity as well as how impacts to air quality will be determined since the EA lacks site specific airshed data.

Page 167, Air Quality, Environmental Consequences: Table III-23 lists the criteria pollutants along with time, modeled concentration, ambient air quality standard, and percentage of ambient air quality standard. It appears that these predictions are for the project construction and operation only and does not include the cumulative affects of other activities such as prescribed fire. We recommend providing quantitative information regarding the cumulative impacts of mine operation (including transportation) along with other activities to determine potential impacts to air quality.

#113

STATE REPRESENTATIVE
19th DISTRICT
BRIAN BLAKE

State of
Washington
House of
Representatives

CAPITAL BUDGET
ECONOMIC DEVELOPMENT, AGRICULTURE & TRADE
NATURAL RESOURCES, ECOLOGY & PARKS
RULES

January 9, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As a member of the Washington State Legislature, I am writing to inform you of my support for the Buckhorn Mountain Project. I urge you in your role as Forest Supervisor of the Okanogan and Wenatchee National Forests to expedite issuance of the final Environmental Assessment (EA) and to approve the project as soon as possible.

The Buckhorn Mountain Project will bring jobs to an economically depressed part of our state. The Kettle River Operations is the largest private-sector employer in Ferry County. The company recently had to lay off a significant portion of its workforce because the mines in Ferry County have run out of ore. Bringing the Buckhorn Mountain Project on line will allow these workers to return to work plus generate new jobs. These jobs and the economic engine that will be created by this project can make a critical difference to Ferry County, which is teetering on the verge of bankruptcy.

If Ferry County is forced to declare bankruptcy, there will be an adverse ripple effect throughout the state. The State Legislature will have to find a way to assist the county in this financial crisis. As a state legislator, my responsibilities extend beyond the boundaries of my district when it comes to economic issues that have statewide importance. I am thus very anxious to see the Buckhorn Mountain Project approved so it can become a partial solution to the financial challenges facing this region.

I understand that there is significant public support for the Buckhorn Mountain Project in Okanogan and Ferry Counties. The redesigned project proposal for an underground mine and off-site processing at the existing Kettle River Operations eliminates the environmental concerns associated with the previous proposal for an open-pit mine.

I also understand that the use of public lands for this project is both modest and appropriate. The access roads, utility corridor, fencing, and infiltration basin that will be built on public lands administered by the U.S. Forest Service are necessary components of the mining project, which will occur on private land, and will have no significant impact on or off of public lands. There is thus no reason to delay the approval of this important project.

I appreciate the opportunity to provide comments about the proposed Buckhorn Mountain Project.

Sincerely,

Brian Blake
State Representative, 19th District

LEGISLATIVE OFFICE: 339 JOHN L. O'BRIEN BUILDING, PO BOX 40600, OLYMPIA, WA 98504-0600 • 360-786-7870
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CATHY McMORRIS
5TH DISTRICT, WASHINGTON

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January 9, 2006

Mr. James Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Ave South
Okanogan, WA 98840

Dear Mr. Boynton,

It is with pleasure that I express my wholehearted support for the Buckhorn Mountain Project and urge the Forest Service to issue its final Environmental Assessment and Record of Decision so this project may once and for all move forward.

I have observed the evolution of this proposed mine during my tenure as a former State Representative to the 7th Legislative District and currently as Congresswoman to the Fifth Congressional District. There is no project that has received greater scrutiny over the years by the permitting agencies and the public. I am confident that the proposed Buckhorn project was designed to address the permitting agencies' and publics' concerns from the former Crown Jewell project as well as create win-wins for the economies of both Ferry and Okanogan Counties. And I am pleased that the United States Forest Service's proposed action in its draft Environmental Assessment states very clearly its intent to approve this most important project.

There is no reason at this juncture to delay this project any longer and I would hope that the Okanogan/Wenatchee National Forests under your leadership continues to place this project as its highest priority for completion. The jobs this project will create are incredibly vital for the communities I represent.

Best Wishes,

Cathy McMorris
Member of Congress

CMC/ss

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

January 24, 2006

Reply To
Attn Of: ETPA-088

Ref: 95-042-AFS

James Boynton, Forest Supervisor
Okanogan Valley Office
1240 Second Avenue South
Okanogan, WA 98840

RE: Draft Environmental Impact Assessment for the Buckhorn Mountain Access Road and Related Activities

Dear Mr. Boynton:

The purpose of this letter is to clarify our positions as stated in the January 9, 2006, cover letter accompanying our comments on the Draft Environmental Impact Assessment (EA) for the project referenced above. In that letter, we stated that information in the EA indicates there are potentially significant environmental impacts on Forest Service lands that are not sufficiently described or mitigated to support a finding of no significant impact. We want to be clear that we acknowledge and respect that the decision to issue a finding of no significant impact (FONSI) or develop an Environmental Impact Statement (EIS) is within the purview and authority of the Forest Service. It is not our intention to prejudge the final Forest Service decision.

