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Department of
Agriculture

Forest
Service

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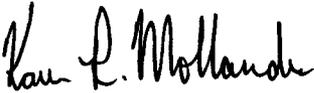
Date: October 5, 2007

Dear Buckhorn Access Project Planning Participant:

Thank you for all the comments I received on the Buckhorn Access Project 40 CFR 1502.9(c) and INFISH MM-2 findings. I considered all of the comments I received, and have revised the proposal to require the pipeline to be installed under the surface of the Riparian Habitat Conservation Area (RHCA) using directional drilling equipment operated outside of the RHCA. This alternate method of installation was proposed to the Forest Service by Crown/Kinross in their comments on the findings document I circulated to the public in late August. This requirement will avoid all surface disturbance to the RHCA. Based on this findings document I have determined that a Supplemental Environmental Impact Statement is not required, and the project will be implemented as modified by the above requirement.

I have posted my final findings on our website at: www.fs.fed.us/r6/oka/projects for your convenience. If you do not have access to the internet or otherwise wish to receive a hard copy of the findings, please contact Environmental Coordinator Jan Flatten at (509) 664-9239, or at the above address.

Sincerely,

for 

REBECCA LOCKETT HEATH
Forest Supervisor

Attachment



Buckhorn Access Project
40 CFR § 1502.9(c) and INFISH
Standard and Guideline MM-2 Finding
October 5, 2007

NEED: Maps produced during the preparation of the Buckhorn Access Project Final Environmental Impact Statement (“FEIS”) did not show the pipeline running from the Buckhorn Mountain Project water treatment plant to the water infiltration gallery crossing Gold Bowl Creek, an intermittent stream later determined to be an Inland Native Fish Strategy (“INFISH”) riparian habitat conservation area (“RHCA”) at the site of the crossing.¹ Accordingly the analysis presented in the FEIS, and the decision-making documented in the Record of Decision (“ROD”), did not address the environmental impacts to the Gold Bowl Creek RHCA or the possible alternatives to locating the pipeline within the RHCA.

The possibility that the pipeline might cross an RHCA was first raised with the Forest Service Interdisciplinary Team (IDT) leader for the Buckhorn Access Project in the process of assisting counsel in preparing the defense of this litigation. When the IDT leader learned the pipeline might cross an RHCA, she consulted with Okanogan-Wenatchee National Forest Deputy Forest Supervisor Karen Mollander. Ms. Mollander requested that the Project Hydrologist review the site on the ground to determine if in fact the draw to be crossed by the pipeline is an RHCA. After visiting the site, the Project Hydrologist confirmed that the pipeline will cross the Gold Bowl Creek RHCA at the location shown in Figures 1 and 3 below.

Figure 1: Gold Bowl Creek Intermittent Stream Crossing at Decommissioned Road. Surface water flow was absent in this reach of the stream in August 2007.



Source: Bennett, August 1, 2007

¹ RHCAs include “traditional riparian corridors, wetlands, intermittent streams and other areas that help maintain the integrity of aquatic ecosystems.”

Because the project IDT leader was not aware the pipeline crossed an RHCA, neither the FEIS nor ROD made a finding under INFISH standard and guideline MM-2. MM-2 requires that all roads, facilities and other mining structures be located outside of RHCAs unless there are no other alternatives. The pipeline to the infiltration gallery is subject to this requirement because transporting water out of the mine site is necessary for mining operations.

