

MAINE LAND USE PLANNING COMMISSION
 Department of Agriculture, Conservation and Forestry
 22 State House Station - Augusta, Maine 04333-0022
 TEL (207) 287-2631 FAX (207) 287-7439

AGENDA

Meeting Date: February 12, 2020 Meeting Time: 10:00 AM

Meeting Location: [Jeff's Catering, 15 Littlefield Road, Brewer](#)

Est. Time	Attachment	Action #	Agenda Item	Action	Presenter
Administrative Matters 10:00 AM					
5 min.			Introductions	None	
5 min.	LINK		January 8, 2020 Commission Meeting Minutes	Acceptance	
10 min.			Director's Report	None	J. East
Permitting & Zoning Matters					
20 min	LINK	SLC 12	Three Rivers Solar <ul style="list-style-type: none"> • Site Law certification of a grid-scale solar energy facility in T-16 MD 	Decision	S. Beyer
10 mins	LINK		Niboban on Rangeley Lake LLC <ul style="list-style-type: none"> • Request for public hearing 	Decision	B. Hinkel
10 min	LINK		Atkinson Deorganization <ul style="list-style-type: none"> • Consideration of staff-initiated rezoning 	Decision	N. Kirk-Lawlor
60 min	LINK		Metallic Mineral Mining <ul style="list-style-type: none"> • Overview of metallic mineral mining • Re-zoning process for metallic mineral mining • Brief introduction to ZP 779 	Discussion	R. Marvinney S.Beyer J.Ouellette
Lunch Break – 1 Hour					
45 min	LINK		Conceptual Standards for Marijuana Facilities <ul style="list-style-type: none"> • Discussion of conceptual standards for marijuana facilities 	Discussion	N. Kirk-Lawlor
Compliance Matters					
15 min	LINK	EC 18-26	David and Ashley Cox <ul style="list-style-type: none"> • Administrative Settlement Agreement 	Decision	D. Kaczowski
Commissioner Comments					

Adjourn

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MINUTES

REGULAR MONTHLY MEETING

Jeff's Catering, 15 Littlefield Road, Brewer
February 12, 2020; 10:00 am Start Time

COMMISSIONERS PRESENT

Everett Worcester, Chair	Millard Billings	James May	Gwen Hilton
Betsy Fitzgerald, Vice-Chair	William Gilmore	Peter Pray	Durward Humphrey
Lee Smith (abstained from all votes)			

STAFF PRESENT

Judy East, Executive Director	Tim Carr, Senior Planner
Stacie Beyer, Planning Manager	Karen Bolstridge, Downeast Senior Regional Rep.
Jean Flannery, Permitting & Compliance Manager	Corinne Michaud-LeBlanc, E. Millinocket Senior Regional Rep.
Bill Hinkel, P&C Regional Supervisor	Kelly Shores, Downeast Regional Rep.
Naomi Kirk-Lawlor, Senior Planner	Tina Corkum, Secretary Associate

OTHERS PRESENT

Bob Marvinney, Director, Bureau of Resource Information and Land Use Planning
Lauren Parker, AAG *See attached Sign in Sheet(s)*

*Note: Commission votes are recorded in the following order:
number voting in favor of a motion – number voting against a motion – number abstaining – number absent*

ADMINISTRATIVE MATTERS

Introductions:

Introductions were made by members of the Commission board.

Minute Approvals:

Commissioner Billings moved to approve the January 8, 2020 minutes; Commissioner May seconded;
Vote: 8-0-0-0 Unanimous

DIRECTOR'S REPORT 02/12/2020

- Commission updates
 - Staff have completed ~99% of the orientation process for new Oxford County Commissioner, Lee Smith
 - Lee has completed public hearing process and senate confirmation
 - We are waiting on paperwork from Secretary of State
 - It needs to be signed in front of Dedimus Justice
 - Will be complete and she will be at the table at the March meeting
 - Commissioner Gilmore, Franklin County is reappointed for another four year term