Our comment pertained to the existing draft document. Our specific comments attached to the letter identified sections of the draft EA that, as currently written, may not support a finding of no significant impact. These issues can be readily addressed as the document is finalized and we will provide any support or further information that you may desire to move forward.

Our January 9, 2006, letter also stated that the potential impacts may best be addressed in the context of an EIS. It is the Forest Service's responsibility to determine if an EIS is necessary. EPA's "Policy and Procedures for the Review of Federal Actions Impacting the Environment" does detail a multi-step process for EPA to work with another Federal Agency in those cases when EPA determines that the Federal Agency has not or does not plan to prepare an EIS on an action that the EPA believes could significantly affect the quality of the environment. We have not made such a determination in this case and we have not invoked that process. Our statement was a suggestion, not a determination.

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As a further point of clarification, the concerns EPA expressed may also be addressed with development and implementation of appropriate mitigation. If appropriate mitigation is included in the scope of the project, then the issuance of a FONSI would be appropriate.

I apologize for any confusion that our comment letter created. I trust that this letter addresses the concerns that you have raised and we have discussed. The public comment period is the only opportunity for EPA to formally comment on federal projects before the decision is made. We have learned that it is very important for EPA to be clear about conclusions that may be drawn from the draft NEPA document and about concerns as to the adequacy of effects disclosure. We are very supportive of the environmental programs of the Okanogan and Wenatchee National Forests and look forward to opportunities to continue working with you.

Sincerely,

Christine B. Reichgott

Christine B. Reichgott, Manager
NEPA Review Unit

cc: Karen Mollander, USFS

DEIS - #2

BOARD OF COMMISSIONERS
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Progress with Power
P.O. Box 1039

ROBERTA B. WELLER, MANAGER

NO. 1 OF FERRY COUNTY
REPUBLIC, WASHINGTON 99166

August 23, 2006

Forest Supervisor, James Boynton
Okanogan Valley Office
Attention Jan Flatten
1240 Second Avenue South
Okanogan, WA 98840

Dear Forest Supervisor Boynton:

We are again appreciative of being given the opportunity to provide our comments on the Buckhorn Project.

Ferry County P.U.D. No. 1 of Ferry County wholeheartedly supports the Buckhorn Project. Crown Resources and other participating entities have proven to be worthy and are good neighbors to all.

We ask that your review of the responses be quick and your approval of the Access Project, as submitted by Crown Resources, also be quick so that we may all move on and help the economy of our economically deprived counties.

Best regards,

Bobbi Weller

Roberta B. Weller
Manager

DEIS - #5

Confederated Tribes of the Colville Reservation

Natural Resources Department - Environmental Trust Soils Office

P.O. Box 150 Nespelem, WA 99155 Phone: (509) 634-2414 Email: skye.cooley@colvilletribes.com

Aug 29, 2006

To: Tom Flatten

From: Skye Cooley
Soil Scientist

Subject: Buckhorn Access Project

Please find enclosed geoscience references bibliography for Colville Reservation + surroundings.

SC

DEIS-14

STATE REPRESENTATIVE
19th DISTRICT
BRIAN BLAKE

State of
Washington
House of
Representatives

CAPITAL BUDGET
ECONOMIC DEVELOPMENT, AGRICULTURE & TRADE
NATURAL RESOURCES, ECOLOGY & PARKS
RULES

October 4, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As a member of the Washington State Legislature, I am writing to inform you of my support for the Buckhorn Mountain Project and to urge you to expedite issuance of the final Environmental Impact Statement (EIS) and to approve the Buckhorn Mountain Project as soon as possible.

The Buckhorn Mountain Project will bring jobs to an economically depressed part of our state. These jobs and the economic engine that will be created by this project can make a critical difference to Ferry County, which is teetering on the verge of bankruptcy.

Kettle River Operations is the largest private-sector employer in Ferry County. The company recently had to lay off a significant portion of its workforce because the mines in Ferry County have run out of ore. Bringing the Buckhorn Mountain Project on line will allow these workers to return to work plus generate new jobs.

If Ferry County is forced to declare bankruptcy, there will be an adverse ripple effect throughout the state. The State Legislature will have to find a way to assist the county in this financial crisis. As a state legislator, my responsibilities extend beyond the boundaries of my district when it comes to economic issues that have statewide importance. I am thus very anxious to see the Buckhorn Mountain Project approved so it can become a partial solution to the financial challenges facing this region.

I understand that the redesigned project proposal for an underground mine and off-site processing at the existing Kettle River Operations eliminates the environmental concerns associated with the previous proposal for an open-pit mine.

I also understand that the use of public lands for this project is both modest and appropriate. The access roads, utility corridor, fencing, and infiltration basin that will be built on public lands administered by the U.S. Forest Service are necessary components of the mining project, which will occur on private land, and will have no significant impact on or off of public lands

I appreciate the opportunity to provide comments about the proposed Buckhorn Mountain Project.