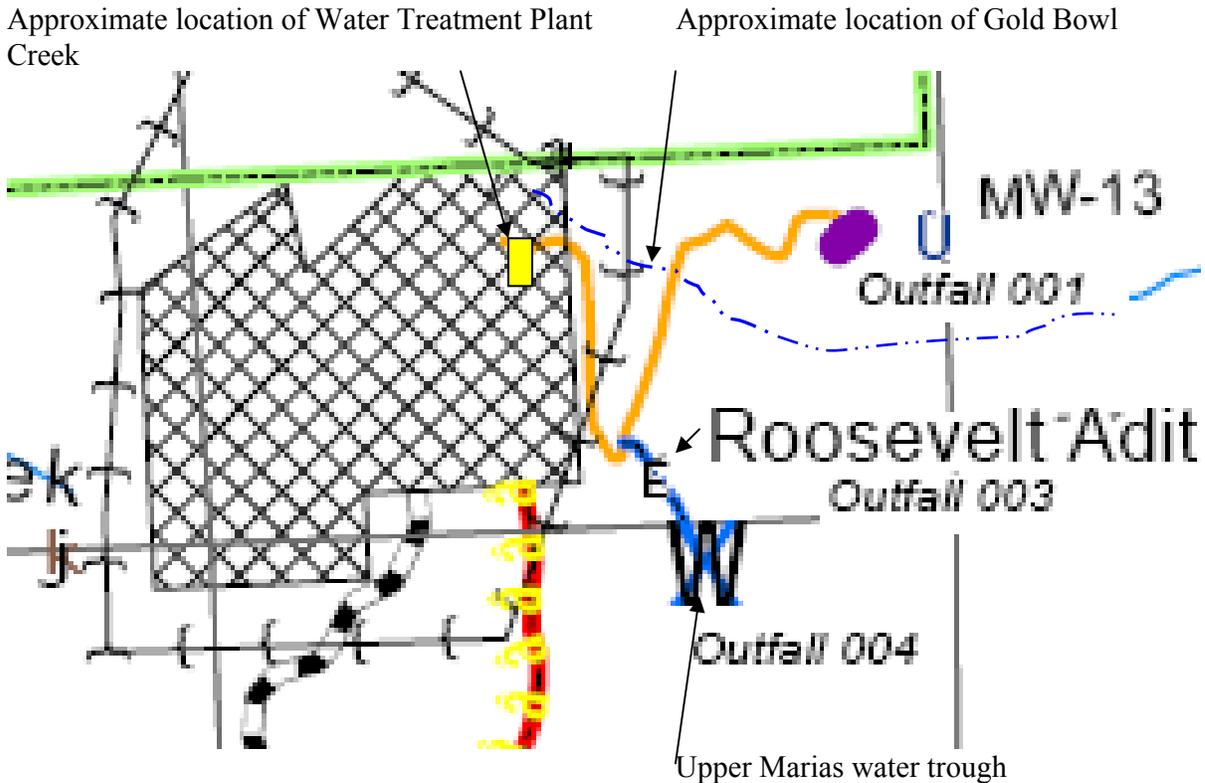
The agency's determination that the pipeline crosses an RHCA also raises the prospect of a Supplemental Environmental Impact Statement (SEIS). The Council on Environmental Quality's implementing regulations for the National Environmental Policy Act at 40 C.F.R. § 1502.9(c) require an SEIS when there is a substantial change in the proposed action relevant to environmental concerns, or if significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts arise.

This report presents the analysis and findings necessary to determine whether an SEIS is required and those required by MM-2.

BACKGROUND: The ROD authorizes the use of National Forest System ("NFS") lands for access to a mine site on land patented by the proponent, Crown Resources Corp. ("Crown"), and for other uses reasonably incident to Crown's mining operation. It approves road construction and reconstruction, a water infiltration gallery and pipeline, a project fence, utility lines, water monitoring stations, and mitigation projects including water augmentation pipelines. Most of Crown's mining will take place below the current groundwater table. During mining operations, ground water will be pumped out of the mine, stored, and then piped to the water treatment plant, also on Crown's land, where it will be treated to water quality standards to be set by the State of Washington in a National Pollutant Discharge Elimination System ("NPDES") permit. After treatment, the water will be conveyed via a pipeline to an infiltration gallery on NFS lands, and to two water augmentation sites on NFS lands, one at Roosevelt Adit and the other in the upper Marias drainage (Figure 2). The infiltration gallery will dispose of treated water so that water does not filter back into the mine. It will also mitigate the impacts of the mine to the hydrologic system on NFS lands by returning water to the groundwater system below the infiltration gallery. The two water augmentation sites will also mitigate the impacts of the mine by returning water to the surface water system.

As was explained in the FEIS, and in a separate report, the infiltration gallery will be built at the only location that has adequate soils, meets the other siting requirements, and which allows for effective mitigation. FEIS at 26. The infiltration gallery itself is not within an RHCA. FEIS at 115. The water treatment plant, already under construction on Crown's private land, is directly east of the infiltration gallery. As Figure 3 shows, the Gold Bowl Creek RHCA runs at a diagonal between the water treatment plant and the infiltration gallery. As a result, any route for the pipeline on National Forest System (NFS) lands would require the pipeline to cross the RHCA at Gold Bowl Creek.

Figure 2: Location of the water treatment plant (yellow rectangle) on private lands (cross hatches) and the infiltration gallery on NFS lands (purple area), with the water conveyance pipeline between them (gold line) and pipeline to water augmentation sites (solid blue line) at Roosevelt Adit (Outfall 003) and upper Marias water trough headwaters (Outfall 004). The location of Gold Bowl Creek is estimated with a dashed blue line – actual location is subsurface east of the pipeline crossing. North is at the top of the figure.