- Public hearing in front of ACF committee at the legislature is scheduled for February 27
 - JCE will be participating at that hearing
- Staff Updates
 - Chief Planner Position posted – internal posting within department, resumes are due Feb. 20
 - Once this position is filled, we will post for the Senior Planner position that will then be vacant
 - Additional help is needed – scope of work in Planning Dept. in particular is remarkable
 - We're also exploring the option for interns
 - Inquiry from grad student from Antioch University who is available for a couple of months
 - We're checking references, we may be using her services to help with some of the solar rules that need updating to prepare for a significant increase in solar development activity anticipated within the next year
 - Inquiry into whether we would hire interns from the Margaret Chase Smith Policy Center, and we're exploring this as well.
- Project Updates
 - Memo was sent from Bill Hinkel about the Brookfield Hydro Power Plant that was permitted by the commission, they have sought to have that permit surrendered because they discovered that they don't need to do the work they thought they needed
 - Sent by email, any questions ask Bill Hinkel
 - Large level of activity going on at staff level – LD 2094 – legislative proposals following from the Maine Indian Claims Settlement Act
 - Task Force has made recommendations to allocate all management and regulation of tribal lands including not just reservation lands but all lands owned by the tribe; all permitting land use and natural resources management activities to the tribe
 - This would constitute a very large shift in the way the LUPC manages the lands in the UT, and we're providing the magnitude of the lands, the number of protection areas, and permit activity to the commissioner
 - Public hearing is this Friday (February 14, 2020)
- Anticipated Calendar going forward
 - Overall, the level of activity that we just went over with new commissioner Lee Smith in both divisions is considerable
 - You'll be hearing in the coming weeks about the adoption of a revised zoning map in the Whetstone Pond, Foss Pond, and Hilton Ponds Concept Plan
 - We will be reporting to you on the tracking program for the adjacency rule changes
 - Weyerhaeuser Petition to abandon the concept plan in the Moosehead Lake Region
 - We'll be coming forward with an updated guidance document on site law certification and land use standards
- JCE scratching the surface of what's going on in both Planning and Permitting & Compliance
 - So, this is a very quick overview
- Commissioner Worcester asked roughly how much land are we talking about if transferring land use control to the Indian tribes?
 - Ellen Jackson is working on the answer, it's in the range of 50,000 acres in several counties; Ellen is still having to map some of the districts that weren't mapped in more remote areas, so we don't have a final number, but it is of that magnitude.
 - After meeting note – final calculations have determined the area is in the range of 175,000 acres.

CERTIFICATION MATTER

SLC 12 Three Rivers Solar – Stacie Beyer - Site Law Certification of a grid-scale solar energy facility in T-16 MD

Stacie Beyer presented the staff recommendation on the Site Law Certification request for the Three Rivers Solar project in T16 MD BPP. Stacie described the location of the project, provided background information on Site Law Certifications, and explained the history and existing conditions of the parcel. She outlined elements and showed the proposed layout of the project. She also explained that all Commission setbacks will be met by the project design. Stacie then reviewed the applicable land use standards that are not being considered by the DEP in its review. Because Staff found that the proposed project is an allowed use in the subdistricts in which it is located and will meet the applicable LUPC land use standards, Staff recommended that the Commission approve SLC 12 for Three Rivers Solar.

Commissioner Gilmore asked if a portion of the original parcel was carved out for the project. Stacie explained that it was her understanding that the entire 1115-acre parcel was conveyed to Three Rivers Power, but just a portion was rezoned to D-CI for the project. Commissioner Gilmore followed up by asking if there was more land available on the parcel that could be used for the project without disturbing wetlands. Kirk Ball from Acheron Engineering answered the question on behalf of Three Rivers Solar. He clarified that the 1115-acre parcel was conveyed by lease, not in fee. He stated that there are no direct impacts to wetlands from the project as designed now. The area was previously cleared, and the scope of the project is within the existing cleared area.

Commissioner Fitzgerald asked about the term of the lease. Mr. Ball indicated that he believed the term is for 50 years.

Commissioner Hilton asked if there is something in the LUPC rule relating to prime farmland. Stacie replied that in both the D-CI and D-RD subdistricts, grid-scale solar energy facilities are an allowed use with a permit. Except if they are on prime farm land soils, solar projects are an allowed use with a permit by special exception, and there are additional standards that must be met. Commissioner Hilton followed up with a question on whether the issue of locating on prime farm lands would be an issue for the Commission in a Site Law certification process. Stacie explained that what the Commission would have to do in a certification process, if a project is located on prime farm land soils, which Three Rivers Solar is not, the Commission would have to make sure the criteria for the special exception are met before issuing an allowed use certification to the DEP.

Commissioner Billings moved to approve staff recommendation, Commissioner Fitzgerald seconded

Vote: 8-0-0-0

PERMITTING MATTER

Niboban on Rangeley Lake LLC – Bill Hinkel – Request for Public Hearing

Bill provided background information regarding subdivision permit SP 4097 and recent transfers of the development property from Rangeley Lake Irrevocable Trust to Petrov LLC to Niboban on Rangeley Lake, LLC, the applicant for the permit transfer. Bill explained the conditions of SP 4097 that would be transferred to the new owner and responsibilities that fall to the Niboban Camps Condominium Association. Bill identified the review criteria for permit transfers.