Sincerely,

Brian Blake

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DEIS-16

State of Washington
Department of Fish and Wildlife

Mailing Address: 600 Capitol Way N, Olympia WA 98501-1091, (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia WA

October 9, 2006

Mr. James Boynton, Forest Supervisor
United States Forest Service
Okanogan Valley Office
1240 Second Avenue South
Okanogan, Washington 98840

SUBJECT: BUCKHORN ACCESS PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT

Dear Mr. Boynton:

The Washington Department of Fish and Wildlife (WDFW) appreciates the opportunity to review and comment on the Draft Environmental Impact Statement (DEIS) for this project. We appreciate the changes that have been made to improve this project over the past year.

Specific Comments

Page 70, Erosion and Sedimentation – We remain concerned about the impacts of increased sedimentation from road construction, heavy vehicle traffic, and maintenance operations on the Marias Creek road. Approximately 65 percent of FR3550 is proximate to streams, cross-culverts added when the road is upgraded will flow into Marias Creek, and 5.3 miles of FR3550 and FR125 is generally about 50 feet away from Marias Creek. The project includes truck traffic of 100 trips per day (hauling ore outbound, hauling backfill inbound) with heavy trucks (30 to 32 ton loads) every day for at least 7 years. It would appear that maintenance of the gravel running surface and road crown alone for this kind of use will require many tons of new rock to be added to the road every year. Additional sediment could also be produced from the erosion on the cut and fill slopes, grading operations, and cleaning the ditches. It is our concern that 50 feet of separation between the road and creek is not enough to contain this material and prevent impacts to fish and fish habitat. Monitoring of turbidity in the stream and monitoring of the erosion control structures are proposed but no monitoring of the potential impacts to the stream is proposed. At the end of mining and haul road use, we recommend that the USFS or Crown/Kinross conduct monitoring of the stream habitat condition, with particular emphasis on sedimentation issues. The information derived from this monitoring should be provided to WDFW and other interested parties for review and used to direct needed stream restoration. The USFS or Crown/Kinross should prepare a draft stream restoration plan, with review by WDFW, and implement the plan.

Page 77, Wildlife and Fish Mitigation and Enhancement – As described in the DEIS, mule deer will be impacted directly by vehicle/deer interactions and indirectly by loss of winter range use due to avoidance of haul road traffic. Since a large portion of the area through which the haul road passes is identified and managed for mule deer winter range, we have recommended that additional mitigation measures be taken to further reduce this impact. Specifically, prescribed burning or timber-stand-improvement of decadent winter range areas would rejuvenate the browse, increasing its palatability and availability to mule deer. Careful siting of the treated areas could serve to draw deer from the haul road vicinity and potentially reduce vehicle/deer interactions. We have reached agreement with Crown/Kinross that they will provide $40,000 to be used for prescribed burns and/or timber stand improvements for these purposes on public and private lands in the area (see page 19 of the Habitat Mitigation Plan, Buckhorn Mountain Project, July 20, 2006). USFS lands will be eligible to receive some of these funds. We recommend that this information be included in the FEIS.

Page 77, Creation of Instream Habitat Improvements in Marias and Nicholson Creeks – With the recent issue that has arisen concerning the mitigation project at the mouth of Marias Creek, it may be necessary to re-visit the creation of instream habitat improvements in Marias and Nicholson creeks. If the creation of instream habitat improvements is chosen to replace the project at the mouth of Marias Creek, we recommend that structures be placed at the beginning of the mining project and again at the end of mining (during reclamation). This would alleviate the concern about the potential longevity of the projects and offset long-term and continuing impacts of this project.

Coordination is needed with WDFW on the design of the instream structures as these plans are further developed.

Page 78, Wildlife Road Closures – In our January 9, 2006, comments to the USFS Draft EA, we recommended additional road closures. It is our understanding that in subsequent discussions with USFS personnel there was a commitment to check the status of roads that have been closed in the past and "unofficial" roads that have been opened by the public and ensure that those roads are closed. This information should be added to this section.

Thank you for the opportunity to comment on this DEIS. We hope our comments are helpful in providing a more complete understanding of impacts to the fish and wildlife resource. We look forward to continued work with the United States Forest Service and the project proponent.

Sincerely,

Chris Parsons

Chris Parsons
Regional Habitat Program Manager

Cc: Kevin Eppers, Kinross Gold, Republic
Holly Cushman, Ecology, Yakima
Curt Leigh, WDFW, Olympia
Teresa Eturaspe, WDFW, Olympia

DEIS-22

Olympia Office:
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E-mail: morton.bob@leg.wa.gov

Washington State Senate

Senator Bob Morton
7th Legislative District

District Office:
3278 Pierre Lake Road
Kettle Falls, WA 99141
Phone: (509) 684-5132

October 5, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As the State Senator representing District 7, which covers the Buckhorn Mountain project area in Okanogan County and the Kettle River Operations in Ferry County, I am writing to urge the U.S. Forest Service, Okanogan and Wenatchee National Forest to issue the final Environmental Impact Statement (EIS) and to approve Alternative B (Crown Resources Corporation's proposal) for the Buckhorn Mountain Project as soon as possible. The Forest Service should consider the Buckhorn Mountain Project to be a very simple project proposal to use public lands for access to the project, a utility corridor, fences, and an infiltration gallery.