Source: Alternative B1 map, Buckhorn FEIS Summary, edited for this document

The FEIS evaluated a proposed pipeline, which would carry water from the water treatment facility to the infiltration gallery along a decommissioned road bed (formerly portions of Forest Roads 3575-127 and 3575-142) that was reclaimed about five years ago as part of the reclamation for the Crown Jewel Project. In August 2007, Project Hydrologist Mel Bennett inspected the location where the pipeline crosses the Gold Bowl drainage, and determined that it is an intermittent stream crossing. He found that it appears to meet the definition of the American Meteorology Society, which defines an intermittent stream as a stream that carries water a considerable portion of the time, but that ceases to flow occasionally or seasonally because bed seepage and evapotranspiration exceed the available water supply. Segments of Gold Bowl Creek, including the location where the pipeline will cross, had no flow when visited this August. As the summer progresses into early fall, additional segments of the stream will likely have no water flow.

The pipeline from the water treatment facility to the infiltration gallery will be approximately 4,650 feet long. FEIS at 35-36. The pipeline will be 4 inches in diameter and will rely on gravity to convey a maximum of 40 gallons per minute (gpm) of water to the infiltration

gallery (a 4-inch pipe can handle up to 100 gpm at 1% slopes). The pipe will be buried 4-5 feet below the surface to protect it from freezing. A Technical Memorandum prepared for Crown calculates the width of the surface disturbance necessary to install the pipeline as about 40 feet using a conventional trenching machine, however this width included construction of a road along the pipeline. The analysis done for this report led the Forest Service to eliminate from the project that portion of the road which would have crossed the RHCA. Additionally, in response to the circulation of the draft version of this document, Crown submitted comments stating that Crown has now determined it is practicable and reasonable to use directional drilling equipment to install the pipeline at its planned depth under the surface of the RHCA. This will eliminate any impacts to surface resources inside the RHCA. The analysis below has been revised to incorporate this design change. Drilling of the pipeline under the surface of the RHCA is expected to last a few days, with the entire pipeline taking 4-6 weeks to complete. To minimize future disturbance, the majority of the pipeline, including the portion crossing under the surface of the RHCA, will be left in the ground after final reclamation (FEIS, page 61).

ENVIRONMENTAL CONSEQUENCES OF PIPELINE RHCA CROSSING:

Aquatics

The pipeline will have no effect on Inland Native Fish or any other fish because fish do not reside in either the Gold Bowl Creek intermittent stream or the larger upper Nicholson Creek drainage, of which Gold Bowl Creek is a tributary. FEIS at 194. Gold Bowl Creek goes subterranean shortly below the pipeline crossing location. Based on past records, it generally does not flow at the pipeline crossing location from five to seven months out of the year. Amphibians may be disturbed by construction activities outside of the RHCA, but construction across the RHCA is likely to take less than a day, and amphibians, if present, can re-colonize. No aquatic macroinvertebrates will be disturbed since no surface activities would occur inside the RHCA. No sediment will be produced in the stream channel since no surface disturbance inside the RHCA will occur. Ongoing operation of the pipeline is not expected to have any effect on the RHCA or the stream since the pipeline will be buried at least 4-5 feet underground. Even if the pipeline were to somehow break or leak, the water released will meet water quality standards set by the NPDES permit, so no impacts to aquatic life are expected. FEIS at 212. Reclamation will not impact the RHCA or stream in any way since this section of pipe will remain buried and will not be reclaimed.

Soil/Hydrology

The location where the pipeline will cross the Gold Bowl RHCA is slightly entrenched in the swale and is apparently fed by shallow ground water seepage. No flow measurements were made, but the flow was estimated to be 1-2 gallons per minute in late July and early August based on visual inspection by the Project Hydrologist. A segment of the stream at the proposed pipeline crossing had no surface water flow, although the wet soil provides evidence of shallow ground water (see Figure 1).

No construction activities will occur inside the RHCA, so no surface disturbance or vegetation removal will occur inside the RHCA and no sedimentation is expected. The 4 inch pipeline will be installed perpendicular to the downslope direction of groundwater flow through the RHCA, so the effect to ground water flow will be neutral because the pipe will

not route groundwater out of the RHCA and groundwater will continue to move down gradient above and below the pipe. There will be no effect on Gold Bowl Creek and its RHCA from operation of the pipeline. Shallow ground water flow will continue below the stream channel. Vegetation will continue to have adequate water to sustain the plant populations. No wetlands adjacent to the stream will be impacted. Cumulative effects resulting from operation of the pipeline are already described in the FEIS and do not change as result of the pipeline being located under the surface of an RHCA. FEIS at 177-87.

