APPENDIX 1A

Plan-specific Resource Protection Measures Under Alternative 3
AC Placer

Water Resources Protection Measures (WRPM)

1. Measurement of a 25’ buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

2. Straw bales or waddles need to be placed between the proposed processing site and Cracker Creek to prevent sedimentation.

3. No removal of stream shade bearing trees.

4. Do not put overburden into riparian zone.

5. Water level must stay at consistent elevation in both the processing and overflow settling ponds and must maintain the existing difference in water surface elevations between ponds to prevent a change in subsurface water elevation through the fill.

6. Miner must monitor excavation pits for groundwater. If ground water becomes visible then the miner must limit further deepening hole to prevent stream from going dry and stream temperatures from increasing.

Amigo

Water Resources Protection Measures (WRPM)

1. When water from an adit is used in the mining process, it shall be piped or trenched around the mine dump to a settling pond for use. Certified weed-free straw bales and filter cloth will also be used to minimize sediment if determined necessary by the District Ranger.

2. Portal discharges resulting from underground development conducted during the life of the approved Plan of Operations must meet State standards for water quality for the receiving stream. The point of compliance shall be at the point of entry into Waters of the State. If water quality standards are exceeded, then the operator(s) shall comply with OAR 340-041-0004. If treatment systems are needed to meet State Water Quality standards, a supplemental plan must be submitted to the District Ranger for approval prior to implementation.

Anchor

Water Resources Protection Measures

Anchor Site #1

1. Miner must monitor excavation pits for groundwater. If ground water becomes visible then the miner must limit further deepening hole to prevent stream from going dry and stream temperatures from increasing.

2. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).
Anchor Site #2

1. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

Anchor Site #3

1. Place straw bales/coils along the low berm that separates the activity site from Elk Creek to increase the effectiveness of the low berm.
2. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).
3. Miner must monitor excavation pits for groundwater. If ground water becomes visible then the miner must limit further deepening hole to prevent stream from going dry and stream temperatures from increasing.

Bald Mountain

Water Resources Protection Measures

1. Lode activities are located on private property. However, the miner must ensure that there is no discharge of heavy metals or sediment onto Forest Service lands or placement of lode material onto Forest Service lands.
2. When mining operations commence, Forest Service GR L4 needs to be applied.
3. Miner must seek input from minerals administrator or district hydrologist to identify portions of roads 73700-100 and TA road 7370-M1A to be rocked to prevent rutting which would funnel water and sediment into McCully Creek.
4. Portal discharges resulting from underground development conducted during the life of the approved Plan of Operations must meet State standards for water quality for the receiving stream. The point of compliance shall be at the point of entry into Waters of the State. If water quality standards are exceeded, then the operator(s) shall comply with OAR 340-041-0004. If treatment systems are needed to meet State Water Quality standards, a supplemental plan must be submitted to the District Ranger for approval prior to implementation.
5. Place industrial mining liners on the pond to control groundwater impacts from heavy metal leaching.

Recreation Resources Protection Measures

1. To provide reasonable access to the Bald Mountain Ponds operator and prevent conflicts with the use of FSR 2200-900, specifically authorize the use of FSR 2200-900 within the Plan of Operations, limiting travel to only those individuals actively involved in the mining operations. Require coordination between the operator and the city to minimize conflicts with the use of the road by the city in administering the water distribution system.
Barbara Lode

Water Resources Protection Measures

1. Place straw bales/coils (or rebuild berm with soil) along the low berm that separates the activity site from Lake Creek to increase the effectiveness of the low berm. It is open at the point where the fillslope is actively eroding. Ensure the berm is functional and is a blockage for any sediment erosion resulting from management activities.

2. Settling ponds shall not be built on mine dumps.

3. Water and winter run off will be diverted around tailings and waste rock piles.

4. Prior to the beginning of operations, the operator(s) will test any adit discharge for compliance with the CWA and Safe Drinking Water Act, Oregon State and the EPA, at a Forest Service approved testing facility. As conditions change during operations, the operator(s) will periodically test the discharge to see if water chemistry has changed (e.g. heavy metals or sulfides). Upon completion of the operations, a final water quality test of the adit discharge will be completed. Testing procedures will follow DOGAMI protocol.