Bill identified that between January 2–7, 2020, five members of the public, all owners of condominium units within the Niboban subdivision, requested a hearing on the transfer application. The requests for hearing from Don Campbell, Sandra Laguerra, Hank Herdt, Amanda Christian, and Joanne Dunlap. In making a staff recommendation, Bill explained that hearings on an application are at the discretion of the Commission unless otherwise required by the Constitution of Maine or statute. In this instance, neither the Maine Constitution nor Maine statute requires a hearing. Commission staff may consider comments submitted by members of the public in deciding on the transfer application. In determining whether a hearing is advisable, the Commission shall consider the degree of public interest and the likelihood that information presented at the hearing will be of assistance to the Commission in reaching its decision.

Commission staff recommend that the Commission deny the requests for a hearing on the pending transfer application.

Commissioner Worcester asked if there were approximately ten members in the condo association and Bill responded that ten was a good estimate.

Commissioner Gilmore asked about who constructed building unit #11 and Bill responded that the current owner did. Commissioner Gilmore asked if there is any direct relationship between the original permittee and the instant applicant and Bill responded that they are two separate entities.

Commissioner Worcester asked if staff received any inquiries from any other people besides condo owners. Bill responded that no comments were received other than one or two general inquiries from other property owners in the vicinity. Commissioner Worcester asked if Bill would characterize the interest as being an issue that the general public has interest in and Bill responded that the interest has been limited to condo owners.

Director East asked Bill to characterize the number of inquiries received over the past several months regarding concerns that are not related to matters in which the Commission has authority. Bill responded that Commission staff have been working on this project for several years. Prior staff spent a considerable amount of time responding to messages, calls, conducting complaint investigations, and compliance evaluations since the permit was issued. Bill identified that in the past 3 months he has processed approximately 300 emails or other documents on this matter, mostly with condo owners and the applicant. Staff have put a lot of resource into sorting out what are issues for the Commission to address and what are matters for the Association to take up.

Commissioner Worcester stated that requests for the Commission staff to review matters that it does not have authority to handle have become a drain on agency resources.

Commissioner Fitzgerald moved to approve staff recommendation, Commissioner Hilton seconded

Vote: 7-0-1-0 (Commissioner Gilmore abstained)

ZONING MATTER

Atkinson Deorganization – Naomi Kirk-Lawlor – Consideration of staff-initiated rezoning

Naomi outlined the various factors that led to the deorganization of the Town of Atkinson, which became effective July 1, 2019. She described the steps that the LUPC took in drafting and refining the proposed zoning map for Atkinson Township, including community involvement and resource agency comments. She presented the proposed zoning map and draft decision document for the Commission to consider.

Commissioner Hilton pointed out that deorganization drives development out of nearby organized service centers and puts pressure on them to provide services. Perhaps we should reach out to those municipalities for their

comments. Commissioner Gilmore pointed out that small towns are struggling in this state. Deorganizations are putting pressure on municipalities and the State to pick up services. Commissioner Billings pointed out that there are municipalities in Hancock County with very few residents and high mill rates when compared with the UT. Commissioner Fitzgerald described the Codyville example.

Executive Director Judy East pointed out that a previous attempt for the Town of Atkinson to deorganize was denied by the legislature. These decisions can go different ways depending on who is in the legislature and changing conditions. Chair Worcester stated that the LUPC is not soliciting these communities to deorganize, they are making that decision themselves and taking that to the legislature for approval. Our role is not proactive, it's reactive.

Executive Director Judy East stated that some communities that are making the decision to deorganize do not have community zoning. So, in some ways, this choice to deorganize brings greater planning and development oversight than they had before they deorganized.

Chair Worcester asked if there was a mechanism to refine this map in the future if needed. Naomi stated that if changes need to be made in the future, that can be done through the zoning petition process.

Commissioner Gilmore moved to approve staff recommendation, Commissioner Billings seconded

Vote: 8-0-0-0

ZONING MATTER

Metallic Mineral Mining – Robert Marvinney, Stacie Beyer, J. Ouellette – Overview of metallic mineral mining; re-zoning process for metallic mineral mining; brief introduction to ZP 779

This agenda item provided an opportunity for informational presentations and Commissioner questions about metallic mineral mining and Zoning Petition 779 (Pickett Mountain Mine). ZP 779 is a petition by Wolfden Mt. Chase LLC to rezone 197.5 acres in T6 R6 WELS (Penobscot County) to the Planned Development (D-PD) subdistrict for the purpose of developing an underground metallic mineral mine. There were three presentations followed by Commissioner questions and discussion. The presentations included:

1. An Overview of Metallic Mineral Mining by Robert Marvinney, Ph.D., State Geologist and Director of the Bureau of Resource Information and Land Use Planning, ME Department of Agriculture, Conservation, and Forestry;
2. An Overview of the Re-Zoning Process for Metallic Mineral Mining by Stacie Beyer, Planning Manager, Land Use Planning Commission; and
3. An Introduction to ZP 779, Pickett Mountain Mine by Jeremy Ouellette, P.Eng., Vice President of Project Development, Wolfden Resources Corp.