Air Quality

Impacts to air quality from the pipeline crossing are expected to be very minor. There will be an insignificant short-term increase in air pollution emissions during pipeline construction. Published data shows that about 90% of the dust from construction and road use is redeposited within 50 meters of its source (Watson et al., 1996, Gebhart et al., 1999, FEIS at 222 and C-6). Minor amounts of dust may settle in the RHCA from construction activities outside of the RHCA and any dust landing in the RHCA may be washed into the stream but will settle out shortly downstream where Gold Bowl Creek goes underground. Dust impacts should not physically affect the RHCA since any dust washed off vegetation should be deposited in the sections of streams where flow is not on the surface. All of these impacts are consistent with those reported in the FEIS.

Noise and Recreation

The pipeline area does not receive significant recreation use. FEIS at 256. The presence of an RHCA has no direct bearing on recreation, thus the impacts reported in the FEIS from construction of the pipeline are not changed by the discovery that the pipeline crosses an RHCA.

Scenic Resources

All activities at the pipeline crossing will be obscured from view from any open road. Some low vegetation will be removed from the crossing which will revegetate within a few years. The presence of an RHCA has no direct bearing on scenic resources and the impacts reported in the FEIS will not change.

Wildlife

The location of the pipeline under the surface of the RHCA will not increase impacts to wildlife beyond those already analyzed in the FEIS. Because the pipeline will be directionally drilled from outside of the RHCA, there will be no impact to riparian habitat or its dependent species. The Okanogan National Forest Land and Resource Management Plan (LRMP, 1989) designates ruffed grouse as the management indicator species for terrestrial riparian wildlife. Ruffed grouse and other terrestrial riparian wildlife may be temporarily disturbed by noise and human presence during installation of the pipeline adjacent to the RHCA. The disturbance near the riparian area is only expected to last a few days, and because the pipeline will be installed 4-5 feet underground, operation of the pipeline will have no continuing effect on terrestrial riparian wildlife species. No vegetation will be disturbed inside of the RHCA. Terrestrial riparian species disturbed by activities adjacent to the RHCA will have plenty of adjacent habitat and construction activities adjacent to the

RHCA will only last a few days. Because no vegetation will be disturbed these species can re-colonize immediately after construction activities are completed. Some disturbance of these species may occur on an infrequent basis during routine maintenance of the pipeline. As was explained above, the Forest Service's consideration of the RHCA led to the elimination of the segment of road proposed along the riparian area. Therefore, there will be no motorized use of any kind along this section of pipeline, nor will there be winter plowing or use by snowmobiles. This will reduce the winter disturbance to wildlife in this area, and it will prevent the compaction or removal of snow that would have provided access to wildlife that are not adapted to deep snow conditions. Because no vegetation would be disturbed inside the RHCA, all existing down wood inside the RHCA will be retained.

Forest Vegetation/Botany

Construction of the pipeline across under the surface of the Gold Bowl Creek RHCA will not impact forested vegetation inside the RHCA in any way. All trees will be retained because no surface disturbance will occur inside the RHCA. The pipeline and pipeline road location were fully surveyed during botany field surveys prior to signing the ROD, and the riparian area was surveyed again in August 2007. No threatened, endangered, sensitive, or cultural plants were found along the route, including within the RHCA. No differences from the impacts reported in the FEIS for Forest Vegetation and Botany will occur.

Range/Noxious Weeds

Construction of the pipeline under the surface of the Gold Bowl Creek RHCA will not affect range or noxious weeds in any way not already analyzed in the FEIS. No surface disturbance to create seedbeds will occur inside the RHCA. This site has received past inspections and effective weed treatments have occurred in the vicinity. As noted on pages 68-69 of the FEIS, the proponent will be required to wash all off-road equipment, including the equipment used for installation of the pipeline adjacent to the RHCA, to ensure that the equipment is noxious weed and seed free. Noxious weed free seed mixtures will be used to promptly reclaim the disturbed area.

Inventoried Roadless Areas/Unroaded/Undeveloped Character

The crossing under the surface of the RHCA is not in an Inventoried Roadless Area ("IRA") or an area with unroaded or undeveloped character, so no impact to those areas will occur.

Cultural Resources

The pipeline and pipeline road location were fully surveyed in the field and no cultural resources were found. The fact that this pipeline crosses under the surface of an RHCA is not relevant to cultural resource impacts and no impacts beyond those analyzed in the FEIS will occur.

