



US Army Corps
Of Engineers
Wilmington District

PUBLIC NOTICE

Issue Date: April 21, 2014
Comment Deadline: May 21, 2014
Corps Action ID Number: SAW-2013-01376

The Wilmington District, Corps of Engineers (Corps) received an application from The Quartz Corp, USA, Peggy Dortch, seeking Department of the Army authorization to impact 1,220 linear feet of stream, replace 60 linear feet culvert, temporarily impact 80 linear feet of stream, relocate 1,308 linear feet of stream, and fill 0.019 acre of wetland, associated with the Pine Mountain site in Spruce Pine, Mitchell County, North Carolina.

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

Applicant: The Quartz Corp, USA
Attn: Mr. Todd Mickleborough
8342 Hwy 226 South / PO Box 309
Spruce Pine, North Carolina 28777

AGENT (if applicable): Wetland and Natural Resource Consultants
Attn: Ms. Jennifer Robertson
775 Haywood Road, Suite D
Asheville, North Carolina 28806

Authority

The Corps evaluates this application and decides whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of the following Statutory Authorities:

- Section 404 of the Clean Water Act (33 U.S.C. 1344)
- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

Location

Directions to Site: To access the site from Asheville take I-26 North to Exit 9 (Burnsville Exit). Turn right at the bottom of the exit ramp onto US Hwy 19 toward and through Burnsville and Micaville. Turn left onto US Hwy 226 before reaching downtown Spruce Pine. Turn right onto

Pine Mountain Road and continue onto property. In general, the site is bordered to the North by forested land; to the East by another mine and forested land; to the South by US Hwy 226 and the North Toe River; and to the West by another mine plant, US Hwy 226, and forested land.

Project Area (acres):	755	Nearest Town:	Spruce Pine
Nearest Waterway:	Little Bear Creek	River Basin:	French Broad
Latitude and Longitude:	35.94799 °N, -82.08923 °W		

Existing Site Conditions

The Pine Mountain Mine consists of a mining processing plant and associated facilities, multiple sedimentation and settling ponds, maintenance buildings and associated facilities, an extensive infrastructure of roads, existing mined areas, existing mine waste dump areas, existing tailings management areas, logged areas, young forested areas, disturbed forested areas, streams, and wetlands. Elevations on site range from approximately 3,520 feet on the Northern boundary of the property to approximately 2,500 feet on the Southern boundary along the North Toe River. The Little Bear Creek drainage on site ranges in elevation from 2,640 feet to 3,460 feet.

Applicant's Stated Purpose

Based on information provided by the applicant the basic project purpose of the proposed The Quartz Corporation's Pine Mountain Mine project is to continue the development and operation of a high quality quartz mining facility at the mine site and achieve design capacities at the three mine waste dumps and the two tailing management areas to provide high quality quartz world-wide.

Project Description

The proposed project includes the continued development of existing and newly proposed facilities within The Quartz Corp's Pine Mountain Mine property in order to continue to mine existing and new quartz reserves within the 755 acres of the Pine Mountain Mine property. The project will impact 1,220 linear feet of stream, replace 60 linear feet of existing culvert, temporarily impact 80 linear feet of stream, relocate 1,308 linear feet of stream, and impact 0.019 acre of wetlands. Impacts include two road crossings, resolution and stabilization of a mining Notice of Violation (NOV) area, construction of one storm water treatment pond, and a stream relocation which will result in 1,589 linear feet of stream (a 281 linear foot gain in new stream). Any additional on-site infrastructure will be located in the road beds so no additional impacts will be necessary for infrastructure such as power and water lines. The applicant proposes to mitigate at 2:1 and 1:1 ratios per existing stream conditions. The project applicant proposes to satisfy mitigation for the project (1,360 linear feet) through the Beaver Creek Preservation Project provided by Unique Places.

Avoidance and Minimization

The applicant provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

The project in Spruce Pine is located in a very unique area of geologic resources within the region. These geologic assemblages are globally limited to only a few regions. The Quartz Corp's Spruce Pine quartz is extremely important because it is purer than any other mine yet discovered in the world. The location of the Pine Mountain Mine has been dictated by the location of the high quality quartz resource that is being sought. The Mine has previously produced quartz for other companies. Geotechnical fieldwork has indicated that there are additional high quality quartz reserves at the property.

Not continuing to develop Pine Mountain Mine as a quartz quarry would not meet the Purpose and Need of this project. Silica glass, which is fused from high purity quartz sand, offers a wide range of exceptional optical, mechanical, and thermal properties essential for manufacturing many highly technical products in areas such as semi-conductor technologies, PV solar applications, high temperature lamp tubing, telecommunications, and optics (semiconductor, solar, optical, and lighting industries). This high quality quartz is essential for many manufacturing jobs and products world-wide.