To start, Commissioner Worcester mentioned that several years ago there were Commission members that went to New Brunswick and looked at open pit mines and below ground mines, including Commissioner Humphrey and Commissioner Worcester.

During Director Marvinney's presentation, Commissioner Fitzgerald ask about the size of the developed area for the Eagle Mine in Michigan. Director Marvinney replied that the footprint is around 100 acres. Regarding the processing of the mineral resources, Commissioner Fitzgerald asked about the length of the residence time in the

concentrators. Director Marvinney explained that it was actually a continuous process. The concentrators are continually fed with crushed rock. He wasn't sure of the residence time in any one tank. Commissioner Fitzgerald also asked about how big an area is needed for dry stacking of mine tailings. Director Marvinney indicated that it could easily be 100 acres. Commissioner Gilmore asked if the Butte mine is just a large hole in the ground. To which, Director Marvinney explained that there are a number of mine components in Butte. He agreed that the Centennial Mine that he had visited is a large open pit mine. Commissioner Hilton asked if the location shown on one slide of the Eagle Mine included a large tailings disposal area. Director Marvinney replied that it did not. At the Eagle Mine there are two separate sites, the ore extraction site and the ore processing site. Tailings are disposed of at the processing site. Also, they are doing wet storage of tailings in an old open pit. Commissioner Worcester commented that the trip that he and others made to New Brunswick was very interesting. He asked about the height of the tailings facility at the New Brunswick mine, which he said was about a mile long. Director Marvinney indicated that it was probably around 200 feet and agreed that it was probably around one mile long. Commissioner Worcester expressed that it was a huge mining project.

Following Stacie's presentation on criteria and the rezoning process, Commission Gilmore asked if Wolfden Mt. Chase, LLC currently has ownership of the parcel for the proposed rezoning. Stacie replied that they do own the parcel. Commissioner Hilton asked, if the Commission approves the rezoning request, does the project go to DEP for review under the Mining law? Stacie explained that if the rezoning request is approved, then Wolfden would be able to apply to the DEP for a permit under the Maine Metallic Mineral Mining Act. Commissioner Hilton followed by asking if we are looking at land use standards not reviewed by DEP in this step of the process. Stacie said we are not at this step. In the zoning phase, we are looking at the criteria in statute and rule that relate to changes in land use district boundaries. Stacie explained that if Wolfden applies for a DEP permit in the future, the Commission, at that time, would have a certification role. The Commission would consider whether the project is an allowed use in the subdistrict and standards not included in the DEP review in its certification decision. The standards that the Commission would cover in a certification for a metallic mineral mine are provided in the Commission's Chapter 13 rules.

During Mr. Ouellette's presentation, Commissioner Worcester asked if the project timeline included 8 to 9 years of mining. Mr. Ouellette indicated that they are looking at 9 to 10 years of steady production. The total project timeframe is 10 to 15 years including permitting and closure. Commissioner Hilton asked if Wolfden owns all the land over the proposed mine. Mr. Ouellette indicated that they do. They own around 6,000 acres at the site. Commissioner Worcester asked if the concentrators described and shown by Mr. Ouellette would be at the Picket Mountain site, and Mr. Ouellette agreed that they would. Commissioner May asked how the proposed rezoning area, around 200 acres, compares to the size of the deposit underground. Mr. Ouellette indicated that the strike zone is about a mile in length and 60 feet thick. The deposit is fairly narrow and approximately 10% of the whole 200 acres. Commissioner May asked if the deposit is linear and Mr. Ouellette agreed that it is. In follow-up, Commissioner May asked if the deposit extends beyond the 200-acre area. Mr. Ouellette replied that the reason the proposed rezoning area is 200 acres is to include the whole deposit within the proposed zone. Commissioner Humphrey asked a question about the haul trucks. Mr. Ouellette answered that the underground haul trucks would be low profile and about 20 tons per unit. He also explained that the surface trucks would be standard tandem trucks but they would have special beds or boxes that will be lined to prevent spillage when they are transporting to the nearest port or refinery. Commissioner Hilton asked if the State has adequate capacity to conduct a technical review, given that there hasn't been an active mine in recent history in Maine. She also asked if this is the type of project where we can hire expertise if we feel assistance is needed. Stacie replied that the project has been deemed an extraordinary fee project, and that we have already estimated and assessed half of the processing fee, so we do have the ability to hire consultants for any outside expertise that we need. For example, LUPC staff have already identified a concern about expertise on socioeconomic impacts, so staff has issued an RFP to retain an economic consultant to review the socioeconomic impacts of the project. As the petition moves through the process, if the Commission identifies other areas where we need assistance, we have the ability to retain additional consultants. There was a question from Lee Smith about the timeframe used for the economic assessment, and Mr.