Transportation

The pipeline route does not affect any transportation routes, except that a part of the road along the pipeline will now be eliminated. This road was only available for use by the proponent, so no differences in effects predicted in the FEIS will occur. No road construction will occur within the RHCA.

Other Disclosures

The pipelines' crossing under the surface of the RHCA will have no socio-economic effects, and will not affect social groups, civil rights, environmental justice, American Indian Rights, prime lands, wild and scenic rivers, short-term uses or long-term productivity, potential mine expansion, or energy or conservation requirements, and will not conflict with other plans, policies or controls for the same reasons described on pages 437-448 of the FEIS.

Summary of Impacts

By crossing under the surface of a very small intermittent stream, the pipeline to the infiltration gallery will not result in any surface disturbance inside the RHCA. No fish reside within the stream crossed or the upper portion of the larger stream to which it is a tributary. Impacts to Aquatics, Soil, Hydrology, Wildlife, Air Quality, Noise, Recreation, Scenery, Forest Vegetation, Botany, Range, Noxious Weeds, IRAs, Undeveloped/Unroaded Areas, Cultural Resources and Transportation will not differ from those already analyzed in the FEIS. No irreversible or irretrievable effects will occur because no vegetation will be disturbed within the RHCA. Based on the MM-2 analysis below, the RHCA crossing is an unavoidable effect, however as noted above, impacts to the RHCA have been avoided.

40 CFR § 1502.9(c) FINDING:

The Council on Environmental Quality's Implementing Regulations for the National Environmental Policy Act [40 CFR § 1502.9(c)] require an SEIS when substantial changes are made to the proposed action that are relevant to environmental concerns, or when there are significant new circumstances or information relevant to the environmental concerns that bear on the proposed action or its impacts.

The discovery that a planned pipeline will cross an RHCA does not constitute a change to the proposed action. The only change to the proposal resulting from that discovery is that a portion of the pipeline access road that would have run through the Gold Bowl Creek RHCA is being dropped from the project, and the pipeline will now be installed under the surface, eliminating all surface disturbance inside the RHCA. These changes lessen the overall environmental impacts of the project, and eliminate any impacts inside the RHCA.

This analysis has shown us that the discovery that the pipeline crosses an RHCA has not raised any significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. The RHCA to be crossed by the pipeline is an intermittent stream that has already been previously disturbed by a road constructed and recently decommissioned at the crossing location. The stream contains no fish and the environmental effects to the RHCA have been eliminated by requiring the pipeline to be installed from outside of the RHCA, and under the surface. Once the pipeline is installed, no

ongoing effects from the use of the pipeline will occur. Cumulative effects relating to water quality and quantity from operation of the pipeline will be as already described in the FEIS. Reclamation of the pipeline will not result in further disturbance of the RHCA because piping will only be removed where it comes to the surface at the top and bottom of the pipeline, and at manholes, all locations that are well away from the RHCA. FEIS at 61.