Previous impact plans showed a significant upper reach of Little Bear Creek being impacted by culverts in order to construct Mine Waste Dump – M2. If these impacts were pursued in the permit application the road access to M2 would have been much easier to construct and on a better gradient lower in the Little Bear Creek watershed. The close proximity of Pine Mountain Mine to the processing plant was also important and key in The Quartz Corp's decision to mine at Pine Mountain Mine. Trucking material long distances is costly especially in mountainous terrain. Impacts to Little Bear Creek have been avoided but for two road crossings to access high ground at Mine Waste Dump – M2. One of these road crossings is located at an existing culvert crossing so additional new stream impacts were avoided at Site #1.

The location of Pine Mountain Mine is the best mine property that meets the needs of The Quartz Corp for mining high quality quartz. While The Quartz Corp does operate other mines in the Spruce Pine area, the Pine Mountain Mine will provide a unique quality of quartz not often found. The majority of the larger streams within the Pine Mountain Mine boundary have been avoided. Most of the proposed impacts are at the headwaters of small, narrow seeps which will minimize the fragmentation of any fish habitat.

Previous site plans that would have required over 3,100 linear feet of stream impacts would have been easier to construct, closer in proximity to the mine area, and would have allowed shorter trucking distances for the disposal of mine waste and delivery of products to the processing plant. The requested impacts are the minimum necessary to allow for the development of Pine Mountain Mine for the intended use. The 1,220 linear feet of stream impacts requested is a reduction of over 61% from one of the previous impact plans that were reviewed earlier in the permitting process by the regulatory agencies.

The initial layout of roads and facilities were designed to maximize site development and follow ideal and fluid routes for truck and equipment travel within the mine. The site plan was then revised multiple times to minimize stream and wetland impacts to the greatest extent practicable. Some of the practices used to reduce impacts include using existing road corridors and existing

stream crossings, shifting road and developed area layouts upslope or upstream, building roads and developed areas above endpoints, and avoiding the majority of the main stream at the mine, Little Bear Creek.

The impacts at Sites 3 and 4 are necessary to resolve a Notice of Violation (NOV) through the North Carolina Department of Environment and Natural Resources Land Quality. The NOV was issued on December 12, 2008 because the area was being used for a mine waste dump but was not approved as such in the existing mine permit. KT Feldspar had allowed an adjacent mining company to use this area as a dump site but the dump location had not been approved as a waste dump through the permit modification process. As a corrective action required by Land Quality (LQ), KT Feldspar submitted a waste dump design and this design was approved by LQ and the permit modified on May 9, 2013. The slopes at this area must be stabilized using the approved design in order to comply with the conditions of the permit. The required stabilization efforts will require impacts at Sites 3 and 4. These two impacts account for 74% of the requested impacts.

Compensatory Mitigation

The applicant offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment:

Mitigation for the Pine Mountain Mine project is proposed to be permittee-responsible and completed off site. Previous mitigation concepts considered an on-site restoration option at the Pine Mountain Mine site. However, The Quartz Corp is no longer considering this option due to lower functional uplift and lower ecological significance, particularly in comparison to the proposed preservation project. After being presented with Unique Places' preservation project, The Quartz Corp, USA decided to forego the previously presented on-site restoration project due to the fact that there are off site downstream property owners that could affect the benefit of the restoration on-site. The preservation project will essentially function similar to a mitigation bank where The Quartz Corp will pay for the required mitigation credits and therefore not have the responsibility of construction and monitoring. All of the mitigation will be completed and the credits will be released before any impacts take place with the proposed preservation project which is also similar to a mitigation bank or the North Carolina Ecosystem Enhancement Program (EEP).

The Quartz Corp proposes to mitigate for the 1,220 linear feet of stream impact that requires 1,360 linear feet of mitigation at the Beaver Creek Preservation (BCP) Project through high quality preservation that will be protected by a conservation easement. The Quartz Corp has contracted with Unique Places to develop the mitigation plan.

In summary, Beaver Creek Preservation Project will provide mitigation credits for the stream impacts at Pine Mountain Mine by preserving approximately 16,000 linear feet of cold water streams and approximately 4,500 linear feet of montane seeps that include an average buffer width of 300 feet. Mitigation ratios at Beaver Creek Preservation Project range from 12:1 to 15:1 for the required mitigation of 1,360 linear feet. Approximately 215 acres will be included in the

conservation easement that will be recorded at the Beaver Creek Preservation Project. Final stream lengths and conservation easement acreage will be determined by surveying.