The EIS is a comprehensive document that clearly reveals this is an environmentally responsible project. As explained in the EIS, the Buckhorn Mountain Project will have minimal environmental impacts on and off of National Forest System lands. This document confirms my long-held belief that the Buckhorn Mountain Project can be built, operated, and reclaimed in a manner that is fully protective of the environment.

This area has waited far too long for this project to become a reality. We need the jobs and economic activity this project will provide. I cannot imagine a more thoroughly studied project. Without a doubt, it is one of the most carefully studied projects in the history of Washington State. The Buckhorn Mountain Project should not have to do any more studies or jump over any more hurdles. It should be approved without further delay.

We all remember the controversy over the Crown Jewel Project. Those days are gone. The vast majority of my constituents support the Buckhorn Mountain Project and are anxious to see this project developed. People understand that the revised project proposal for an underground mine and off-site milling represents a significant opportunity to develop a mine with the least possible impact upon the environment. It also represents the best opportunity to maintain and create high-paying jobs, which are sorely needed in this economically challenged part of Washington State. With the mine in Okanogan County and the mill in Ferry County, this project is a win-win for both areas.

Please do not let the few vocal detractors delay approval of this project. The company has gone the extra mile to work with the community and to address residents' concerns about traffic along the road. We should all recognize that there are a few anti-mining activists in the area who simply do not want to see this project or any mining project developed.

Putting the Buckhorn Mountain Project into production will allow the continued operation of the Kettle River Operation milling facility. In addition to being an essential component of the economy of the region, the Kettle River Operations is an excellent corporate neighbor that has contributed so much to the community for more than a decade. It is thus essential that this project be permitted as soon as possible in order for the recently laid-off Kettle River mill workers to be put back on the payroll and to allow the laid-off mine workers to start working at the mine in Okanogan County.

Once again, I wish to stress the importance of issuing the Final EIS and approving Alternative B for the Buckhorn Mountain Project as soon as possible.

Cordially yours,

Bob Morton

BOB MORTON
State Senator

DEIS-23

STATE REPRESENTATIVE
7th DISTRICT
BOB SUMP

State of
Washington
House of
Representatives

STATE GOVERNMENT
COMMERCE & LABOR
TECHNOLOGY,
TELECOMMUNICATIONS
& ENERGY

October 5, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As the elected representative for District 7, Position No. 1, I am writing to express my support for the Buckhorn Mountain Project. I urge you to issue the final Environmental Impact Statement (EIS) for the Buckhorn Mountain Project as soon as possible.

The Kettle River Operations recently had to layoff a substantial portion of its workforce and this has led to devastating financial consequences for many residents of the town of Republic. The current lack of employment opportunities in Ferry County is reaching a crisis level and as soon the permits for the Buckhorn Mountain Project are issued, we can get many of these people back to work.

The proposed use of National Forest lands for the access road, utility corridor, fencing, and the infiltration basin appear to be straightforward, necessary and appropriate. The EIS thoroughly examines all aspects of these facilities and reveals that there are very few environmental concerns associated with the Buckhorn Mountain Project either on or off of public land and I haven't been made aware of any substantial concerns that should lead to the delay of project approval.

Again, I urge the Forest Service to issue the Final EIS and to approve the Buckhorn Mountain Project as soon as possible. Further delays will prove to be extremely detrimental to my community and my constituents.

Sincerely,

Bob Sump
State Representative
7th Legislative District

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DEIS-24

STATE REPRESENTATIVE
24th DISTRICT
JIM BUCK

State of
Washington
House of
Representatives

NATURAL RESOURCES,
ECOLOGY & PARKS
RANKING MEMBER
TRANSPORTATION

October 5, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As a member of the Washington State Legislature, I am writing to inform you of my support for the Buckhorn Mountain Project and to urge you in your role as Forest Supervisor of the Okanogan and Wenatchee National Forests to expedite issuance of the final Environmental Impact Statement (EIS) and to approve the Buckhorn Mountain Project as soon as possible.

Although I do not represent the areas in which the mine and milling facilities are located, I believe this project is important to the entire state, which is why I am requesting that the permitting process be completed in the shortest amount of time possible.

The Buckhorn Mountain Project will bring jobs to an economically depressed part of our state. These jobs and the economic engine that will be created by this project can make a critical difference to Ferry County, which is teetering on the verge of bankruptcy.

The Kettle River Operations is the largest private-sector employer in Ferry County. The company recently had to lay off a significant portion of its workforce because the mines in Ferry County have run out of ore. Bringing the Buckhorn Mountain Project on line will allow these workers to return to work plus generate new jobs. Given the dire economic circumstances in Ferry County, these jobs are essential.