5. When processing is conducted on Forest Service land, tailings from the first run will need to be tested at an approved testing facility to see if they have the potential to release acidity or other contaminates. (See EPA standards and CWA for guidelines). Testing of the waste rock may be required based on the type of rock present. Additional testing will be required throughout the life of the operation as conditions change. Upon completion of the operations, a final test of the tailings and waste rock will be required before the Plan can be closed out. Reclamation procedures may be modified, depending on the results of the testing.

6. When testing of adit discharge, tailings or waste rock, a copy of the test results will be sent directly from the testing facility to the District Ranger. Should the results exceed EPA and ODEQ's standards, the operator must address this issue prior to continuing this portion of the operation (36CFR 261.11 (c)). A modification to the Plan may be required as per direction found in 36CFR 228.4 (e).

7. Should water begin to discharge from previously dry adits, the District Ranger will be notified immediately and L3 and L5 would apply.

8. Tailings, waste rock, and soil piles will be placed in separate locations. Tailings and waste rock piles will be placed a sufficient distance from any nearby surface waters such that no surface discharge from the waste rock or tailings will reach the waters.

Transportation Resources Protection Measures

1. For Roads 6540089 and 6540091, maintain current or effective road closure (ie. gate or berm) during and after completion of mining operations.

Recreation Resources Protection Measures

1. To increase safety and prevent conflicts with public use of the Lake Creek road (Road 6540-030), stipulate road use conditions in the operating plan that include warning signs of the truck use on the road and consider limiting hauling of material during periods of expected low public use.
Blue Jay, David #1, Hi Bar

Water Resources Protection Measures

1. Settling ponds would be located with input from the minerals administrator and district hydrologist and appropriate WRPMs identified and implemented.

2. Place straw bales/coils along the low berm that separates the activity site from Cracker, Slim, Pole and unnamed perennial Creeks to increase the effectiveness of the low berm.

3. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

4. Miner must monitor excavation pits for groundwater. If ground water becomes visible then the miner must limit further deepening hole to prevent stream from going dry and stream temperatures from increasing.

5. Miner must not withdrawal water or excavate mining holes below the stream levels prior to May 15th to not impact dissolved oxygen in 303(d) listed Cracker Creek.

Fish Protection Measures

1. The miner will provide the Forest Service with advanced notification of ford construction so that a fisheries biologist or minerals administrator can monitor the fords and ensure that they do not create a fish barrier during low flows.

2. No water withdrawals are permitted in Cracker Creek after August 15 to protect fish migrating to spawn.

3. If Cracker Creek is dry below where the miner is working prior to August 15, then the miner must cease withdrawing water from the creek until flow exceeds the amount withdrawn.

4. Dredging operations and use of stream fords must shut down immediately if the operator observes bull trout. The operation must remain shut down until the fish move(s) at least 100 feet upstream of the operation or at least 500 feet downstream. Dredging operations must shut down immediately if any sick, injured, or dead specimen of bull trout is found.

5. Prior to using stream fords, operators must meet with a WWNF fisheries biologist who will inspect each existing and proposed ford site. Ford crossing will only occur during the ODFW in-stream work window for all use. If the miner proposes to ford outside the in-stream work window, then a WWNF fish biologist must inspect the crossing and approve beforehand. Dredges must not operate in such a way that the current or the discharge from the sluice is directed into the bank in a way that causes erosion or destruction of the natural form of the channel, that undercuts the bank, or that widens the channel.

6. Dredging must be conducted in a manner so as to prevent the undercutting and destabilization of stream banks, and may not otherwise disturb streambanks. If streambanks are disturbed in any way, they must be restored to the original contour and re-vegetated with native species at the end of the annual dredge season the disturbance occurred in.

