

INTER AGENCY MEMORANDUM

To: Craig Jones, Senior MEPA/MSFA Coordinator, Montana Department of Environmental Quality

From: Gary Bertellotti, Region 4 Supervisor, Montana Fish, Wildlife & Parks

Date December 8, 2017

RE: Data and issues of concern request from FWP for EIS on the proposed Tintina Resources Inc. Black Butte Copper Mine.

Dear Craig;

This letter is in response to DEQ's request to FWP that our agency provide an overview of topics of concern that FWP has regarding potential impacts of the proposed Black Butte Copper Mine to fish, wildlife, and recreational resources in the immediate project area and beyond. FWP also offers, as requested, some practical options for mitigation of these impacts that we hope DEQ will consider as you move forward in the permitting process. FWP is optimistic that by working proactively with DEQ, FWP may be able to identify some mitigation actions and funding that would offset some of the harmful impacts of the mine. Ideally these mitigations would be agreed upon by the Applicant in the permit and enforceable by DEQ.

We appreciate the opportunity to work with DEQ on this important project and offer our assistance and expertise throughout your environmental analysis. This collaborative effort is a good example of two state agencies working in conjunction to fulfill our respective missions and serve the people and resources of Montana.

Sincerely,

A handwritten signature in blue ink, appearing to read "Gary Bertellotti". The signature is fluid and cursive, with the first name "Gary" being more prominent.

Gary Bertellotti
Region 4 Supervisor

C: Linnaea Schroeer, MEPA Coordinator FWP

General Concerns

One area of concern for FWP is the lack of a specific bond to deal with both unexpected and intermittent low-level chronic impacts to aquatic, terrestrial, and recreational resources from mining activities as well as the more obvious, permanent impacts. The mining permit will likely require the applicant to comply with discharge permits that enforce surface water quality standards. However, there are a host of other resources and issues of concern that DEQ should consider in the EIS process: impacts to wildlife; impacts to recreation on a broad scale within the area; and enforcement of FWP laws and other socio-economic factors all need to be considered in the environmental analysis of the proposed project and, if possible, mitigated for in some way.

During the EIS analysis of the proposed permit, we encourage DEQ and its contractor to incorporate a thorough assessment of the broad spectrum of resources present in the area and the impacts that are likely to occur to those resources during all phases of the mine (exploration, development, operations, restoration, and post-mine activities). We hope you will consider incorporating proactive and effective conservation tools that other companies in Montana have successfully employed. Models that provide funding for resource protection are numerous and can be seen in the hydroelectric, oil and gas, wind energy and even hard rock mining industries. We have identified some such possible protective and enhancement measures, outlined below, that would prove for a cooperative effort and benefit the people and fish and wildlife resources in the area and beyond.

Water Quality and Quantity Concerns

As stated earlier, FWP is concerned by the lack of a specific bond to address chronic impacts to fisheries and aquatic resources from mining activities. The mining permit will likely require the applicant to comply with discharge permits that enforce numeric surface water quality standards. Discharge permits generally involve monthly monitoring and reporting. In the event of an accident that results in exceedance of Montana numeric surface water quality standards, the permittee may be subject to daily fines. However, FWP has concerns with this method of compliance. First, there is a broad range of latitude that may cover an exceedance under the incidental discharge clause of the storm water discharge permit. Next, there is no mechanism that evaluates impacts that are cumulative and/or chronic. For example, elevated levels of monitored compounds can result in a chronic impact to aquatic resources and habitat while remaining within numeric standards. FWP has recommended the Applicant adopt an aquatic monitoring program that would aid in detecting these chronic changes over time, but there is no mechanism for remediation if elevated levels occur or if chronic impacts are detected. Even if water quality remains within the standards, there could be an impact to fisheries and aquatic resources.

FWP can cite several examples where DEQ's enforcement division has been unwilling to apply violations to a broad range of incidents for both point-source and storm water discharges. In our experience, investigators have a great deal of latitude to make judgements on the severity of a violation and are frequently unwilling to issue violations that include fines. Also, we are uncertain if DEQ fines are collected for the purpose of mitigating impacts or if the fines go to a general revenue account with DEQ? Under the Duty to Mitigate clause for application for a MPDES permit, the applicant ".....shall take reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affected human health or the environment..." FWP believes the subjectivity of terms in this clause allows a great deal of room for interpretation and responsibility by the applicant. We recommend the EIS evaluate these issues.