Ouellette indicated that there will be 60 employees during the operating phase of the project, which will last 9 to 10 years. The total benefits of the project were considered throughout all phases of the project, which is about 15 years, year 2020 out.

LUNCH BREAK – 1 HOUR

PLANNING MATTER

Conceptual Standards for Marijuana Facilities – Naomi Kirk-Lawlor – Discussion of conceptual standards for marijuana facilities

Naomi presented on potential concepts for marijuana land use standards to address odor and light pollution.

Chair Worcester asked if we were also discussing hemp with these concepts? Naomi answered that hemp is considered an agricultural crop and regulated by the Bureau of Agriculture, which is not to say that the LUPC couldn't regulate standards relating to hemp. However, the way we have dealt with agricultural management in the past is to include the Bureau of Agriculture best management practices as required standards within the LUPC's agricultural management use-specific standards.

Commissioner Hilton asked if these potential standards would apply to both medical and adult use marijuana. Naomi answered, yes. Commissioner Hilton then asked whether they would apply to personal cultivation. Naomi answered, no that was not the intention, these would be for commercial and industrial activities.

Commissioner Gilmore wondered if we could find any rural Maine communities that have similar ordinances that we could use to help develop the LUPC's standards. Commissioner Hilton stated that she has been looking at municipal ordinances and attending workshops for over a year and it is complicated. We should try to keep it simple and figure that we will be looking at this again as statute is changed. Commissioner Humphrey suggested maybe we need to categorize facilities by size and type and develop different standards for each.

Chair Worcester asked whether there are odor sensors and light sensors that could provide quantitative measures. Executive Director Judy East answered that there are ways to measure light. She went on to ask if staff have looked into the effectiveness of greenhouse shade cloths and other technologies for greenhouses. Naomi answered that staff have not done an in-depth study of available technologies and their effectiveness. It may be helpful to hear from greenhouse owners during a public comment period if the Commission decides to move forward with rulemaking.

Commissioner Fitzgerald asked if what we are trying to avoid is a nighttime glowing. Naomi answered, yes, that is the problem. Commissioner Fitzgerald suggested that a lumen cut-off for when standards are required might be a useful idea.

Commissioner Billings stated that for odor, it really matters whether the marijuana is grown indoors or outdoors in relation to how to deal with the nuisance.

Chair Worcester asked if we could deal with these impacts at the permitting stage without use-specific standards. Naomi answered that yes, there are ways to deal with these impacts through our general criteria for permits and the no undue adverse impact standard.

Commissioner Hilton pointed out that the statute for medical marijuana cultivation at the state level is less robust and we may want to apply standards to facilities of a certain size. Naomi added that perhaps we should apply

standards to operations if they don't meet the scale requirements for home-based businesses. In the past, we have treated marijuana cultivation for medical use that meets the scale requirements for a home business as such.

Commissioner Hilton suggested that greenhouse light shielding could likely be a reasonable thing to require. Commissioner Billings stated that this is a good beginning and asked if these requirements would be retroactive? Stacie Beyer, Planning Manager, answered that these development standards apply when a permit comes in, they are not retroactive.

Commissioner Hilton asked if we want these lighting standards to apply to things other than marijuana greenhouses. Stacie Beyer stated that the intention here was to apply these lighting standards to commercial development. Executive Director Judy East stated that what we are really worried about is these large greenhouse effects, not light emanating from a storefront, for example. Commissioner Billings suggested a combination of limiting the lighting standard to commercial development and applying a lumens cut-off. Naomi stated that we will work to carefully craft draft language to address these issues.

COMPLIANCE MATTER

EC 18-26 David and Ashley Cox – Debra Kaczowski – Administrative Settlement Agreement

Debbie Kaczowski presented Enforcement Case EC 2018-26 with proposed Settlement Agreement entered into with David & Ashley Cox. The Coxes own a 2.43 acre back lot and a 36-foot wide waterfront strip of land on Lower Shin Pond in Mt. Chase, Penobscot County. An overview of the land division & permitting history was provided, which revealed the Coxes merged lot does not meet the minimum shoreline frontage requirement of 200 feet and is part of an unapproved subdivision created by Ronald Gerard between 2011 and 2015. The land divisions between Ronald Gerard, Todd & Carol Brodeur, and the Coxes created three lots within a five year period. Commission staff is seeking resolution with Ronald Gerard outside of this Agreement. Gerard is currently working with his lawyers to convey the [retained] 12-foot wide strip of land to the abutter. Chair Worcester asked if that will resolve the subdivision violation? Debbie K. replied that it would.