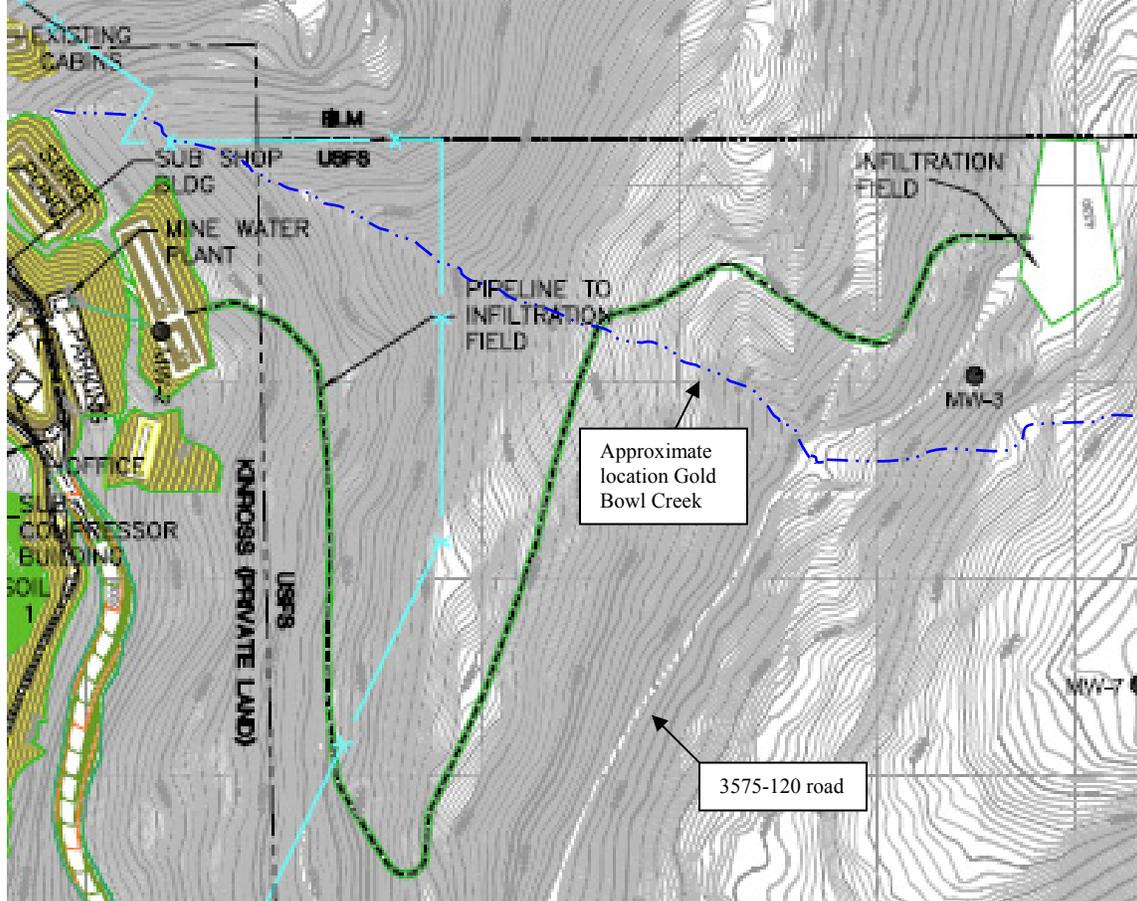
Based on the preceding analysis, I have determined that this additional information does not require preparation of an SEIS.

MM-2 ANALYSIS

As noted above, INFISH's standard and guideline MM-2 requires that mining roads, structures and other facilities be located outside of RHCAs unless no other alternatives are available.

As was explained above, the proposed location for the infiltration gallery is the only feasible location and lies directly east of the water treatment plant, already under construction on private land. Gold Bowl Creek runs on a diagonal line between the two. As a result, a pipeline across NFS lands between the two facilities must cross the Gold Bowl Creek RHCA (see Figure 3 below). The IDT reviewed other potential pipeline routes, including several which would venture off NFS lands, to determine if any other alternative routes are reasonably feasible (see below). The IDT also looked at the possibility of avoiding the pipeline altogether by trucking water to the infiltration gallery. Neither trucking nor any of the alternative routes proved reasonably feasible.

Figure 3: Topographic Map Showing Location of Water Treatment Plant, Pipeline and Infiltration Gallery. Gold Creek below 3575-120 road is a rough estimate.



Source: Washington State Department of Ecology, Environmental Protection Performance Security Plan

Alternatives To The Approved Pipeline Route:

Direct Route from Water Treatment Plant to Infiltration Gallery

The FEIS considered an alternate location for the pipeline which went in a straight line from the water treatment plant to the infiltration gallery, rather than following the old decommissioned road grade. However this route would also have required crossing the Gold Bowl Creek RHCA. As noted in the FEIS, on pages 26-27, this pipeline route was not selected because it would be located on steeper slopes and require ground disturbance of an area that had not previously been disturbed. Operation of the equipment needed to install the pipeline on these steep slopes would be dangerous and difficult.

Disposal of All Mine Water on Private Lands (no infiltration gallery or pipeline)

The FEIS considered the option of requiring all treated water to be disposed of in the headwaters creeks on Crown’s private lands with no infiltration gallery or pipeline. As discussed on page 27 of the FEIS, this would have resulted in most water quickly running downstream without being retained in the ground to provide baseflows. Some of this water

also would return to the underground mine and would have to be re-pumped because the headwater streams on private land are within the mine's cone of depression.

Discharge of All Water at Roosevelt Adit

The FEIS considered the option of requiring all treated water to be disposed of at Roosevelt Adit. As discussed on page 27 of the FEIS, doing so at peak flows would have caused detrimental erosion, possibly damaging wetlands, or even re-routing surface flow down Marias Creek. Additionally Roosevelt Adit itself is in an RHCA, so discharging all waters there would not avoid the placement of a pipeline in an RHCA.