The Beaver Creek Preservation Project will preserve excellent quality, cold water streams with wide riparian buffers using a watershed approach which will improve protection of the Town of Spruce Pine's drinking water supply. The proposed mitigation site is within one mile of the Pine Mountain Mine project within the adjacent watershed. The mitigation site has high ecological value and significance as well as a high conservation priority per NC Department of Environmental and Natural Resources, NC Wildlife Resources Commission, and US Fish and Wildlife Service

Essential Fish Habitat

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, this Public Notice initiates the Essential Fish Habitat (EFH) consultation requirements. The Corps' initial determination is that the proposed project would not effect EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

Cultural Resources

Pursuant to Section 106 of the National Historic Preservation Act of 1966, Appendix C of 33 CFR Part 325, and the 2005 Revised Interim Guidance for Implementing Appendix C, the District Engineer consulted district files and records and the latest published version of the National Register of Historic Places and initially determines that:

- Should historic properties, or properties eligible for inclusion in the National Register, be present within the Corps' permit area; the proposed activity requiring the DA permit (the undertaking) is a type of activity that will have no potential to cause an effect to an historic properties.
- No historic properties, nor properties eligible for inclusion in the National Register, are present within the Corps' permit area; therefore, there will be no historic properties affected. The Corps subsequently requests concurrence from the SHPO (or THPO).
- Properties ineligible for inclusion in the National Register are present within the Corps' permit area; there will be no historic properties affected by the proposed work. The Corps subsequently requests concurrence from the SHPO (or THPO).
- Historic properties, or properties eligible for inclusion in the National Register, are present within the Corps' permit area; however, the undertaking will have no adverse effect on these historic properties. The Corps subsequently requests concurrence from the SHPO (or THPO).
- Historic properties, or properties eligible for inclusion in the National Register, are present within the Corps' permit area; moreover, the undertaking may have an adverse

effect on these historic properties. The Corps subsequently initiates consultation with the SHPO (or THPO).

- The proposed work takes place in an area known to have the potential for the presence of prehistoric and historic cultural resources; however, the area has not been formally surveyed for the presence of cultural resources. No sites eligible for inclusion in the National Register of Historic Places are known to be present in the vicinity of the proposed work. Additional work may be necessary to identify and assess any historic or prehistoric resources that may be present.

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

Endangered Species

Pursuant to the Endangered Species Act of 1973, the Corps reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information:

- The Corps determines that the proposed project would not affect federally listed endangered or threatened species or their formally designated critical habitat.
- The Corps determines that the proposed project may affect federally listed endangered or threatened species or their formally designated critical habitat. The Corps initiates consultation under Section 7 of the ESA and will not make a permit decision until the consultation process is complete.
- The Corps is not aware of the presence of species listed as threatened or endangered or their critical habitat formally designated pursuant to the Endangered Species Act of 1973 (ESA) within the project area. The Corps will make a final determination on the effects of the proposed project upon additional review of the project and completion of any necessary biological assessment and/or consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service.

Other Required Authorizations

The Corps forwards this notice and all applicable application materials to the appropriate State agencies for review.

North Carolina Division of Water Resources (NCDWR): The Corps will generally not make a final permit decision until the NCDWR issues, denies, or waives the state Certification as required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice, combined with the appropriate application fee, at the NCDWR Central Office in Raleigh constitutes initial receipt of an application for a 401 Certification. A waiver will be

deemed to occur if the NCDWR fails to act on this request for certification within sixty days of receipt of a complete application. Additional information regarding the 401 Certification may be reviewed at the NCDWR Central Office, 401 and Buffer Permitting Unit, 512 North Salisbury Street, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for a 401 Certification should do so, in writing, by May 21, 2014 to:

NCDWR Central Office
Attention: Ms. Karen Higgins, 401 and Buffer Permitting Unit
(USPS mailing address): 1650 Mail Service Center, Raleigh, NC 27699-1650

Or,

(physical address): 512 North Salisbury Street, Raleigh, North Carolina 27604

North Carolina Division of Coastal Management (NCDCM):

The application did not include a certification that the proposed work complies with and would be conducted in a manner that is consistent with the approved North Carolina Coastal Zone Management Program. Pursuant to 33 CFR 325.2(b)(2) the Corps cannot issue a Department of Army (DA) permit for the proposed work until the applicant submits such a certification to the Corps and the NCDCM, and the NCDCM notifies the Corps that it concurs with the applicant's consistency certification. As the application did not include the consistency certification, the Corps will request, upon receipt, concurrence or objection from the NCDCM.

Based upon all available information, the Corps determines that this application for a Department of Army (DA) permit does not involve an activity which would affect the coastal zone, which is defined by the Coastal Zone Management (CZM) Act (16 U.S.C. § 1453).