7. Camping areas, paths, and other disturbed sites that are located along stream banks and that are associated with dredge operations must be re-vegetated or otherwise restored to their original conditions at the end of the dredge season in 2029. Any temporary roads, road repair of road maintenance proposed by the claimant that would occur within any riparian area, or which has the
potential to transmit sediment to stream channels, must be specifically approved by the WWNF in detail and in writing, and will be inspected by the WWNF during the dredging season.

8. Operators must cease activities during the wet periods when Project activities are causing excessive ground disturbance (visible ground disturbance due to soil saturation) or excessive damage (muddying/rutting) to roads.

9. Mining operators must not remove, relocate, or disturb stable in-stream woody debris or boulders greater than 12-inches in diameter, unless it was determined during the pre-mining site review that the predominate substrate was 12-inches and retaining larger boulders would be more beneficial to that particular reach. This design feature will prevent the destabilization of the stream channel and assure that potential fish habitat would not be disturbed.

10. The operator will not remove any large down or standing woody debris or trees for firewood within one tree length of the stream.

11. Operators will not move cobbles in the stream to the extent that the deepest and fastest portion of the stream channel (i.e., the thalweg) is altered or moved.

12. No mechanized equipment will be operated below the mean high water mark except for the dredge itself and any life support system necessary to operate the dredge. No mechanized equipment other than the suction dredge will be used for conducting operations.

13. Dredging must not dam the stream channel.

14. Dredges must not operate in the gravel bar areas at the tails of pools.

15. Dredges must not operate in such a way that fine sediment from the dredge discharge blankets gravel bars.

16. Operators must visually monitor the stream for 300 feet downstream of any dredging operation. If noticeable turbidity is observed downstream, the operation must cease immediately or decrease in intensity until no increase in turbidity is observed 300 feet downstream.

17. Shallow areas must be restored to their original grade each day and natural pools may not be filled. Tailings must be redistributed to avoid creating unstable spawning gravels.

18. Mining operators must maintain a minimum spacing of at least 150 linear feet of stream channel between suction dredging operations.

19. Gasoline and other petroleum products must be stored in spill-proof containers at a location that minimizes the opportunity for accidental spillage.

20. The suction dredge must be checked for leaks, and all leaks repaired, prior to the start of operations each day. The fuel container used for refueling must contain less fuel than the amount needed to fill the tank. The suction dredge must be anchored to the stream bank when refueling in the water, so that fuel does not need to be carried out into the stream. Unless the dredge has a detachable fuel tank, operators may transfer no more than one gallon of fuel at a time during refilling. Operators must use a funnel while pouring, and place an absorbent material such as a towel under the fuel tank to catch any spillage from refueling operations. A spill kit must be available in case of accidental spills. Soil contaminated by spilled petroleum products, must be excavated to the depth of saturation and removed from the WWNF for proper disposal.

21. Operators will not entrain, mobilize, or disperse any mercury discovered during mining operations. Operators must cease operations and notify the WWNF if mercury is encountered in
dredged material. Operators must not use mercury, cyanide, or any other hazardous or refined substance to recover or concentrate gold.

22. All human waste must be kept more than 200 feet away from any live water. Any existing outhouses currently located within the riparian area are not to be used. All refuse from dredging activities must be packed out and disposed of properly.

23. To prevent the threat of aquatic invasive species, suction dredges, tools used while dredging, and associated equipment must be thoroughly cleaned with a pressure washer and dried at least five days prior to use on the Forest.

Transportation Resources Protection Measures

1. For Hibar, Road 5530060, maintain current or effective road closure (ie. gate or berm) during and after completion of mining operations.

California Gulch

Water Resources Protection Measures

Temporary Bridge

1. The approach where the bridge will be placed will be rocked.
2. At the beginning of each season, this area will be checked and more rock added as necessary.
3. Bridge will be removed each Fall.

Transportation Resources Protection Measures

1. For Road 7220300 (MP 1.18 to 3.70), maintain current or effective road closure (ie. gate or berm) during and after completion of mining operations.

Dead Horse

Water Resources Protection Measures

1. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

2. Settling ponds need to be located with input from the minerals administrator and district hydrologist and appropriate WRPMs identified and implemented.