Use of Private Lands to Cross RHCA Before Reaching NFS lands

The proclaimed National Forest Boundary and NFS lands end just north of where the intermittent Gold Bowl Creek crosses onto NFS lands from Crown's private land (see Figure 3 above). The IDT looked at the potential for the pipeline to cross Gold Bowl Creek on private lands so that the pipeline would enter NFS lands on the north side of the intermittent stream. Figure 3 shows the steepness of ground on the North Side of Gold Bowl Creek (the closer the contour lines, the steeper the ground).

Using private lands for the initial part of the pipeline would require installation of the pipeline on NFS lands on an undisturbed, steep, rocky hillside just outside of the RHCA boundary (See Figure 4 below). Based on a report by McGilvery (2007), installing the pipeline the required 4-5 feet below ground level for winterization would necessitate blasting through rock on NFS lands. Because of the proximity of the potential pipeline to Gold Bowl Creek and the steepness of slopes between the creek and the pipeline (estimated by McGilvery to be between 25-65% with sustained slopes of 60%), it is likely that much of the blasted material would wind up in the intermittent Gold Bowl Creek which would be inconsistent with INFISH's objective to avoid sidecasting into RHCAs. Moreover, the steep terrain makes use of the excavator very difficult and dangerous. In any event, this route still requires the pipeline to cross Gold Bowl Creek on private lands. Therefore any impacts of the crossing itself would merely be displaced onto private lands, and any sediment from the pipeline installation would wind up downstream on NFS lands when Gold Bowl Creek is flowing.

Figure 4: Steep, rocky ground where the potential alternate pipeline would need to be located to avoid RHCA



Source: McGilvery, August 2, 2007

Use of Private Lands to Cross RHCA Before Reaching BLM and NFS lands

The land just north of the National Forest boundary and Crown’s private land is managed by the United States Department of Interior, Bureau of Land Management (“BLM”). At least in theory, the pipeline could be routed onto BLM land before crossing back over on the NFS lands to avoid introducing blasting material into the Gold Bowl Creek. Not only does the FS lack jurisdiction over activities on BLM land, but also the entire slope south of BLM land is rocky and very steep (slopes of 25-65%, sustained slopes of 60%), so this alternative faces the same feasibility problem as previously discussed alternatives – equipment required for pipeline installation would be difficult to operate and dangerous to use on these steep slopes. Moreover, this route would still require the pipeline to cross Gold Bowl Creek on private lands. Therefore, any impacts of the crossing itself would merely be displaced onto private lands, and any sediment from the pipeline installation would wind up downstream on NFS lands when Gold Bowl Creek is flowing.

Requiring Water from the Water Treatment Plant to be Trucked to the Infiltration Gallery

Another alternative considered would require the proponent to truck the water from the water treatment plant to the infiltration gallery. The pipeline to the water augmentation sites could

still be constructed since they are mitigation, not mining, structures, and do not cross Gold Bowl Creek (see discussion below on water augmentation sites). Due to the narrow roads, steep grades, and tight corners on the existing roads between the site and the points of discharge, the water would be hauled in trucks with approximately 4000 gallon capacity. That would mean at least 7, and perhaps as many as 10, truck trips per day, 365 days per year. It would take approximately 12 hours to accomplish 7 round trips, or 17 hours to accomplish 10 trips per day.

Leased water trucks with an operator cost about \$60/hour according to Crown, so the total cost of water haul to the infiltration gallery over the life to the mine would be about 1.8-2.6 million dollars. That figure does not include the additional capital cost for water holding tanks, road work and power and communications needs, which are likely to offset any savings from not constructing the portion of the pipeline from the junction with the Roosevelt Adit pipeline to the infiltration gallery. If water were hauled to the Roosevelt Adit and upper Marias wetland, the cost would increase by about one million dollars over the life of the project because of the length of time the State of Washington is requiring water augmentation mitigation.

In addition to increasing Crown's costs substantially, trucking would increase the environmental impacts on NFS land. Storage tanks and unloading areas would need to be built on NFS lands to make the systems work. To accommodate the trucks, Forest Road 3575-120, which crosses the RHCA, would have to be upgraded from its junction with the new mine access road to the infiltration gallery. Because of the volume of traffic necessary for this alternative, more intervisible turnouts would be needed, which would require additional ground disturbance, including road surfacing and ditch improvement within the RHCA, along with additional road grading at sharp corners outside of the RHCA. Further, access would need to be established to the tank located above the infiltration gallery (and at the Roosevelt Adit and upper Marias wetlands if the pipeline to those locations was not built). All roads would need to be maintained year round including plowing in the winter and dust abatement in the summer. Further, the additional traffic would also increase noise and fugitive dust impacts to the residents along that route, and would increase disturbance impacts to wildlife.