Evaluation

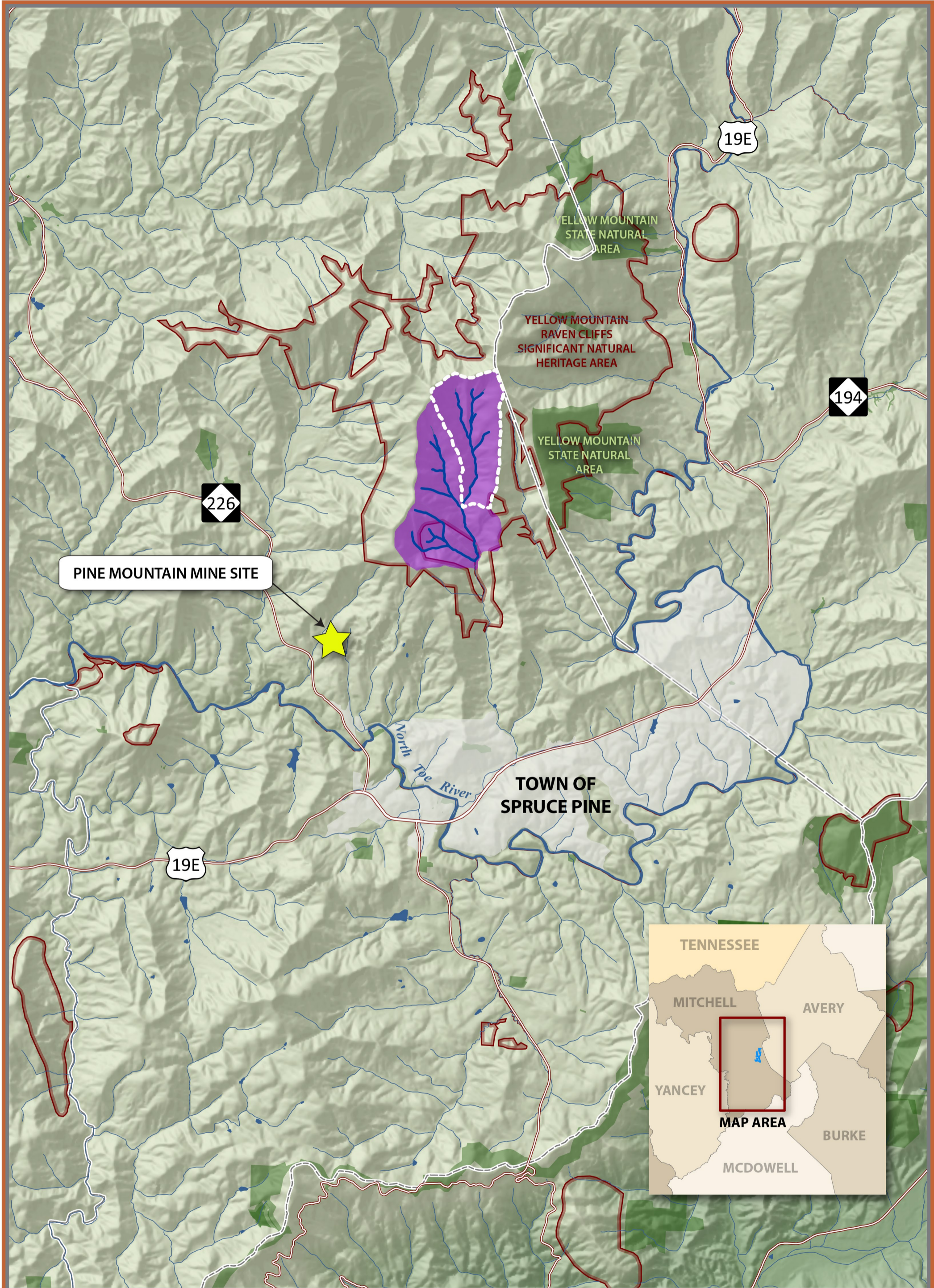
The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

Commenting Information



The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidated State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

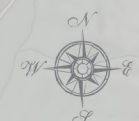
Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

