



ALASKA DEPARTMENT OF NATURAL RESOURCES

Division of Mining, Land, and Water

Water Resources Section

3700 Airport Way, Fairbanks, AK 99709-4699

TEMPORARY WATER USE AUTHORIZATION

TWUA F2014-101

Pursuant to AS 46.15, as amended and the rules and regulations promulgated thereunder, permission is hereby granted to Constantine Metal Resources, Ltd (hereinafter authorization holder), 800 West Pender St. Suite 320, Vancouver, BC, V6C 2V6 and its contractors, to **withdraw up to a combined total of 86,400 gallons of water per day from the below described sources of water, May 1st through October 31st of each authorized year of the project at an intake rate of up to 20 gallons of water per minute per pump (subject to a maximum of three authorized pumps being simultaneously operated) allocated between the below described authorized sources of water (up to three authorized pumps may be operated simultaneously in any one of the authorized water sources #1 through #5 under this Temporary Water Use Authorization TWUA F2014-101, or up to three simultaneously operated authorized pumps may be spread out over any combination of the authorized water sources #1 through #5 under this Temporary Water Use Authorization TWUA F2014-101).** Water will be used to support mineral exploration activities associated with multi-year (2014-2018) APMA J5690, the Palmer Project.

Sources of Water (see 1 through 5 numbered sources on the two attached maps):

1. The indicated unnamed stream located within SE1/4SW1/4 Section 1, Township 29 South, Range 53 East, Copper River Meridian.
2. The indicated unnamed stream located within NW1/4SW1/4 Section 1, Township 29 South, Range 53 East, Copper River Meridian.
3. The indicated unnamed stream located within N1/2 Section 3, Township 29 South, Range 53 East, Copper River Meridian.
4. The indicated unnamed stream located within NW1/4 Section 23, Township 29 South, Range 53 East, Copper River Meridian.
5. The indicated unnamed stream located within N1/2NE1/4 Section 11, Township 29 South, Range 53 East, Copper River Meridian.

Structures to be Constructed and Used:

Screened water intake structure(s), three water pump(s) each having an intake diameter of 3 inches and each operating at a maximum intake rate of twenty gallons of water per minute, pipe and/or hose, water storage tanks, and other necessary water distribution and water dissipation equipment.

Changes in the natural state of water are to be made as stated herein and for the purposes indicated.

The authorization holder shall comply with the following conditions:

Conditions:

1. **This authorization does not authorize the authorization holder to enter upon any lands until proper rights-of-way, easements, or permission documents from the appropriate landowner have been obtained.**
2. Follow acceptable engineering standards in exercising the privilege granted herein.
3. Comply with all applicable laws, and any rules and/or regulations issued thereunder.
4. Except for claims or losses arising from negligence of the State, defend and indemnify the State, the State's agents, and the State's employees against and hold each of them harmless from any and all claims, demands, suits, loss, liability and expense, including attorney fees, for injury to or death of persons and damages to or loss of property arising out of or connected with the exercise of the privileges covered by this authorization.
5. Notify the Water Resources Section upon change of address.
6. The authorization holder is responsible for obtaining, maintaining, and complying with other permits/approvals (state, federal, or local) that may be required prior to beginning water withdrawal, including but not limited to fish habitat permit(s) from the Alaska Department of Fish and Game (ADF&G), Habitat Division.
7. The authorization holder shall allow an authorized representative of the Water Resources Section to inspect, at reasonable times, any facilities, equipment, practices, or operations regulated or required under this authorization.
8. Failure to respond to a request for additional information during the term of the authorization may result in the termination of this authorization.
9. This authorization, or a copy thereof, shall be kept at the site of the authorized project described herein. The authorization holder is responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project, and shall ensure that workers are familiar with the requirements and conditions of this authorization. For any activity that significantly deviates from the approved project during its siting, construction, or operation, the authorization holder is required to contact the Water Resources Section and obtain approval before beginning the activity.
10. The Water Resources Section may modify this authorization to include different limitations, expand monitoring requirements, evaluate impacts, or require restoration at the site.
11. Any false statements or representations, in any application, record, report, plan, or other document filed or required to be maintained under this authorization, may result in the termination of this authorization.
12. Pursuant to 11 AAC 93.220 (f), this authorization may be suspended or terminated by the Department of Natural Resources to protect the water rights of other persons or the public interest.