If Ferry County is forced to declare bankruptcy, there will be an adverse ripple effect throughout the state. The State Legislature will have to find a way to assist the county in this financial crisis. As a state legislator, my responsibilities extend beyond the boundaries of my district when it comes to economic issues that have statewide importance. I am thus very anxious to see the Buckhorn Mountain Project approved so it can become a partial solution to the financial challenges facing this region.

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I understand that there is significant public support for the Buckhorn Mountain Project in Okanogan and Ferry Counties. The redesigned project proposal for an underground mine and off-site processing at the existing Kettle River Operations eliminates the environmental concerns associated with the previous proposal for an open-pit mine.

I also understand that the use of public lands for this project is both modest and appropriate. The access roads, utility corridor, fencing, and infiltration basin that will be built on public lands administered by the U.S. Forest Service are necessary components of the mining project, which will occur on private land, and will have no significant impact on or off of public lands. There is thus no reason to delay the approval of this important project.

I very much appreciate the opportunity to provide comments about the proposed Buckhorn Mountain Project.

Sincerely,

Jim Buck

JIM BUCK
State Representative
24th Legislative District

DEIS-24

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
500 NE Multnomah Street, Suite 356
Portland, Oregon 97232-2036

9043.1
IN REPLY REFER TO
ER06/842

October 10, 2006

James Boynton
Forest Supervisor
Okanogan Valley Office
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Buckhorn Access Project, Okanogan and Wenatchee National Forests, Okanogan County, Washington. The Department does not have any comments to offer.

We appreciate the opportunity to comment.

Sincerely,

Preston A. Sleeger
Regional Environmental Officer

DEIS-41

STATE REPRESENTATIVE
21st DISTRICT
BRIAN SULLIVAN

State of
Washington
House of
Representatives

NATURAL RESOURCES,
ECOLOGY & PARKS
CHAIR

LOCAL GOVERNMENT

TRANSPORTATION

October 9, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

As a member of the Washington State Legislature, I am writing to inform you of my support for the Buckhorn Mountain Project and to urge you in your role as Forest Supervisor of the Okanogan and Wenatchee National Forests to expedite issuance of the final Environmental Impact Statement (EIS) and to approve the Buckhorn Mountain Project as soon as possible.

Although I do not represent the areas in which the mine and milling facilities are located, I believe this project is important to the entire state, which is why I am requesting that the permitting process be completed in the shortest amount of time possible.

The Buckhorn Mountain Project will bring jobs to an economically depressed part of our state. These jobs and the economic engine that will be created by this project can make a critical difference to Ferry County, which is teetering on the verge of bankruptcy.

The Kettle River Operations is the largest private-sector employer in Ferry County. The company recently had to lay off a significant portion of its workforce because the mines in Ferry County have run out of ore. Bringing the Buckhorn Mountain Project on line will allow these workers to return to work plus generate new jobs. Given the dire economic circumstances in Ferry County, these jobs are essential.

If Ferry County is forced to declare bankruptcy, there will be an adverse ripple effect throughout the state. The State Legislature will have to find a way to assist the county in this financial crisis. As a state legislator, my responsibilities extend beyond the boundaries of my district when it comes to economic issues that have statewide importance. I am thus very anxious to see the Buckhorn Mountain Project approved so it can become a partial solution to the financial challenges facing this region.

I understand that there is significant public support for the Buckhorn Mountain Project in Okanogan and Ferry Counties. The redesigned project proposal for an underground mine and off-site processing at the existing Kettle River Operations eliminates the environmental concerns associated with the previous proposal for an open-pit mine.

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I also understand that the use of public lands for this project is both modest and appropriate. The access roads, utility corridor, fencing, and infiltration basin that will be built on public lands administered by the U.S. Forest Service are necessary components of the mining project, which will occur on private land, and will have no significant impact on or off of public lands. There is thus no reason to delay the approval of this important project.

I very much appreciate the opportunity to provide comments about the proposed Buckhorn Mountain Project.

All My Best,

State Representative Brian Sullivan
21st Legislative District

DEIS-42
Extension Granted

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

October 13, 2006

Reply To
Attn Of: ETPA-088

Ref: 95-042-AFS

James Boynton, Forest Supervisor
Okanogan Valley Office
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

The U.S. Environmental Protection Agency (EPA) has reviewed the draft Environmental Impact Statement (EIS) for **Buckhorn Access Project** (CEQ No. 20060345) in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309, independent of NEPA, specifically directs EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Under our policies and procedures we evaluate the EIS document's adequacy in meeting NEPA requirements.

This draft EIS evaluates the no action alternative and four alternatives related to access to the Buckhorn mine site via Forest Service land, fence construction, and an infiltration system for disposal of treated water from the mine site. Alternative B is the Proposed Action; Alternative B1 is the Proposed Action with modifications; Alternative C was designed to use a different ore, supply, and employee access route; and Alternative D was designed to result in the least impacts to National Forest lands. The draft EIS identifies Alternative B1 as the Preferred Alternative.