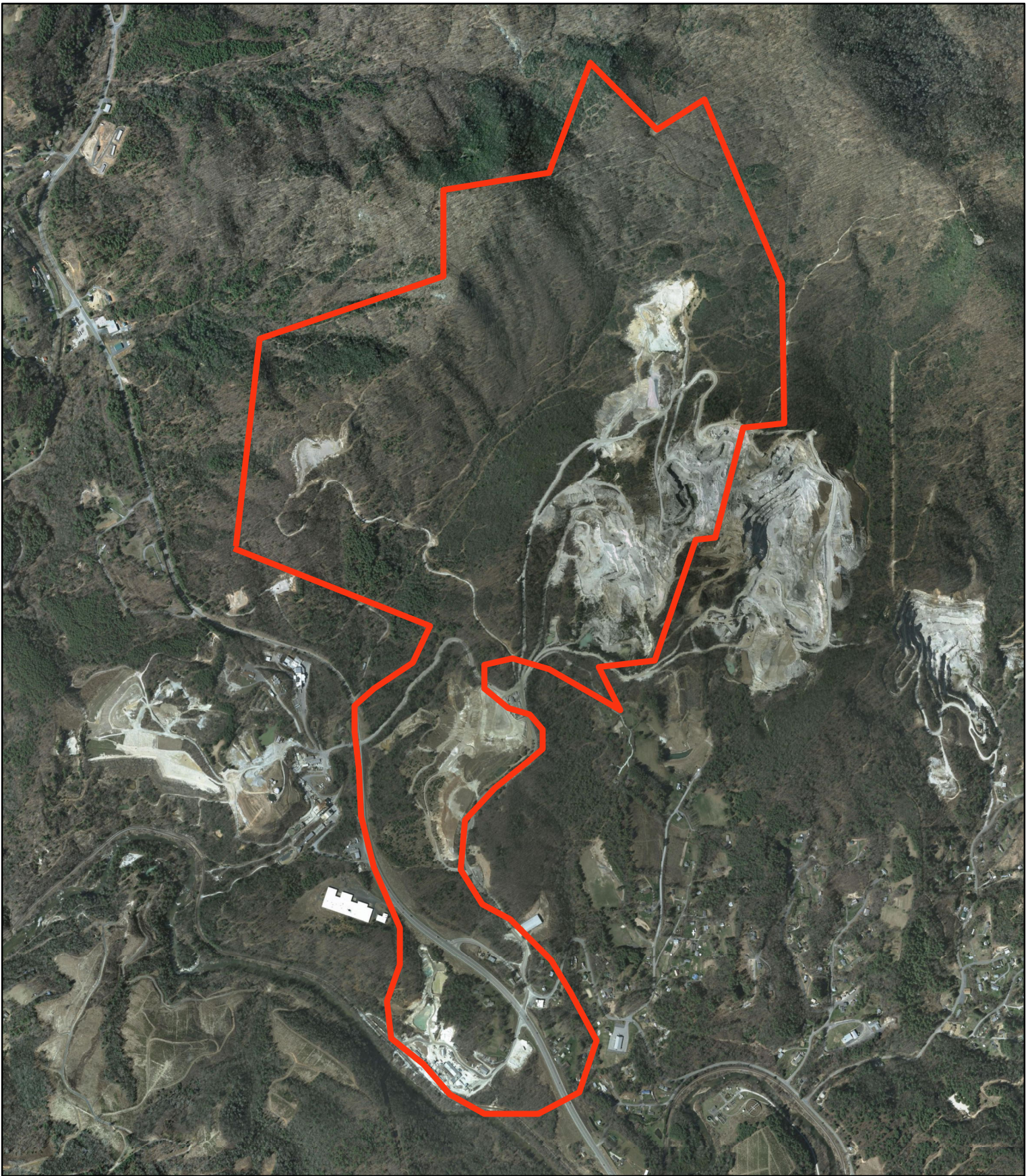
The Corps of Engineers, Wilmington District will receive written comments pertinent to the proposed work, as outlined above, until 5pm, May 21, 2014. Comments should be submitted to Tasha Alexander, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, North Carolina 28801-5006, at (828) 271-7980.