FWP recommends DEQ consider the Montana Water Quality Act – Non-Degradation Rules (17.30.701) in the EIS analysis and specifically define a mixing zone in accordance with ARM 17.30.501. We are uncertain if the mine compound, tailings pond and water treatment facility would be permitted under a traditional MPDES and MS4-type permit. One area of concern with the MS4-type permit is that the permittee is required to develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in ARM 17.30.1102(7)) into the permitted Small MS4 for illicit discharge, detection and elimination of pollutants. FWP would recommend DEQ and other responsible agencies work closely with the permittee to develop BMPs and a program that affords a high degree of assurance against accidental discharge or exceedance of standards. In the event an applicant fails to comply with Non-Degradation Rules or discharge permit standards, what is the risk of losing section 401 Federal Clean Water Act certification for the project? We recommend these issues receive consideration and analysis in the EIS.

FWP holds many water rights in the Smith River basin and we believe diminished water quality may create a cumulative impact along with diminished water quantity. The bond associated with a mining permit is typically a reclamation bond and therefore has limited scope. As such, FWP would like to request a separate natural resources related bond in the amount of \$10 million. This bond would cover chronic and cumulative impacts or accidents affecting aquatic systems, recreation, wildlife, and would address additional demands on FWP resources associated with the proposed mining activity, including Sheep Creek upstream and downstream of the mine, the Smith River and adjacent geographic areas. The bond is revocable if monitoring or some other metric can be used to determine that a chronic or cumulative impact is occurring. The bond would be used to remediate or mitigate the impacts on-site or within the Smith River drainage or the associated geographic area and would be connected to water quality, fisheries impacts, wildlife, recreation and/or results in increased demands of FWP resources. DEQ and FWP could work together to develop thresholds or triggers that would activate the bond.

Montana FWP has experience with several conservation-type funds through Federal Energy Regulatory Commission (FERC) licensed hydroelectric and wind turbine electric projects. FWP is recommending DEQ require the Applicant to develop a **conservation fund** to protect or enhance fish, wildlife, habitat and recreation resources in the Smith River basin. We propose three separate funds to address the increased demands on fish, wildlife, habitat and recreation.

Fisheries and Aquatic

Although the level of impact that the proposed Black Butte copper mine would have on water quality and quantity is uncertain, we anticipate that the additional 200 workers and nearly 300 residents to the White Sulphur Springs community would create additional demands on sport fishery resources. A conservation fund designed to improve fish populations and habitat would improve the current status of this valuable resource as well as act as a hedge against possible future impacts. Montana FWP manages Smith River State Park, Newlan Creek Reservoir, Sutherlin Reservoir and Fort Logan FAS, and there are numerous other streams, lakes and reservoirs in the basin that provide angling to the public. The area surrounding the proposed mine contains a wealth of supporting habitat that helps maintain wild fish populations throughout the basin. The present demands on the water resources in the Smith River basin are extreme. Implementing projects that improve efficiency of existing water use as well as the quality of that water benefits a broad range of water users.

Recreation Concerns:

The Smith River corridor is a national treasure protected by a permit access system to manage recreation for our constituents, provide a high-quality experience, and keep resource impacts within acceptable standards. Other water-based areas of concern are the numerous small streams and reservoirs in the basin that provide recreational opportunities for boating, camping, and fishing as well as consumptive use. Example of possible impacts to Smith river-area resources are increased public access from USFS trails, additional use of Camp Baker for non-Smith river floaters, and increased violations, conflicts, and complaints and the necessary law enforcement response. These impacts would be likely for all publicly accessible recreation areas in the basin.

Some of the potential impacts are social in nature as demographics change due to the influx of workers from diverse backgrounds and cultures. Examples of likely problems include a lack of understanding of fish and game laws and basic outdoor ethics, increased camping and possibly squatting on public land, private property rights, and others. When large projects like the proposed Black Butte mine are first initiated, the necessary community infrastructure often lags, creating a shortage of housing and other services that cause people to use neighboring public land for camping, bathing, etc. These areas were never meant for this type of use and problems soon develop. Besides FWP, other public lands in the area managed by USFS and DNRC would also be affected.