Fine Gold

Water Resources Protection Measures

1. Settling ponds need to be located with input from the minerals administrator and district hydrologist and appropriate WRPMs identified and implemented.
2. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

3. Place straw bales/coils along the low berm that separates the activity site from Cracker Creek to increase the effectiveness of the low berm.

4. Miner must monitor excavation pits for groundwater. If ground water becomes visible then the miner must limit further deepening hole to prevent stream from going dry and stream temperatures from increasing.

5. During the use and maintenance of all closed or temporary access roads, surface drainage and erosion control features or structures shall be maintained, repaired or installed. This work shall be accomplished in a manner to effectively control and/or prevent water concentrations upon the road bed and prevent or eliminate the movement of sediment from any activity or source from entering into streams. Examples of erosion control and drainage structures, and those to be maintained, repaired, or installed include silt fences, erosion control blankets, earthen berms, sediment catch basins, drain dips, armored grade sags, water bars and corrugated metal pipes. New installation of these structures shall be agreed upon by the Forest Service prior to installation.

Fish Protection Measures

1. No water withdrawals are permitted in Cracker Creek after August 15 to protect fish migrating to spawn.

2. If Cracker Creek is dry below where the miner is working prior to August 15, then the miner must cease withdrawing water from the creek until flow exceeds the amount withdrawn.

3. Dredging operations and use of stream fords must shut down immediately if the operator observes bull trout. The operation must remain shut down until the fish move(s) at least 100 feet upstream of the operation or at least 500 feet downstream. Dredging operations must shut down immediately if any sick, injured, or dead specimen of bull trout is found.

4. Prior to using stream fords, operators must meet with a WWNF fisheries biologist who will inspect each existing and proposed ford site. Ford crossing will only occur during the ODFW in-stream work window for all use. If the miner proposes to ford outside the in-stream work window, then a WWNF fish biologist must inspect the crossing and approve beforehand. Dredges must not operate in such a way that the current or the discharge from the sluice is directed into the bank in a way that causes erosion or destruction of the natural form of the channel, that undercuts the bank, or that widens the channel.

5. Dredging must be conducted in a manner so as to prevent the undercutting and destabilization of stream banks, and may not otherwise disturb streambanks. If streambanks are disturbed in any way, they must be restored to the original contour and re-vegetated with native species at the end of the annual dredge season the disturbance occurred in.

6. Camping areas, paths, and other disturbed sites that are located along stream banks and that are associated with dredge operations must be re-vegetated or otherwise restored to their original conditions at the end of the dredge season in 2029. Any temporary roads, road repair of road maintenance proposed by the claimant that would occur within any riparian area, or which has the potential to transmit sediment to stream channels, must be specifically approved by the WWNF in detail and in writing, and will be inspected by the WWNF during the dredging season.
7. Operators must cease activities during the wet periods when Project activities are causing excessive ground disturbance (visible ground disturbance due to soil saturation) or excessive damage (muddying/rutting) to roads.

8. Mining operators must not remove, relocate, or disturb stable in-stream woody debris or boulders greater than 12-inches in diameter, unless it was determined during the pre-mining site review that the predominate substrate was 12-inches and retaining larger boulders would be more beneficial to that particular reach. This design feature will prevent the destabilization of the stream channel and assure that potential fish habitat would not be disturbed.

9. The operator will not remove any large down or standing woody debris or trees for firewood within one tree length of the stream.

10. Operators will not move cobbles in the stream to the extent that the deepest and fastest portion of the stream channel (i.e., the thalweg) is altered or moved.

11. No mechanized equipment will be operated below the mean high water mark except for the dredge itself and any life support system necessary to operate the dredge. No mechanized equipment other than the suction dredge will be used for conducting operations.

12. Dredging must not dam the stream channel.

13. Dredges must not operate in the gravel bar areas at the tails of pools.

14. Dredges must not operate in such a way that fine sediment from the dredge discharge blankets gravel bars.

15. Operators must visually monitor the stream for 300 feet downstream of any dredging operation. If noticeable turbidity is observed downstream, the operation must cease immediately or decrease in intensity until no increase in turbidity is observed 300 feet downstream.