**FIGURE 1:
BEAVER CREEK
PRESERVATION PROJECT
REGIONAL LOCATION & NATURAL HERITAGE**

-  PROJECT AREA
-  BEAVER CREEK WATERSHED





0 0.125 0.25 0.5 0.75 1 Miles

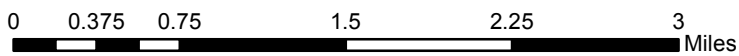
Property Overview

2010 Aerial Imagery

Pine Mountain; Mitchell County



WNR
Wetland and Natural Resource Consultants



Property Overview

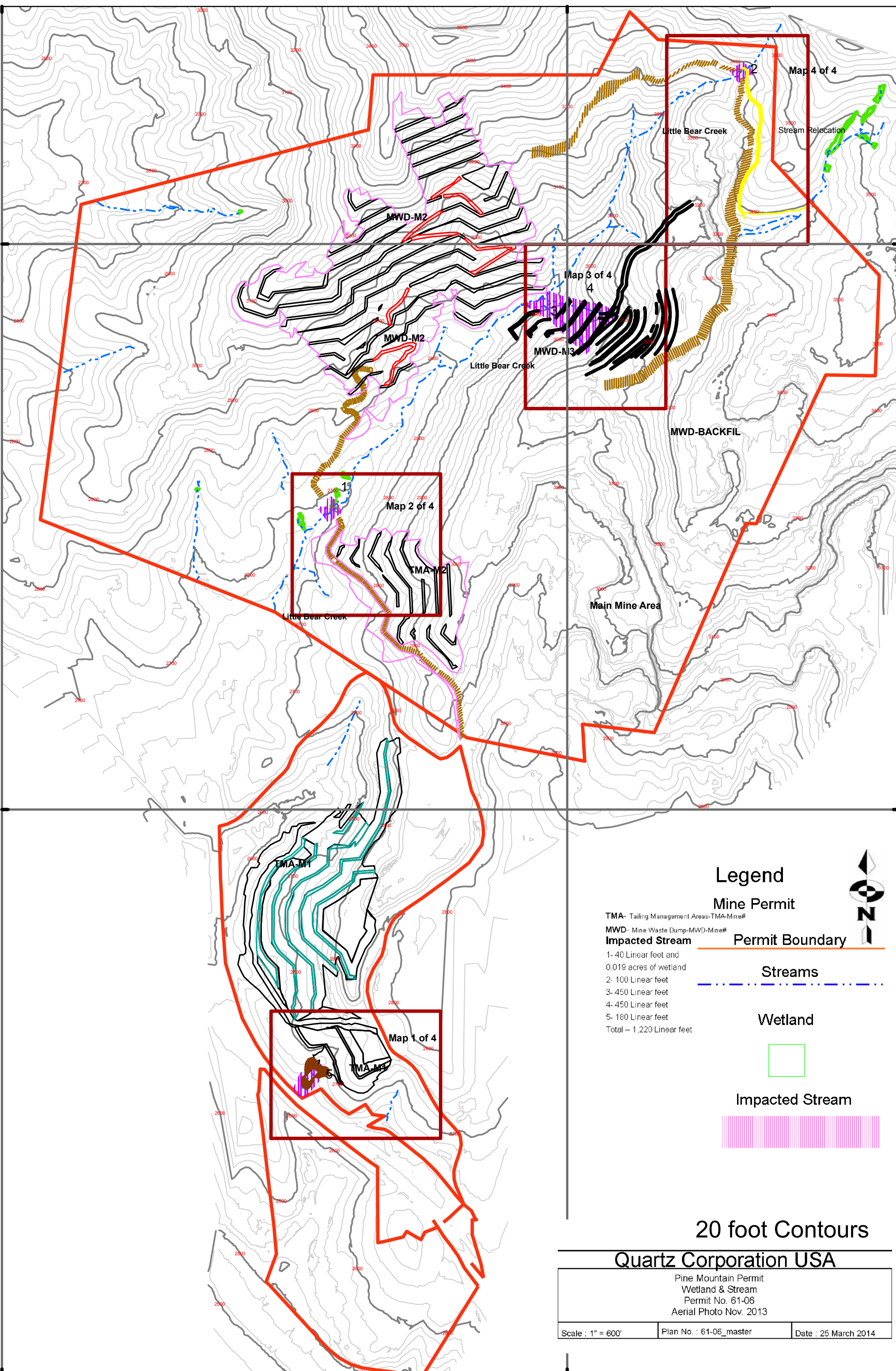
USGS Topography

Pine Mountain; Mitchell County



WNR

Wetland and Natural Resource Consultants



Legend

Mine Permit

TMA- Tailing Management Areas-TMA-Mine#

MWD- Mine Waste Dump-MWD-Mine#

Impacted Stream

- 1- 40 Linear feet and 0.019 acres of wetland
- 2- 100 Linear feet
- 3- 450 Linear feet
- 4- 450 Linear feet
- 5- 180 Linear feet
- Total - 1,220 Linear feet

Permit Boundary

Streams

Wetland

Impacted Stream



20 foot Contours

Quartz Corporation USA

Pine Mountain Permit
 Wetland & Stream
 Permit No. 61-06
 Aerial Photo Nov. 2013

Scale : 1" = 600'	Plan No. : 61-06_master	Date : 25 March 2014
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Map 1 of 4