Based on our review we have rated the Preferred Alternative EC-2 (Environmental Concerns-Insufficient Information). This rating and a summary of our concerns will be published in the *Federal Register*. A summary of the rating system we have used in conducting our review of the DEIS is enclosed for your reference.

EPA is pleased that the Forest Service prepared an EIS and we appreciate the consideration of the comments that we provided on the Environmental Assessment (EA). We feel that the EIS provides more detailed analysis for the public to review and allows for a better decision making process. EPA's main concerns with this document are the need to correct information about water resources and enforcement of monitoring and mitigation to be consistent with the latest information in the final Washington State Department of Ecology's State Supplemental Environmental Impact Statement (SEIS). The draft EIS relies on incorrect data in

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the draft SEIS document, which has been corrected in their final SEIS. We understand that the draft EIS was developed when the information in the draft SEIS document was the most current; however, since the publication of the draft SEIS, additional modeling and analysis was conducted. Ideally, the federal NEPA and State SEIS processes would have been coordinated so that a review of both documents could be conducted concurrently since they refer to one another. Unfortunately, since these documents were apparently not coordinated, the draft EIS contains incorrect information and analysis, which limits our ability to make relevant comments about its completeness or prediction of impacts. The other main concern is about monitoring/mitigation. Although the document addresses a number of mitigation measures to offset impacts to aquatic resources, it is unclear what enforcement mechanism would ensure their implementation. A final concern relates to the Preferred Alternative. We support an alternative that contains the least environmentally damaging components and at this point Alternative D appears to be the most protective.

Detailed comments from our review of the draft EIS are enclosed. Our comments mainly focus on those components that relate to water quality and aquatic resources. We believe a thorough review of the draft EIS would require the review of the final SEIS. Because the comment periods did not overlap much for both documents, this was difficult to accomplish. We do appreciate the time Forest Service staff provided to work with us to identify inconsistencies and discuss our concerns. We are reviewing the final SEIS and will be providing comments on that document to the Department of Ecology and we recommend that the Forest Service also consider these comments in the development of the final EIS.

Thank you for the opportunity to comment on the draft EIS. If you have questions or would like to discuss these comments, please contact Lynne McWhorter at (206) 553-0205, Patty McGrath, Regional Mining Coordinator at (206) 553- 0979 or me at (206) 553-1601.

Sincerely,

//s//
Christine B. Reichgott, Manager
NEPA Review Unit

Enclosures

EPA Detailed Comments on Buckhorn Mountain Access Road and Related Activities Draft Environmental Impact Statement (DEIS)

General Comments

EPA supports the development of an EIS for this project. Our review indicates that the draft EIS has many improvements compared to the Environmental Assessment. We appreciate that many of our comments were considered and incorporated in the draft EIS. We believe that the section on cumulative impacts, which is included in each resource section, contains more information and analysis that allows the reader to understand the impacts in a broader sense. We understand from speaking with Forest Service staff that the final EIS will include more analysis on water quality and quantity based on additional modeling and information that was received after the development of the draft EIS. We will look forward to reviewing final document with more accurate data included in the analysis and discussion. Also, we recommend that where the final EIS references the final Washington State Department of Ecology's Environmental Impact Statement (SEIS) document, that sections and page numbers be included. Currently, we are reviewing the final SEIS and will be providing comments on the aspects such as the more recent modeling that may be relevant to this draft EIS and the development of the final EIS.

Inconsistent information between the draft EIS and the final SEIS

The draft EIS refers to information and conclusions from the draft SEIS. We recommend that the final EIS incorporate information from the final SEIS and EPA's corresponding comments on the final SEIS. For example, between the draft SEIS and the final SEIS there are changes to the water quantity and quality predictions, additional National Pollution Discharge Elimination System (NPDES) outfalls identified, changes to the monitoring, additional wetlands impacts identified, additional mitigation measures, etc. Please update this information in the final EIS.

The final SEIS identifies four outfalls (001 through 004), while the draft EIS identifies only one NPDES outfall (from the infiltration gallery, which is outfall 001) and three augmentation locations. The draft EIS should use the same terminology as the final SEIS and clearly describe for each outfall, the location (including whether or not on USFS land), discharge characteristics, and effectiveness of treatment technology for meeting limits. If the outfalls are located on Forest Service land, then the draft EIS needs to discuss the impacts on water and aquatic resources from these discharges.

Based on our conversation with Forest Service Staff, it is our understanding that water discharged from the infiltration gallery would be required to meet the more stringent standard (e.g. drinking water versus surface water). Currently, the draft EIS states that water discharged from the infiltration gallery would be required to meet State ground water quality standards (pg 32 and 72). While the final SEIS states that water would be treated to meet surface water quality standards. The final EIS should reflect the correct information and discuss the treatment that will be utilized to ensure that standards are met.