16. Shallow areas must be restored to their original grade each day and natural pools may not be filled. Tailings must be redistributed to avoid creating unstable spawning gravels.

17. Mining operators must maintain a minimum spacing of at least 150 linear feet of stream channel between suction dredging operations.

18. Gasoline and other petroleum products must be stored in spill-proof containers at a location that minimizes the opportunity for accidental spillage.

19. The suction dredge must be checked for leaks, and all leaks repaired, prior to the start of operations each day. The fuel container used for refueling must contain less fuel than the amount needed to fill the tank. The suction dredge must be anchored to the stream bank when refueling in the water, so that fuel does not need to be carried out into the stream. Unless the dredge has a detachable fuel tank, operators may transfer no more than one gallon of fuel at a time during refilling. Operators must use a funnel while pouring, and place an absorbent material such as a towel under the fuel tank to catch any spillage from refueling operations. A spill kit must be available in case of accidental spills. Soil contaminated by spilled petroleum products, must be excavated to the depth of saturation and removed from the WWNF for proper disposal.

20. Operators will not entrain, mobilize, or disperse any mercury discovered during mining operations. Operators must cease operations and notify the WWNF if mercury is encountered in dredged material. Operators must not use mercury, cyanide, or any other hazardous or refined substance to recover or concentrate gold.
21. All human waste must be kept more than 200 feet away from any live water. Any existing outhouses currently located within the riparian area are not to be used. All refuse from dredging activities must be packed out and disposed of properly.

22. To prevent the threat of aquatic invasive species, suction dredges, tools used while dredging, and associated equipment must be thoroughly cleaned with a pressure washer and dried at least five days prior to use on the Forest.

**J & J Placer**

**Water Resources Protection Measures**

1. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

2. Ford on FS road 7225 – 020 across the perennial unnamed stream shall be sloped and armored with rock, based on a site-specific evaluation. The stream will not flow down the road, but will cross the road at this ford location.

3. No suction dredging within the meadow riparian areas that have silt that forms the streambed.

**Medic Placer**

**Water Resources Protection Measures**

1. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

2. Stake Straw bales on O’Farrell Gulch side of proposed processing site and mining activity areas.

**Transportation Resources Protection Measures**

1. Closed FS road 2200-900 will need to have a drain ditch on the uphill side of the road; constructed from where the small spring currently enters it, downslope to the existing culvert to prevent sedimentation.

**Fish Protection Measures**

1. No water withdrawals are permitted in O’Farrell Gulch after August 15 to protect fish migrating to spawn.

2. If O’Farrell Gulch is dry below where the miner is working prior to August 15, then the miner must cease withdrawing water from the creek until flow exceeds the amount withdrawn.

**Transportation Resources Protection Measures**

1. For Roads 2200900 and 7300950, maintain current or effective road closure (ie. gate or berm) during and after completion of mining operations.
Native Spirit

Water Resources Protection Measures

1. Settling ponds need to be located with input from the minerals administrator and district hydrologist and appropriate WRPMs identified and implemented.

2. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

3. Mining in the floodplain or wetlands will be accomplished by placing equipment in dry areas located outside the floodplain or wetland. The wet areas and floodplain areas will be mined and reclaimed after July 1. Seasonal reclamation shall be accomplished by late fall in time to allow for the areas to revegetate and stabilize before winter (see R8 and R9 for specifications regarding revegetation).

4. Where wetland vegetation is approved to be removed, it shall be kept wet by placing it in the ponds for up to 14 days while the area is being mined and reclaimed. The vegetation shall be replaced in the riparian area to approximately the original density and monitored for success for 3 years as described in R9 above. The success of final reclamation shall be evaluated as stated in R18 above.

5. The size, location and function of wetlands after reclamation shall be similar to what now exists.

Pardners

Water Resources Protection Measures

1. A waste rock disposal site will be designated by the Minerals Administrator, mining permittee and District Hydrologist.