2800

2700

2600

TMA-M4

20 foot Contours

Legend

Mine Permit

Permit Boundary

Streams

Wetland

Impacted Stream

TMA- Tailing Management Areas-TMA-Mine#

MWD- Mine Waste Dump-MWD-Mine#

Impacted Stream

- 1- 40 Linear feet and 0.019 acres of wetland
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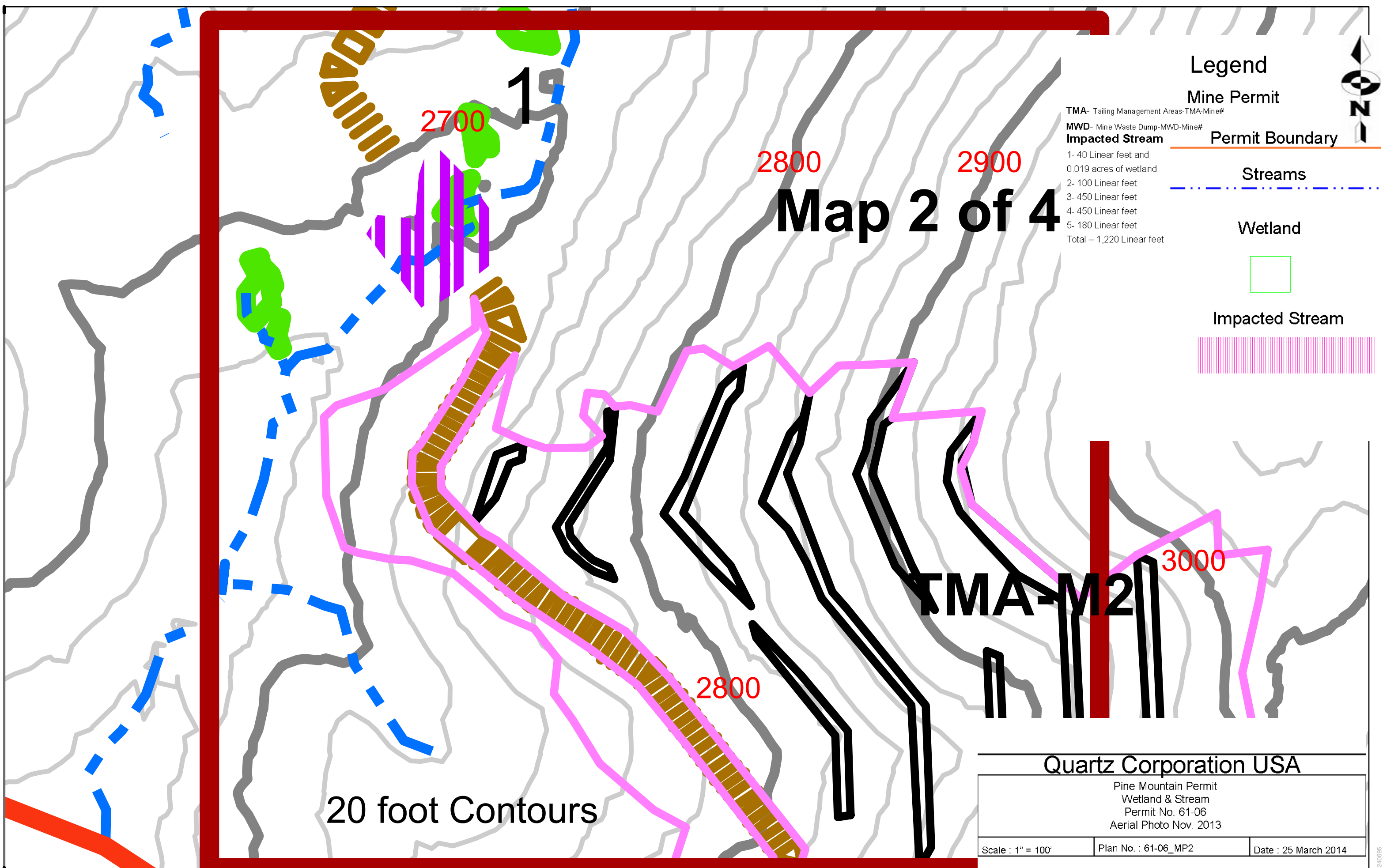
Quartz Corporation USA

Pine Mountain Permit
 Wetland & Stream
 Permit No. 61-06
 Aerial Photo Nov. 2013

Scale : 1" = 100'

Plan No. : 61-06_MP1

Date : 25 March 2014



Legend

Mine Permit

Permit Boundary

Streams

Wetland

Impacted Stream

TMA- Tailing Management Areas-TMA-Mine#

MWD- Mine Waste Dump-MWD-Mine#

Impacted Stream

- 1- 40 Linear feet and 0.019 acres of wetland
- 2- 100 Linear feet
- 3- 450 Linear feet
- 4- 450 Linear feet
- 5- 180 Linear feet
- Total - 1,220 Linear feet



Map 2 of 4

20 foot Contours

TMA-M2

Quartz Corporation USA

Pine Mountain Permit
 Wetland & Stream
 Permit No. 61-06
 Aerial Photo Nov. 2013

Scale : 1" = 100'

Plan No. : 61-06_MP2

Date : 25 March 2014

3000

3000

Map 3 of 4

4

2900

3

3100

3000

3200

MWD-M3

Legend

Mine Permit

TMA- Tailing Management Areas-TMA-Mine#

MWD- Mine Waste Dump-MWD-Mine#

Impacted Stream

- 1- 40 Linear feet and 0.019 acres of wetland
- 2- 100 Linear feet
- 3- 450 Linear feet
- 4- 450 Linear feet
- 5- 180 Linear feet
- Total - 1,220 Linear feet