13. No damming or diversion of waters is permitted unless specifically authorized by the Alaska Department of Natural Resources and the Alaska Department of Fish and Game.
14. Any water intake structure in fish bearing waters, including a screened enclosure, well-point, sump, or infiltration gallery, must be designed, operated, and maintained to prevent fish entrapment, entrainment, or injury at the maximum diversion rate, unless specifically exempted by the Alaska Department of Fish and Game, Habitat Division.
15. Water intake structures in fish bearing waters must be enclosed and centered within a screened box or cylinder with a maximum screen-mesh size of 0.25 inches. To reduce fish impingement at the screen/water interface, water velocity may not exceed 0.5 feet per second when the pump is operating.
16. Except as otherwise authorized, water bodies shall not be altered to facilitate water withdrawal or disturbed in any way. If banks, shores, or beds are inadvertently disturbed, excavated, compacted, or filled, they shall be immediately stabilized to prevent erosion and sedimentation of the water body. Any disturbed areas shall be recontoured and revegetated with native vegetation.
17. Authorization holder shall inspect the intake screen for damage (torn screen, crushed screen, screen separated from intake ends, etc.) after each use and prior to each deployment. Any damage must be repaired prior to use of the structure. The structure must always conform to the original design specifications while in use.
18. Adequate flow and water levels, as determined by the Alaska Department of Fish and Game, Habitat Division, must remain to support indigenous aquatic life and provide for the efficient passage and movement of fish if any are present. Issuance of this authorization does not give the authorization holder the right to block or dam a water course.
19. Water discharge (including runoff) shall not be discharged at a rate or location resulting in sedimentation, erosion, or other disruptions to the bed or banks of water bodies, causing water quality degradation.
20. Any discharge shall comply with the Alaska Water Quality Standards (18 AAC 70). This may require the installation and maintenance of settling ponds or similar systems to reduce turbidity and settleable solids in the discharges.
21. The suction hose at the water source take point must be clean and free from contamination, and should be in water of sufficient depth so that sediments are not disturbed during pumping.
22. Pumping operations shall be conducted in such a way as to prevent any petroleum products or hazardous substances from contaminating surface or ground water. Pumps shall not be fueled or serviced within 100 feet of a pond, lake, stream or river unless the pumps are situated within a catch basin designed to contain any spills. Absorbent pads shall be readily available at the water withdrawal sites. Hazardous and non-hazardous spills must be reported to the Alaska Department of Environmental Conservation at 1-800-478-9300 per their Notification Requirements and to the Alaska Department of Natural Resources.
23. The placement of mineral exploration and water pumping equipment shall not unnecessarily hinder public access, if any, to the above-described sources.

24. Except as otherwise authorized, in-water activity pursuant to this authorization shall be limited to placement, inspection, and removal of the intake structure only. No other in-water activities will occur pursuant to this authorization.
25. There shall be no wheeled, tracked, excavating, or other machinery or equipment (with the exception of the non-motorized screened intake box) operated below the ordinary high water line to facilitate water withdrawal pursuant to this authorization.
26. Drill holes shall not be drilled within 100 feet of a waterbody.
27. Per 11 AAC 05.010. (a)(8)(M), an annual administrative service fee shall be assessed on this authorization.

This Temporary Water Use Authorization is issued pursuant to 11 AAC 93.220. No water right or priority is established by a temporary water use authorization issued pursuant to 11 AAC 93.220. Water so used is subject to appropriation by others.

Pursuant to 11 AAC 93.210 (b), authorized temporary water use is subject to amendment, modification, or revocation by the Department of Natural Resources if the Department of Natural Resources determines that amendment, modification, or revocation is necessary to supply water to lawful appropriators of record or to protect the public interest.

This authorization shall expire on October 31, 2018.