Trespass on private lands could also potentially increase with the influx of new workers and their families. Higher levels of trespass and associated private property damage can make landowners reluctant to allow legal access for licensed hunters and anglers. Reduced legal access concentrates use in other areas, restricts FWP's ability to manage wildlife through hunting, and hinders FWP's ability to work with private landowners to accomplish a wide range of wildlife and habitat management objectives.

Wildlife Concerns:

Wildlife throughout the basin and the surrounding areas provide opportunities for hunting, wildlife viewing and are part of the natural ecosystem. The many species in the area are managed both on public and private lands and access to wildlife requires cooperation with private landowners and respect for landowners. With an influx of mine employees comes a lack of the balance between private rights, public lands and access to wildlife for many reasons.

As the number of employees increase, both worker and mine related traffic also increases, resulting in vehicle/wildlife collisions. Wildlife and human safety become a concern and can have cumulative effects on wildlife populations along with illegal take, change to migration patterns and habitat use. When combined with other impacts, the influx of workers could significantly reduce wildlife populations of non-game and large game animals. These potential issues also put increased demands on FWP staff and with the increased workloads make their management of the many species difficult. Many of these foreseeable issues could be avoided with proactive measures put in place on the ground by FWP via public awareness and education.

Of additional concern is the fact that the grizzly bear is now present in the proposed mine area. This ESA-listed species requires additional management and educational resources as FWP works to decrease conflicts with humans, livestock, etc. The same threats and impacts that will be present for all wildlife

will apply to grizzly bears too, such as illegal killing, collisions with vehicles, habitat loss, etc. The EIS must include an analysis of impacts to this federally listed species, and the operational plan must provide protections.

Enforcement Concerns:

Workers from the mine may not understand or respect the laws related to FWP. With the increase in people to the area there is high probability of significant increase in violations to include wildlife, recreation, fisheries and trespass violations. Violation detection rates will decline due to the extra workload on current staff and impacts to these resources will increase proportionately.

Secondary impacts will include landowner relationships, Block management public access program impacts, land uses on the Smith river corridor and other FASs in the area, as well as the State Park and Wildlife Management area. Other programs like boating safety, snowmobile and ATV trail use, and others could also be impacted.

As such, FWP is recommending Tintina Resources Inc. (TRI) Develop a Conservation Fund to maintain and improve those natural resources in the basin. The Fund would be held by FWP in a dedicated account with specific uses identified and process to allocate these as specified by that process for those specified uses.

CONSERVATION FUND (CF) COMPONENT 1. Aquatic and Fisheries Resources:

FWP is recommending Tintina Resources Inc. (TRI) contribute to the (CF) for Fisheries and Aquatic Resources Conservation to maintain and improve these resources in the basin. This portion of the fund shall be defined as follows;

- A fund designed to maintain and improve sport angling, conservation, habitat, fisheries and aquatic resources in the Smith River Basin.
- The fund would be administered by a Supervisory Committee composed of representatives from the Montana Department of Fish, Wildlife and Parks, U.S. Forest Service, a representative from the Missouri River Flyfishers, Pat Barnes Missouri River Chapter of Trout Unlimited, undetermined representative 1 and Tintina Resources Inc. The Committee would be permanently chaired by a representative of TRI and would be a non-voting member of the Committee. The Committee serves on a volunteer basis and will not be paid salaries, per diem or operations from the Fund.
- The Chair organizes the annual meeting to be held in January each year, keeps minutes of the meeting, maintains the bank account, directs vendors to proceed with the work, disburses payments, deposits funds with a Trustee (DEQ or FWP Dedicated account) for payment of authorized projects, prepares and submits annual reports to DEQ and the Committee members by December of each year.
- The Committee would:
 - evaluate sport fishery, conservation, research, management and habitat related projects located in Smith River Basin,
 - Solicit proposals from resource management agencies (FWP, USFS) by December 1,
 - meet by December 20 to discuss the previous projects and vote on proposals for the up and coming calendar year,