Permit Boundary

Streams

Wetland

Impacted Stream



20 foot Contours

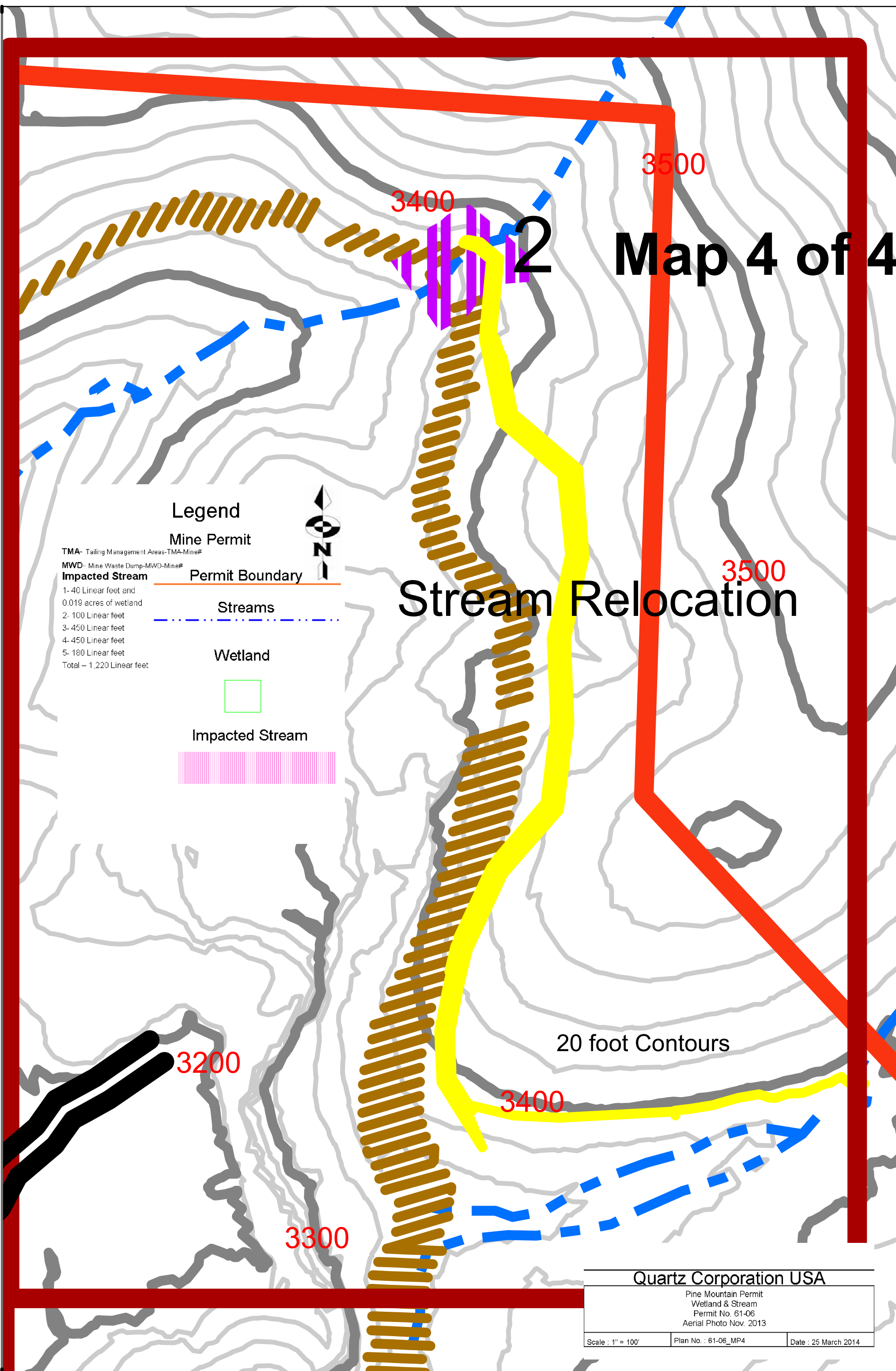
Quartz Corporation USA

Pine Mountain Permit
Wetland & Stream
Permit No. 61-06
Aerial Photo Nov. 2013

Scale : 1" = 100'

Plan No. : 61-06_MP3

Date : 25 March 2014



2 Map 4 of 4

Stream Relocation

Legend

Mine Permit
 TMA- Tailing Management Areas-TMA-Mine#
 MWD- Mine Waste Dump-MWD-Mine#

Permit Boundary

Streams

Wetland

Impacted Stream

1- 40 Linear feet and 0.019 acres of wetland
 2- 100 Linear feet
 3- 450 Linear feet
 4- 450 Linear feet
 5- 180 Linear feet
 Total - 1,220 Linear feet



20 foot Contours

Quartz Corporation USA

Pine Mountain Permit
 Wetland & Stream
 Permit No. 61-06
 Aerial Photo Nov. 2013

Scale : 1" = 100' Plan No. : 61-06_MP4 Date : 25 March 2014