Date issued: August 6, 2014

Approved: miel wolk

Title: Natural Resource Manager II
DNR, State of Alaska



ALASKA DEPARTMENT OF NATURAL RESOURCES

Division of Mining, Land, and Water

Water Resources Section

3700 Airport Way, Fairbanks, AK 99709-4699

TEMPORARY WATER USE AUTHORIZATION

TWUA F2014-102

Pursuant to AS 46.15, as amended and the rules and regulations promulgated thereunder, permission is hereby granted to Constantine Metal Resources, Ltd (hereinafter authorization holder), 800 West Pender St. Suite 320, Vancouver, BC, V6C 2V6 and its contractors, to **withdraw up to a combined total of 86,400 gallons of water per day from the below described sources of water, May 1st through October 31st of each authorized year of the project at an intake rate of up to 20 gallons of water per minute per pump (subject to a maximum of three authorized pumps being simultaneously operated) allocated between the below described authorized sources of water (up to three authorized pumps may be operated simultaneously in any one of the authorized water sources #1 through #5 under this Temporary Water Use Authorization TWUA F2014-102, or up to three simultaneously operated authorized pumps may be spread out over any combination of the authorized water sources #1 through #5 under this Temporary Water Use Authorization TWUA F2014-102).** Water will be used to support mineral exploration activities associated with multi-year (2014-2018) APMA J5690, the Palmer Project.

Sources of Water (see 1 through 5 numbered sources on the attached map):

1. The indicated unnamed stream located within NW1/4NW1/4 Section 34 to SE1/4SE1/4 Section 28, Township 28 South, Range 53 East, Copper River Meridian.
2. The indicated unnamed stream located within NE1/4NE1/4 Section 6, Township 29 South, Range 54 East, Copper River Meridian.
3. The indicated unnamed stream located within N1/2 Section 33, Township 28 South, Range 53 East, Copper River Meridian.
4. A well, to be drilled, located within NW1/4NE1/4 Section 6, Township 29 South, Range 54 East, Copper River Meridian.
5. A drilled well, 2160 feet in depth (with final water pump intake depth of 130 feet), located within NW1/4NW1/4 Section 6, Township 29 South, Range 54 East, Copper River Meridian.

Structures to be Constructed and Used:

Screened water intake structure(s), three water pump(s) each having an intake diameter of 3 inches and each operating at a maximum intake rate of twenty gallons of water per minute, pipe and/or hose, water storage tanks, and other necessary water distribution and water dissipation equipment.

Changes in the natural state of water are to be made as stated herein and for the purposes indicated.

The authorization holder shall comply with the following conditions:

Conditions:

1. **This authorization does not authorize the authorization holder to enter upon any lands until proper rights-of-way, easements, or permission documents from the appropriate landowner have been obtained.**
2. Follow acceptable engineering standards in exercising the privilege granted herein.
3. Comply with all applicable laws, and any rules and/or regulations issued thereunder.
4. Except for claims or losses arising from negligence of the State, defend and indemnify the State, the State's agents, and the State's employees against and hold each of them harmless from any and all claims, demands, suits, loss, liability and expense, including attorney fees, for injury to or death of persons and damages to or loss of property arising out of or connected with the exercise of the privileges covered by this authorization.
5. Notify the Water Resources Section upon change of address.
6. The authorization holder is responsible for obtaining, maintaining, and complying with other permits/approvals (state, federal, or local) that may be required prior to beginning water withdrawal, including but not limited to fish habitat permit(s) from the Alaska Department of Fish and Game (ADF&G), Habitat Division.
7. The authorization holder shall allow an authorized representative of the Water Resources Section to inspect, at reasonable times, any facilities, equipment, practices, or operations regulated or required under this authorization.
8. Failure to respond to a request for additional information during the term of the authorization may result in the termination of this authorization.
9. This authorization, or a copy thereof, shall be kept at the site of the authorized project described herein. The authorization holder is responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project, and shall ensure that workers are familiar with the requirements and conditions of this authorization. For any activity that significantly deviates from the approved project during its siting, construction, or operation, the authorization holder is required to contact the Water Resources Section and obtain approval before beginning the activity.
10. The Water Resources Section may modify this authorization to include different limitations, expand monitoring requirements, evaluate impacts, or require restoration at the site.