2. When Lode Mining operations begin, follow Forest Service GRs L4 and L5 needs to be applied, these include:

3. When processing is conducted on Forest Service land, tailings from the first run will need to be tested at an approved testing facility to see if they have the potential to release acidity or other contaminants. (See EPA standards and CWA for guidelines). Testing of the waste rock may be required based on the type of rock present. Additional testing will be required throughout the life of the operation as conditions change. Upon completion of the operations, a final test of the tailings and waste rock will be required before the Plan can be closed out. Reclamation procedures may be modified, depending on the results of the testing.

4. When testing of adit discharge, tailings or waste rock, a copy of the test results will be sent directly from the testing facility to the District Ranger. Should the results exceed EPA and ODEQ’s standards, the operator must address this issue prior to continuing this portion of the operation (36CFR 261.11 (c)). A modification to the Plan may be required as per direction found in 36CFR 228.4 (e).

5. When Lode Mining operations begin and the samples come back negative for potential acidity, still follow these criteria when dealing with lode waste rock:

6. Water and winter run off will be diverted around tailings and waste rock piles.
7. Tailings, waste rock, and soil piles will be placed in separate locations. Tailings and waste rock piles will be placed a sufficient distance from any nearby surface waters such that no surface discharge from the waste rock or tailings will reach the waters.

8. Portal discharges resulting from underground development conducted during the life of the approved Plan of Operations must meet State standards for water quality for the receiving stream. The point of compliance shall be at the point of entry into Waters of the State. If water quality standards are exceeded, then the operator(s) shall comply with OAR 340-041-0004. If treatment systems are needed to meet State Water Quality standards, a supplemental plan must be submitted to the District Ranger for approval prior to implementation.

**Transportation Resources Protection Measures**

1. For Road 7220020, maintain current or effective road closure (ie. gate or berm) during and after completion of mining operations.

**Return Group Placers**

**Water Resources Protection Measures**

1. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

2. Minimize removal of stream shade bearing trees, only where necessary for mining operations. Replant stream shade trees immediately after the soil and floodplain characteristics have been reclaimed.

3. Do not put overburden into riparian zone, side channels or wetlands.

4. Water level must stay at consistent elevation in both the processing and overflow settling ponds and must maintain the existing difference in water surface elevations between ponds to prevent a change in subsurface water elevation through the fill.

5. Settling ponds need to be located with input from the minerals administrator and district hydrologist and appropriate WRPMs identified and implemented.

6. Place straw bales/coils along the low berm that separates the activity site from Deer Creek to increase the effectiveness of the low berm.

7. To reduce fine sediment inputs to Deer Creek, divert snowmelt or storm driven runoff from the dry draw (Prize claim) to the floodplain approximately 100 feet above the confluence of the dry draw and Deer Creek. This will allow fine sediment to fall out of suspension through ground cover and straw bales/coils on the floodplain and not be carried directly into Deer Creek.

8. The temporary bridge will be rocked on the approaches and will be assessed annually for the need to place more rock to break up sedimentation from the temporary road and Deer Creek.

**Fish Resource Protection Measures**

1. The miner will provide the Forest Service with advanced notification of ford and bridge construction so that a fisheries biologist or minerals administrator can monitor the structures and ensure that they do not create a fish barrier during low flows. Fords and Bridge locations will be
pre identified, pre-engineered and authorized by the authorizing official with input from fish biologist prior to installation and use.

**Transportation Resources Protection Measures**

1. Road 7240415: Miner proposes to relocate 0.14 miles of this open road out of the draw and mine the existing roadbed. The relocated road would be constructed according to FS specifications. Although miner proposes to replace the road in its original location after mining is complete, the Forest Service prefers the new location located out of the draw and would require the miner to decommission the original road (located in the draw) after mining is complete (see General Requirement Z-14).

**Salmon**

**Water Resources Protection Measures**

1. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

2. Miner must monitor excavation pits for groundwater. If ground water becomes visible then the miner must limit further deepening hole to prevent stream from going dry and stream temperatures from increasing.

3. Straw bales, waddles or expanding the existing berm to completely stop any runoff between work site 2 and Salmon Creek to prevent sedimentation.