In October 2018, the Commission directed staff to develop a reasonable solution to the unauthorized subdivision and to go forward with a settlement agreement with the Coxes. Staff recognizes the [Coxes] merged lot does not meet the minimum shoreline frontage. However, the backlot, alone, meets all dimensional requirements, no undue adverse effect from the residential development is expected, and development restrictions can be imposed to protect the nonconforming waterfront portion of the lot. Therefore, staff recommends against removal of the dwelling and seeks to resolve this matter through a settlement agreement.

Commissioner Fitzgerald inquired if the location of the dwelling on the 2.43-acre lot is more than 250 feet from the lake and isn't even in shoreland zoning, isn't the fact that it doesn't have sufficient frontage moot? Debbie K. stated he [Cox] would not be able to develop the front portion, but because it is merged [with the back lot] they don't have the required 200 feet of shoreline frontage for any development.

Commissioner Fitzgerald: But as far as the dwelling that is existing, it doesn't matter because it is more than 250 feet? Debbie K. stated if it was just a separate back parcel and he did not own the 36-foot wide strip of land, there would be no issue, but because he owns the 36-foot wide parcel he can't meet the Commission's minimum requirement of 200 feet of water frontage.

Commissioner Pray: The Coxes purchased the lots on the same day, but they submitted their permit without giving us knowledge of the second lot, correct? Debbie K. stated that is correct.

Chair Worcester stated he wanted to make it clear in 2018 we recognized that we had permitted this building inappropriately. We did it on the basis of what was submitted to us and it wasn't the full submission. Whether that

was inadvertent or whether this double deed deal was intentional, nobody knows. We also know that we have this illegal subdivision, so that got by as well. We recognized all that in 2018 and what we sent the staff to do is to try to resolve this as best they can. The abutting landowners are taking exception to this Settlement Agreement. At this point I would like to hear from the Stories.

Michael Storie stated it was obvious that he [Cox] knew he could not build if the 36 feet were included in the building permit and, by dividing the land into two deeds, the intent was to avoid the objectives of minimum shoreline frontage and mislead the LUPC by omitting from the application relevant land division history. The history would be relevant to the Coxes' lot because the lot was created without Commission subdivision approval and the Commission could not approve the Cox application for the new dwelling on a lot that does not include sufficient shoreline frontage. In addition, the Coxes are not able to obtain a certificate of compliance.

Chairman Worcester: You were aware of this issue before he built the property?

Michael Storie stated right when he had bought the property I had spoken with my father and that's when he contacted the LUPC.

Richard Storie addressed the Commission and stated that on July 27th, after researching the deeds and finding that he owned both lots, I called LUPC in East Millinocket and was told there was no application from David Cox or a permit. I later spoke with the Ashland office several times regarding the 36-foot wide strip and the 12-foot wide strip with an easement. The difficulty that arose was E. Millinocket received and approved the permit, in the meantime I am talking to Ashland. I was not aware until November that a building permit had been issued.

Chair Worcester: You are opposed to this settlement, what is your solution to this problem?

Richard Storie: I would like to see the building permit rescinded and his building removed.

Chair Worcester asked: How far is his building from yours?

Richard Storie: It is around 300 feet. The trouble is he is right up on a ridge and through the trees we can see his shed. But the big problem is the way he behaved. Besides that, the [36-foot] strip going down next to us, people go down there and our dogs start barking. Until he came and cut those trees and made that path to the lake, we couldn't even see our neighbors and our neighbors couldn't see us. We should have been protected with that 200 foot land minimum. Another factor is when I told [Attorney] Dean Beaupain what the dimensions were, he told me that it is a spaghetti lot. At this point we don't want to see this Settlement Agreement ratified. There is verbiage in the Agreement that is really scary that says that anybody who buys that back lot now also gets the 36 feet and he can build and get a permit for anything that is ok on the back lot.

Commissioner Pray asked if there is anything that can be done, except to remove the cabin, to make it livable?

Debbie K. stated the cabin is livable. The whole back lot is in compliance with the permit. The issue is the 36-foot wide strip of land. Technically, if he [Cox] had Gerard buy back that 36-foot wide strip and then sell it to an abutter, that would resolve the nonconformance, but he would still be able to keep the dwelling on the back lot.

Commissioner Pray: Yes, but if he did sell that back to Gerard that would stop that illegal subdivision, too, wouldn't it? Debbie K. stated no, he [Gerard] would still have two separate lots. The 36-foot wide strip and the 12-foot wide strip of land are separated by the Stories land. The Stories are abutters to the [retained] 12-foot wide strip and the Coxes' 36-foot wide strip of land. There is only one other abutter on the 36-foot wide strip.