The draft EIS rates flow augmentation (WQ-3) as moderately effective since flows would only be replaced during the growing season in some creeks and some flow loss in Myers Creek

would not be augmented (pg 73). However, the final SEIS states that flow augmentation would be highly effective. Flow augmentation can be highly effective if it occurs whenever needed and at a location, volume, and quality that is consistent with the flow that is being replaced. The final EIS needs to discuss whether or not this will occur and how (i.e., which permits will include requirements for flow augmentation).

Preferred Alternative

The draft EIS identified Alternative B1 as the preferred alternative. However, there is no detailed discussion regarding why Alternative B1 was selected instead of Alternative D which has fewer environmental impacts. We recommend that the final EIS describe the rationale for selecting Alternative B1. Moreover, from an aquatic resources standpoint it appears that Alternative D is the least environmentally damaging alternative. Alternative D would minimize or eliminate impacts to aquatic resources in the following ways with respect to Alternative B1:

a. avoid impacts to 3.9 miles of construction within riparian habitat conservation areas on NFS lands or right-of-ways,
b. avoid direct losses of 0.1 acres of riparian habitat and 0.1 acres of wetlands in the access road,
c. reduce the "High" potential for salts to enter streams, riparian areas and wetlands to "Low" potential, and
d. eliminate impacts to 16 threatened, endangered or sensitive plant species.

Mitigation/Monitoring

The draft EIS addresses a number of mitigation measures (including reclamation, mitigation and monitoring) to offset impacts to aquatic resources (referenced on page 143 and addressed on pages 52-98). These include direct and some indirect impacts to wetlands, seeps and springs, streams, and fisheries resources from the access road and hydrologic modifications associated with the infiltration gallery and mining operation, which we support. These would be strengthened with appropriate enforcement and monitoring mechanisms. A list of these is below.

a. augmenting stream flows (p. 73 WQ-3) to offset impacts to wetlands and streams in the headwaters of Nicholson and Marias Creeks (there would still be reductions in base flows and lag time losses in average base flows for both Nicholson and Marias Creeks, with de-watering of seeps and springs and reductions in wetland hydrology. See pp.156-160).
b. replacing culverts in Marias Creek (p. 76 WS-1) in a number of locations to facilitate fish passage and accommodate 100 year flood events.
c. proposed compensatory mitigation (p. 146 & p. 76 WS-2) for wetland losses associated with the access road (provided by 'constructing small wetlands above culverts on live streams to compensate for wetlands lost from culvert replacement').
d. livestock fencing.
e. wildlife and fish mitigation and enhancement (p. 77 – 783).
f. re-seeding and re-vegetation with native plant species (species lists or sources should be given to indicate clearly what will be re-seeded or re-planted).
g. potential for chemicals to reach streams, wetlands, RHCAs and riparian habitat is low if spill occurs

The draft EIS addresses cumulative impacts to aquatic resources for each alternative so that consideration is given to collective impacts from the activities on Forest Service land and private lands associated with the overall Buckhorn mine. However, compensatory mitigation for the combined impacts is not fully addressed in the draft EIS. We recommend addressing this in the final EIS.

There appears to be no clear enforcement mechanism to ensure that all of the mitigation measures and monitoring proposed will be implemented. For example, it is not clear how often, in what location, who is responsible for, and how (what biological parameters and water quality parameters) monitoring will be performed and how monitoring would trigger contingency or adaptive management measures. These details should be clarified in the final EIS to ensure that impacts will be mitigated.

In our comments on the draft SEIS that we referenced in our earlier comments on the EA, we recommended that Table S-2 be amended to incorporate references to each permit or agreement and correspond those to the specific mitigation measure and enforcement so that these requirements are clearly identified. We recommend that the final EIS incorporate a table that lists each of the mitigation measures, including reclamation requirements and monitoring and show which permits or mechanisms will be used to enforce these measures. This table should include which permit or permits each element will be tied to (e.g., whether the requirement will be in the NPDES permit, the Washington Department of Natural Resources reclamation plan/permits, Water Rights permit(s), Hydraulic Project Approval (HPA), or Army Corps of Engineers Nationwide Permit, or the Forest Services approved Plan of Operations, etc.).

Ideally, there would be one aquatic resources mitigation plan that includes all of the details of a typical compensatory mitigation plan, includes goals and objectives, performance standards, a monitoring plan and schedule, contingencies and adaptive management decision making processes, performance bonds, and reporting schedules. The plan could include the suggested 'cross-walk' table identifying which permits and enforcement mechanisms the plan is tied to. We believe it would also be helpful if the final EIS would reference the Aquatic Resources Mitigation Plan being developed by the company and show how this will be implemented.

The draft EIS does not discuss whether or not impacts to Gold Bowl Creek will be mitigated for. Please discuss this in the final EIS.