11. Any false statements or representations, in any application, record, report, plan, or other document filed or required to be maintained under this authorization, may result in the termination of this authorization.
12. Pursuant to 11 AAC 93.220 (f), this authorization may be suspended or terminated by the Department of Natural Resources to protect the water rights of other persons or the public interest.
13. **No damming or diversion of waters is permitted unless specifically authorized by the Alaska Department of Natural Resources and the Alaska Department of Fish and Game.**
14. **Any water intake structure in fish bearing waters, including a screened enclosure, well-point, sump, or infiltration gallery, must be designed, operated, and maintained to prevent fish entrapment, entrainment, or injury at the maximum diversion rate, unless specifically exempted by the Alaska Department of Fish and Game, Habitat Division.**
15. **Water intake structures in fish bearing waters must be enclosed and centered within a screened box or cylinder with a maximum screen-mesh size of 0.25 inches. To reduce fish impingement at the screen/water interface, water velocity may not exceed 0.5 feet per second when the pump is operating.**
16. **Except as otherwise authorized, water bodies shall not be altered to facilitate water withdrawal or disturbed in any way. If banks, shores, or beds are inadvertently disturbed, excavated, compacted, or filled, they shall be immediately stabilized to prevent erosion and sedimentation of the water body. Any disturbed areas shall be recontoured and revegetated with native vegetation.**
17. **Authorization holder shall inspect the intake screen for damage (torn screen, crushed screen, screen separated from intake ends, etc.) after each use and prior to each deployment. Any damage must be repaired prior to use of the structure. The structure must always conform to the original design specifications while in use.**
18. **Adequate flow and water levels, as determined by the Alaska Department of Fish and Game, Habitat Division, must remain to support indigenous aquatic life and provide for the efficient passage and movement of fish if any are present. Issuance of this authorization does not give the authorization holder the right to block or dam a water course.**
19. **Water discharge (including runoff) shall not be discharged at a rate or location resulting in sedimentation, erosion, or other disruptions to the bed or banks of water bodies, causing water quality degradation.**
20. **Any discharge shall comply with the Alaska Water Quality Standards (18 AAC 70). This may require the installation and maintenance of settling ponds or similar systems to reduce turbidity and settleable solids in the discharges.**
21. **The suction hose at the water source take point must be clean and free from contamination, and should be in water of sufficient depth so that sediments are not disturbed during pumping.**
22. **Pumping operations shall be conducted in such a way as to prevent any petroleum products or hazardous substances from contaminating surface or ground water. Pumps shall not be fueled or serviced within 100 feet of a pond, lake, stream or river unless the pumps are situated within**

a catch basin designed to contain any spills. Absorbent pads shall be readily available at the water withdrawal sites. Hazardous and non-hazardous spills must be reported to the Alaska Department of Environmental Conservation at 1-800-478-9300 per their Notification Requirements and to the Alaska Department of Natural Resources.

23. The placement of mineral exploration and water pumping equipment shall not unnecessarily hinder public access, if any, to the above-described sources.
24. Except as otherwise authorized, in-water activity pursuant to this authorization shall be limited to placement, inspection, and removal of the intake structure only. No other in-water activities will occur pursuant to this authorization.
25. There shall be no wheeled, tracked, excavating, or other machinery or equipment (with the exception of the non-motorized screened intake box) operated below the ordinary high water line to facilitate water withdrawal pursuant to this authorization.
26. Drill holes shall not be drilled within 100 feet of a waterbody.
27. Per 11 AAC 05.010. (a)(8)(M), an annual administrative service fee shall be assessed on this authorization.

This Temporary Water Use Authorization is issued pursuant to 11 AAC 93.220. No water right or priority is established by a temporary water use authorization issued pursuant to 11 AAC 93.220. Water so used is subject to appropriation by others.

Pursuant to 11 AAC 93.210 (b), authorized temporary water use is subject to amendment, modification, or revocation by the Department of Natural Resources if the Department of Natural Resources determines that amendment, modification, or revocation is necessary to supply water to lawful appropriators of record or to protect the public interest.

This authorization shall expire on October 31, 2018.

Date issued: August 13, 2014

Approved: Mick W. [Signature]

Title: Natural Resource Manager II
DNR, State of Alaska

Temporary Water Use Authorization

TWUA F2014-102