Commissioner Hilton: So if the strip of land went away, that whole piece down to the lake, you still have that lot there. If we go with the Settlement Agreement, either way, wouldn't this landowner be able to come in and build an even bigger house? Whether there is a strip or not, there will always be that he owns the land and if it is permitted a larger house or whatever he wants. This strikes me as the best that we can do with this situation and I don't think in any way we are setting precedent. We aren't [setting precedent] through a Settlement Agreement are we? AAG Lauren Parker stated no. You can have similar matters and handle them all differently. You probably don't want to do that as a matter of consistency in how you govern yourself. But it doesn't create a legally binding precedent that would require you to resolve one enforcement matter the exact same way as you resolve another one.

Commissioner Billings: The 12-foot wide strip and the 36 foot wide strip, who owns the piece of land in the middle? And they are going to sell the 12 foot strip to an abutter? Deb K. stated the Stories own on both sides of that 12 foot strip, so they are the only abutter that could legally obtain it without creating more issues or it could go to Cox but then he would still have a nonconforming lot and it wouldn't help. Mr. Gerard is currently working with his lawyers and is willing to convey the land to the Stories.

Commissioner Billings: So the Stories are going to end up with a continuous lot along the shore that almost meets the 200 foot requirement. Debbie K. stated that is correct.

Commissioner Fitzgerald: So if I understood these folks correctly, part of the problem is that the people going up and down this 36-foot wide piece of property are noisy and make your dogs bark is that correct? So if there were something in the Settlement Agreement that required the planting of additional vegetation so that blocked more of that off, because he can have a six-foot wide meandering path, that's a given.

Richard Storie: The 36-foot wide strip is abutted to Smallwood and to us. We could split that. Let an appraiser come in and tell us what the square footage value of 36 feet divided by two for 191 feet, we'll pay for it. That gets shoreline property owning shoreline property.

Chair Worcester asked if we took the route that he suggested, divide it and give it to each property owner, would the Coxes still be able to walk down to the shoreline? Debbie K. answered no.

David Cox was allowed to address the Commission and stated that at no point was he trying to lie or mislead on the application. He stated in the spring of 2015 he had received guidance from a prior LUPC staff person that if when he had his title search done and made two separate deeds, Strip E which we are considering now, would be considered the nonconforming lot and would be pretty much useless. This would leave the second lot, the 2.43 acre back lot, and we would be able to apply for a building permit. In the summer of '15 we had a title search done. We then purchased the property on July 2nd and on August 3rd we submitted the building permit. On the application I only included the one lot with the intentions that I was told by prior staff that was the lot I was applying for, completely understanding that I wasn't going to build a camp down on the other strip of land. On the 25th, we got the application approval back which would give us no indication that there was going to be any violation if we followed the permit regulations for the back lot. Mr. Cox suggested moving the 6-foot trail over towards the Smallwood's property. Stating there is a lot more land between his camp and the property line, opposed to the Stories and where the trail currently exists, as long as it was in writing that I wasn't violating something else by cutting too many trees. But that would be a possible solution. I'm not really too excited about giving up that piece of land. When we purchased the property, part of the idea was that we would have some type of access to the water, which obviously in turn upped the price of the property.

Chair Worcester asked if we can make the Settlement Agreement reflect what he just offered? To move the footpath, Debbie K. stated yes.

Commissioner May recommended that given the contentious nature of it, what has just been agreed to verbally here should be in the Settlement Agreement.

Chair Worcester stated he would be more comfortable if it were in the Agreement, but thought it can be done after it was approved.

AAG Lauren Parker stated that there is a pretty clear understanding of what the direction the Commission is actually ratifying and so that is a pretty discrete thing and neither the Director nor I would sign the Settlement Agreement if it didn't reflect what the Commission has actually ratified. As you have clear understanding of what that would look like, then I think that is manageable. If it is not, you can always bring it back at the next meeting.

Commission Pray asked if we are sure that Mr. Smallwood is in agreement with this or will he get upset? Debbie K. stated that with a 6-foot wide path, I think we can get it in the middle of both property lines.

Chair Worcester thanked all parties who came and spoke to the Commission and felt it was helpful.

**Commissioner Gilmore moved to accept staff recommendations, Commissioner Fitzgerald seconded
Vote: 7-0-2-0 (Commissioners Pray and Humphrey abstained)**

COMMISSIONER COMMENTS

At the end of the meeting, Commissioner Worcester provided additional time for questions about the Wolfden rezoning proposal. Commissioner May asked if Wolfden could provide a diagram showing the location of the mine deposit and the proposed subdistrict boundaries. Mr. Ouellette agreed to provide a diagram, and generally pointed out the vicinity of the deposit on a map of the proposed subdistrict. He explained that the deposit is linear and one-half mile tip to tip.