Impacts to Aquatic Resources

It is unclear what changes may occur to the aquatic environment from the location and operation of the infiltration basin. Please articulate these potential impacts in the final EIS.

Tables S-2 and II-7 provide a summary comparison of alternatives. The last line compares changes in base flow at individual stream stations. We recommend that this be followed by a line which summarizes the impacts to aquatic resources due to these changes in base flows.

The draft EIS predicts impacts in streams from salt treatment of roads to be less than 1 ppm chloride. This result is based on various chloride dilution estimates presented in the Environmental Consequences section. These estimates appear to be in error by up to five orders of magnitude. For example, the calculation that appears to be used in the draft EIS (p. 143) for estimating dilution spaced over one year for 7,960 gallons of magnesium chloride solution in a Marias Creek base flow of 110 gpm would result in about 30 ppm above a background of 3 ppm, not the 0.0001 ppm above background as indicated in the draft EIS. Similar errors of various orders of magnitude are apparent for the other chloride dilution calculations. Perhaps the actual calculations could be presented in an appendix for clarity. Moreover with regard to consistency with the state final SEIS, it should be noted that the magnesium chloride usage value in the draft EIS of 7,960 gallons per year contrasts with the usage value of 72,000 gallons per year in the Engineering Report referenced in the state final SEIS.

Performance Security

The draft EIS rates the performance security as a highly effective mitigation measure. However, no estimate of the performance security is provided. Without such an estimate compared to projected reclamation and post-closure treatment and monitoring costs, there is no basis for stating that the performance security will be effective. We understand that final security will be established during permitting; however, a list of actions that would be included in the security and estimated range of costs can and should be made at this stage to support the statements made in the draft EIS.

STATE REPRESENTATIVE
7th DISTRICT
JOEL KRETZ

State of
Washington
House of
Representatives

CAPITOL BUDGET
ECONOMICAL DEVELOPMENT, AGRICULTURE & TRADE
NATURAL RESOURCES, ECOLOGY & PARKS

October 10, 2006

Mr. James L. Boynton, Forest Supervisor
c/o Ms. Jan Flatten
Okanogan and Wenatchee National Forests
1240 Second Avenue South
Okanogan, WA 98840

Dear Mr. Boynton:

I represent District 7, Position No. 2 in the House of Representatives and the areas in which both the Buckhorn Mountain Project and the Kettle River Operations are located. I am writing as an elected official to stress the importance of the Buckhorn Mountain Project to this economically challenged region of Washington. On a more personal note, I live very close to the mine and the designated haul rote. It is critically important that the U.S. Forest Service/ Okanogan and Wenatchee National Forests issue the final Environmental Impact Statement (EIS) and approve Alternative B for the Buckhorn Mountain Project as soon as possible.

It is very clear from the recently issued Preliminary EIS that the Buckhorn Mountain Project will directly benefit Ferry and Okanogan Counties, and will indirectly benefit the rest of the State of Washington. This environmentally responsible project should be approved immediately so the workers recently laid off from the Kettle River Operations can go back to work and the new jobs associated with the Buckhorn Mountain mine in Okanogan County can become a reality.

My constituents have waited for well over a decade for this mining project to bring a measure of economic growth and prosperity to the region. Frankly, we are out of patience and see no reason why we should wait any longer.

In considering the Final EIS, it is hard to imagine that anything more could be said about the roads, utility corridor, fencing, and infiltration area that will be on public lands. The 474-page Preliminary EIS examines these facilities in great detail. Consequently, the Forest Service has properly taken into account all relevant factors and has examined all aspects of the proposed project. It is also evident that the proposed project will have minimal environmental impacts both on and off of National Forest System lands. Given the thoroughness of the Preliminary EIS, I would hope the Final EIS can be issued promptly.

The U.S. Forest Service should understand that there is a great deal of public support for the Buckhorn Mountain Project. Area residents recognize the need for this project and the benefits it will bring to Ferry and Okanogan counties. There is widespread awareness that the revised project proposal represents a significant opportunity to develop a mine with the least possible

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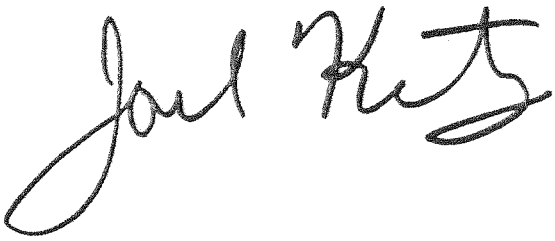
impact upon the environment. It also represents the best opportunity to maintain and create high-paying jobs, which are sorely needed in this economically depressed part of Washington State.

On a personal note, I live in close proximity to the project and designated haul routes and see nothing but positive contributions being made in our local neighborhoods. Once again, I strongly urge the U.S. Forest Service/ Okanogan and Wenatchee National Forests to issue the Final EIS and approve Alternative B for the Buckhorn Mountain Project as soon as possible.

Sincerely,



Joel Kretz
State Representative
7th Legislative District