**Recreation Resources Protection Measures**

1. To prevent conflicts with the seasonal Salmon Creek area road closure, limit the operating period to May 2nd through October 31st each year.

**Transportation Resources Protection Measures**

1. To prevent conflicts with the seasonal Salmon Creek area road closure, limit the operating period to May 2nd through October 31st each year.

**Slow Poke**

**Water Resources Protection Measures**

1. Ensure the temporary roads follow the Z road use general requirements. Rock the roads and provide drainage to road to minimize concentrated flow from occurring down the road prism.

**Transportation Resources Protection Measures**

1. For Roads 7390341 and 7390345, maintain current or effective road closure (ie. gate or berm) during and after completion of mining operations.

**Struggler**

**Water Resources Protection Measures**
1. Miner must monitor excavation pits for groundwater. If ground water becomes visible then the miner must limit further deepening hole to prevent stream from going dry and stream temperatures from increasing.

2. A waste rock disposal site and processing site will be designated by the Minerals Administrator, mining permittee and District Hydrologist.

3. When Lode Mining operations begin, follow Forest Service GRs L4 and L5 needs to be applied, these include:

4. When processing is conducted on Forest Service land, tailings from the first run will need to be tested at an approved testing facility to see if they have the potential to release acidity or other contaminate. (See EPA standards and CWA for guidelines). Testing of the waste rock may be required based on the type of rock present. Additional testing will be required throughout the life of the operation as conditions change. Upon completion of the operations, a final test of the tailings and waste rock will be required before the Plan can be closed out. Reclamation procedures may be modified, depending on the results of the testing.

5. When testing of adit discharge, tailings or waste rock, a copy of the test results will be sent directly from the testing facility to the District Ranger. Should the results exceed EPA and ODEQ’s standards, the operator must address this issue prior to continuing this portion of the operation (36CFR 261.11 (c)). A modification to the Plan may be required as per direction found in 36CFR 228.4 (e).

6. When Lode Mining operations begin and the samples come back negative for potential acidity, still follow these criteria when dealing with lode waste rock.

7. Water and winter run off will be diverted around tailings and waste rock piles.

8. Tailings, waste rock, and soil piles will be placed in separate locations. Tailings and waste rock piles will be placed a sufficient distance from any nearby surface waters such that no surface discharge from the waste rock or tailings will reach the waters.

9. Portal discharges resulting from underground development conducted during the life of the approved Plan of Operations must meet State standards for water quality for the receiving stream. The point of compliance shall be at the point of entry into Waters of the State. If water quality standards are exceeded, then the operator(s) shall comply with OAR 340-041-0004. If treatment systems are needed to meet State Water Quality standards, a supplemental plan must be submitted to the District Ranger for approval prior to implementation.

10. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

11. Ford on FS road 7225 – 020 across the perennial unnamed stream shall be sloped and armored with rock, based on a site-specific evaluation. Also included are general rules (Z1-Z9, Z11; Appendix 2).

**Tough Luck Charley**

*Water Resources Protection Measures*
Appendix 1A Powder River Mining DEIS

1. Measurement of the buffer would start at the top of the valley floor terrace-channel bank break in slope of the side channel (See Appendix 1B and Figures 1B-2 and 1B-3 for explanations of this feature).

2. Straw bales or waddles need to be placed between the proposed processing site and Bridge Creek to prevent sedimentation.

3. Settling ponds and mine processing site would be located with input from the minerals administrator and district hydrologist and appropriate WRPMs identified and implemented

   Fords

1. In addition to following FS General Requirement -G7, the miner will provide the Forest Service with advanced notification of ford construction on following FS roads:
   i. FS Decommissioned road 7240-E1A
   ii. FS Temporary Access road 7240-E1B
   iii. FS Temporary Access road 7240-E1C

2. A fisheries biologist or minerals administrator will need to monitor the fords and ensure that they do not create a fish barrier during low flows.

3. Mining equipment shall cross creeks only at pre-approved sites, as authorized by the District Ranger with FS, NMFS and USFWS mitigations, and 2012 BMPs. All fords shall be sloped and armored with rock, based on a site-specific evaluation.