Burying the Pipeline in Existing Roads

Another idea considered for the pipeline location was to follow existing roads. However, all potential routes would still have to cross the RCHA at Gold Bowl Creek on the 3575-120 road further below the route selected in the 2007 ROD.

Directionally Drilling to Install the Pipeline Under the Surface of the RHCA

As a result of their review of these findings, Crown suggested the alternative of avoiding all surface impacts to the RHCA by using directional drilling equipment to install the pipeline under the surface of the RHCA at the location selected in the ROD to eliminate any trenching excavation or other surface disturbance inside the RHCA. All equipment will be operated outside of the RHCA.

Water Augmentation Sites

As was discussed in the FEIS a portion of the water from the water treatment plant will be delivered to water augmentation sites at the Roosevelt Adit and the headwaters of Marias Creek. FEIS at 34-35. These sites are not alternatives to the infiltration gallery because they

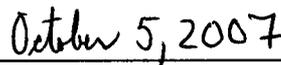
cannot accept the volume of water dispensed at the infiltration gallery without significant erosion and damage to the resource. FEIS at 27. They are considered mitigation rather than “mining structures or facilities” subject to MM-2. However both augmentation sites are within RHCAs because the Roosevelt Adit has flowing water and the Upper Marias site is a wetland. The augmentation water cannot be introduced into the stream or wetland without a pipeline or other delivery device entering those RHCAs.

MM-2 FINDING: As was explained in the environmental effects analysis above, the pipeline between the water treatment plant and the infiltration gallery will now not impact any surface resources within the RHCA and RHCA impacts have been avoided. It will have no effect on Inland Native Fish – or any other fish – and will not affect other resources within the RHCA. The IDT analysis demonstrates that alternate routes for the pipeline and alternative methods of delivering water from the water treatment plant to the infiltration gallery either do not avoid impacts to the Gold Bowl Creek RHCA, or are not reasonably feasible, or both. Therefore, approval of the pipeline location in the 2007 ROD is consistent with INFISH standard and guideline MM-2 because no other reasonably feasible location exists. However, requiring directional drilling and installation of the pipeline under the surface of the RHCA will avoid any surface disturbance within the RHCA and will not impact water flow below the surface because the pipeline will be installed perpendicular to water flow, and water will flow above and below the 4 inch pipe. This will meet MM-2’s requirement to avoid impacts to RHCAs, streams and inland native fish. Further, because the pipeline road across the RHCA has now been dropped, no new road construction will occur in the RHCA, consistent with MM-2. Finally, because the pipelines to the water augmentation sites must enter the RHCAs to deliver water to them, these pipelines are consistent with MM-2, even if they were to be considered mining structures rather than mitigation because no other alternatives to delivery water to these RHCAs exist.

I have considered all 78 comment letters that arrived in response to my mailing the unsigned version of this document to the public for review.² Three of these letters raised concerns about the Buckhorn Mountain project, while the rest showed support for the project and/or the findings. Only two letters addressed comments specific to the RHCA crossing. I conclude that no reasonably feasible alternative to crossing the RHCA exists. Crown’s revised proposal, which will eliminate surface disturbance within the RHCA, adequately addresses the concerns raised by these two letters. Based on my determination that an SEIS is unnecessary, and this MM-2 finding, I find that the Buckhorn Access Project can proceed as approved in the ROD, once the Clean Water Act 401 Certification has been issued by the State of Washington, and the Plan of Operations has been issued.

for 

REBECCA LOCKETT HEATH
Forest Supervisor



DATE

² Does not include multiple copies of the same letter from the same individual that were received both e-mail and hard copy. Some of these letters were not timely, but I considered them anyway.

**Buckhorn Access Project
1502.9(c) Finding
List of Preparers**

Jeremy L. Anderson - District Wildlife Biologist

Christina Bauman – Tonasket Ranger District Lead Rangeland Management Specialist.

Mel Bennett – Buckhorn Project Hydrologist and Forest Hydrologist

Phil Christy – Project Coordinator, Air and Scenic Quality, Recreation, and Noise

Jan Flatten - Buckhorn Project Team Leader and Forest Environmental Coordinator

Powys Gadd – Heritage Program Manager and Forest Archaeologist

Annie Greene – Zone Soil Scientist

Rodney T. Lentz – Washington On-Scene Coordinator

Larry Loftis – District Botanist, Tonasket Ranger District

Dave McCormack – Zone Transportation Planner

Carol Ogilvie – District Noxious Weed Technician

Nancy Wells – District Fish Biologist