- prepare a report each year by January 15 specifying the previous years projects, the minutes from the annual meeting and the status of the bank account,
 - evaluate and approve specific plans for the projects to be funded;
 - prepare purchase orders;
 - evaluate completed projects;
- Proposals will be submitted to the Committee by December 1 each year and shall include a brief statement, budget and cost share.
- Cost share is encouraged but not mandatory. Cost share includes in-kind services and operations.
- Applications shall be considered during the annual meeting. Voting on applications shall be through simple majority. The Chair shall mediate any disputed vote based on the merits of application/project and how it fits with the funds purpose as described below.
- Fund begins with an initial deposit. Each year after the annual deposit shall occur by January 1 each year. The annual amount shall be the sum of the previous year's installment plus 2.5% to offset for inflation. The duration of the annual installments shall be for the life of the mine as permitted including all expansions up to completed reclamation, plus 10 years. TRI (or successor) reserves the right to make a final installment after the mine is reclaimed that is the sum of the 10-year amount that includes each annual inflation correction. There is no cap on the amount the fund can accumulate.
- The Fund shall be used to;
 - Develop or maintain public fishing opportunities, conservation of fish and aquatic organisms, research, management, equipment and operations, habitat enhancement for fisheries and aquatic resources and acquisition in the Smith River Basin.
 - Employ seasonal employees to help manage or maintain aquatic resources and habitat,
 - As is common with other conservation funds, at some point projects will become less available. For this reason, no more than 10% of the annual balance may be used for off-site projects outside of the Smith River Basin and only for research, habitat enhancement and acquisition. No offsite funds shall be used to fund personnel. It is the spirit of the off-site fund to help off-site projects succeed and not for multi-year maintenance, unless specifically approved by the Supervisory Committee.

CONSERVATION FUND (CF) COMPONENT 2. Recreation Resources:

There are anticipated impacts to the recreation resources in the Smith River drainage. Montana FWP manages the Smith River floater corridor, Newlan Creek Reservoir, Sutherlin Reservoir and Fort Logan. We anticipate the additional 200 workers and nearly 300 residents to the White Sulphur Springs community may create added demands on these recreational resources. Undoubtedly there would be an increase in camping and angling at Newlan Creek Reservoir, Sutherlin Reservoir and Fort Logan FAS. The Smith River floater corridor is regulated, but there could be increased off-season floating and additional camping at Camp Baker. As such, FWP is recommending the Applicant develop a Recreation Conservation Fund to maintain and improve the recreational resources in the Basin. The Fund shall be described as:

- A fund designed to maintain and improve recreational resources in the Smith River Basin.

- The Recreation Fund would be administered by a Supervisory Committee to be composed of representatives from the Montana Department of Fish, Wildlife and Parks Fishing Access and State Parks divisions, U.S. Forest Service, undetermined representative 1, undetermined representative 2, and Tintina Resources Inc. The Committee would be permanently chaired by a representative of TRI and would be a non-voting member of the Committee. The Committee serves on a volunteer basis and will not be paid salaries, per diem or operations from the Fund.
- The Chair organizes the annual meeting to be held in January each year, keeps minutes of the meeting, maintains the bank account, direct vendors to proceed with the work, disburses payments, deposit funds with a Trustee (bank?) for payment of authorized projects, prepares and submits annual reports to DEQ and the Committee members by December of each year.
- The Committee would:
 - evaluate recreation enhancement projects located in Smith River Basin,
 - Solicit proposals from recreation management agencies (FWP, USFS) by December 1,
 - meet by December 20 to discuss the previous projects and vote on proposals for the up and coming calendar year,
 - prepare a report each year by January 15 specifying the previous year's projects, and the minutes from the annual meeting and the status of the bank account,
 - evaluate and approve specific plans for the projects to be funded;
 - prepare purchase orders,
 - evaluate completed projects,
- Proposals will be submitted to the Committee by December 1 each year and shall include a brief statement, budget and cost share.
- Cost share is encouraged but not mandatory. Cost share includes in-kind services and operations.
- Applications shall be considered during the annual meeting. Voting on applications shall be through simple majority. The Chair shall mediate any disputed vote based on the merits of application/project and how it fits with the funds purpose as described below.
- Fund begins with an initial deposit. Each year after the annual deposit shall occur by January 1 each year. The annual amount shall be the sum of the previous year's installment plus 2.5% to offset for inflation. The duration of the annual installments shall be for the life of the mine as permitted including all expansions up to completed reclamation, plus 10 years. TRI (or successor) reserves the right to make a final installment after the mine is reclaimed that is the sum of the 10-year amount that includes each annual inflation correction. There is no cap on the amount the fund can accumulate.
- The Fund shall be used to;
 - Develop or maintain public fishing access in the Smith River Basin and Smith River State Park. This includes acquisition, maintenance, weed spraying, equipment, infrastructure, building and operations,
 - Employ seasonal employees to help manage or maintain fishing access, recreation access and recreation floating opportunity,
 - As is common with other conservation funds, at some point projects will become less available. For this reason, no more than 10% of the annual balance may be used for off-site projects outside of the Smith River Basin and only for acquisition, maintenance or development. No offsite funds shall be used to fund personnel. It

is the spirit of the off-site fund to help off-site projects succeed and not for multi-year maintenance, unless specifically approved by the Supervisory Committee.

CONSERVATION FUND (CF) COMPONENT 3. Wildlife and Law Enforcement resources.

Although the level of impact that the proposed Tintina Black Butte copper mine would have on fisheries, wildlife, and recreational resources is uncertain, we anticipate the additional 200 workers and nearly 300 residents to the White Sulphur Springs community would create additional demands on all these resources, to include extra demands on FWP law enforcement. The present demands on the wildlife and law enforcement resources in the Smith River basin are high. A conservation fund designed to improve wildlife populations and habitat could improve the status over time. Implementing projects that improve wildlife habitat and enforces fish and wildlife laws benefits a broad range of users.

As such, FWP is recommending Tintina Resources Inc. (TRI) develop a Wildlife and Enforcement Conservation Fund to maintain and improve these resources in the Basin. The Fund shall be defined as:

- A fund designed to maintain and improve wildlife, hunting, conservation, habitat and terrestrial resources and fish and wildlife law enforcement in the Smith River Basin.
- The fund would be administered by a Supervisory Committee composed of representatives from the Montana Department of Fish, Wildlife and Parks wildlife and enforcement divisions, U.S. Forest Service, a representative from the Rocky Mountain Elk Foundation, Meagher County Sheriff Department, undetermined representative 1 and Tintina Resources Inc. (TRI). The Committee would be permanently chaired by a representative of TRI and would be a non-voting member of the Committee. The Committee serves on a volunteer basis and will not be paid salaries, per diem or operations from the Fund.
- The Chair organizes the annual meeting to be held in January each year, keeps minutes of the meeting, maintains the bank account, directs vendors to proceed with the work, disburses payments, deposits funds with a Trustee (Bank ?) for payment of authorized projects, prepares and submits annual reports to DEQ and the Committee members by December of each year.
- The Committee would:
 - evaluate wildlife, hunting, habitat, conservation, research and law enforcement related projects located in Smith River Basin,
 - Solicit proposals from resources management agencies (FWP, USFS) by December 1,
 - meet by December 20 to discuss the previous projects and vote on proposals for the up and coming calendar year,
 - prepare a report each year by January 15 specifying the previous years projects, the minutes from the annual meeting and the status of the bank account,
 - evaluate and approve specific plans for the projects to be funded;
 - prepare purchase orders;
 - evaluate completed projects;
- Proposals will be submitted to the Committee by December 1 each year and shall include a brief statement, budget and cost share.
- Cost share is encouraged but not mandatory. Cost share includes in-kind services and operations.

- Applications shall be considered during the annual meeting. Voting on applications shall be through simple majority. The Chair shall mediate any disputed vote based on the merits of application/project and how it fits with the funds purpose as described below.
- Fund begins with an initial deposit. Each year after the annual deposit shall occur by January 1 each year. The annual amount shall be the sum of the previous year's installment plus 2.5% to offset for inflation. The duration of the annual installments shall be for the life of the mine as permitted including all expansions up to completed reclamation, plus 10 years. TRI (or successor) reserves the right to make a final installment after the mine is reclaimed that is the sum of the 10-year amount that includes each annual inflation correction. There is no cap on the amount the fund can accumulate.
- The Fund shall be used to;
 - Develop or maintain public hunting opportunities, habitat acquisition, preservation or enhancement of wildlife and terrestrial resources, conservation of wildlife and terrestrial organisms, surveys, research, equipment, operations, fish and wildlife law enforcement in the Smith River Basin.
 - Employ seasonal employees to help manage or maintain wildlife resources, habitat and fish and wildlife law enforcement,
 - As is common with other conservation funds, at some point projects will become less available. For this reason, no more than 10% of the annual balance may be used for off-site projects outside of the Smith River Basin and only for research, habitat enhancement and acquisition. No offsite funds shall be used to fund personnel. It is the spirit of the offsite fund to help off site projects succeed and not for multi-year maintenance, unless specifically approved by the Supervisory Committee.