ADJOURN: Meeting adjourned at approximately 2:30 pm.

Land Use Planning Commission

SIGN-IN SHEET

Please print clearly.

Date: 12 FEB 2020

NAME	AFFILIATION
BILL HINKEL	LUPC
Stacie Beyer	LUPC
Jean Flannery	LUPC
Judy East	LUPC
Bill Adena	LUPC
Jeremy Quillette	Wolfden Resources Corp
Ron Little	"
Bob Marvinnay	MGS
PETER THOMPSON	Wood
Stacy Lyden	NORL
Nancy Kirk-Lawlor	LUPC
KIRK BALL	Acheron
Nhu Vo	Acheron
Don Campbell	owner AT M BOBAN
Becca Campbell	public
Michael Storie	EC 18-26
RICHARD STORIE	EC 18-26
Tim Carr	LUPC

Land Use Planning Commission

SIGN-IN SHEET

Please print clearly.

Date: 2/12/2020

NAME	AFFILIATION
Connie Bennett	Power Engineers
Markus Anderson	Interest
Laura Sanborn	Penobscot County Commissioner
Eliza Donoghue	Maria Audubon
Kathryn Bernard	TNC
Elgin H. Turner	H.C. Haynes, Inc.
Lucy Fowler	Swift Current Energy
Melanie Sturm	NRCM
David Cox	EC18-26
Corinne Michaud-LeBlanc	LUPC
Kelly Shores	LUPC



JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
LAND USE PLANNING COMMISSION
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022

AMANDA E. BEAL
COMMISSIONER
JUDY C. EAST
EXECUTIVE DIRECTOR

Memorandum

To: LUPC Commissioners
From: Tim Carr, Senior Planner
Stacie Beyer, Planning Manager
Date: February 5, 2020
Re: February 12, 2020 Commission meeting item on metallic mineral mining and ZP 779 (Pickett Mountain Mine Zoning Petition by Wolfden Mt. Chase LLC)

One hour is allocated at the February 12, 2020 Commission meeting for informational presentations and Commissioner questions about metallic mineral mining and Zoning Petition 779 (Pickett Mountain Mine). ZP 779 is a petition by Wolfden Mt. Chase LLC to rezone 197.5 acres in T6 R6 WELS (Penobscot County) to the Planned Development (D-PD) subdistrict for the purpose of developing an underground metallic mineral mine. Three presentations are planned along with additional time available for questions. The order of presentations will be:

- 1) An Overview of Metallic Mineral Mining (15-20 mins)

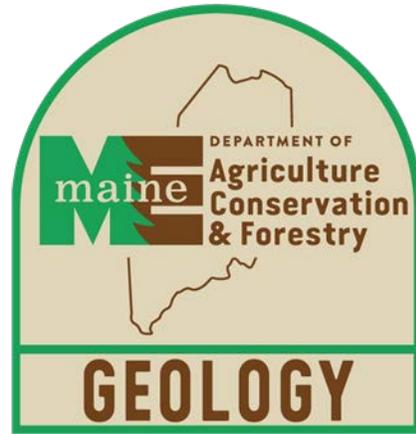
Robert Marvinney, Ph.D., State Geologist and Director of the Bureau of Resource Information and Land Use Planning, ME Department of Agriculture, Conservation, and Forestry

- 2) An Overview of the Re-Zoning Process for Metallic Mineral Mining (5-10 mins)

Stacie Beyer, Planning Manager, Land Use Planning Commission

- 3) An Introduction to ZP 779, Pickett Mountain Mine (15-20 mins)

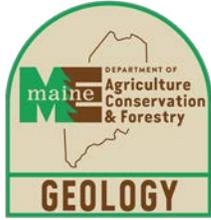
Jeremy Ouellette, P.Eng., Vice President of Project Development, Wolfden Resources Corp.



Maine's Geology, Mineral Potential, and Basics of Metallic Mineral Mining

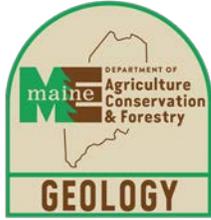
Robert G. Marvinney
State Geologist
Maine Geological Survey
Dept Agriculture, Conservation and Forestry

February 12, 2020
Land Use Planning Commission



Presentation Outline

- **Important Mineral Discoveries**
 - Exploration history
- **Mine Components**
 - Open pit
 - Underground
- **Ore Processing**
- **Mine Environmental Concerns**
- **Summary**



Significant Metallic Mineral Deposits

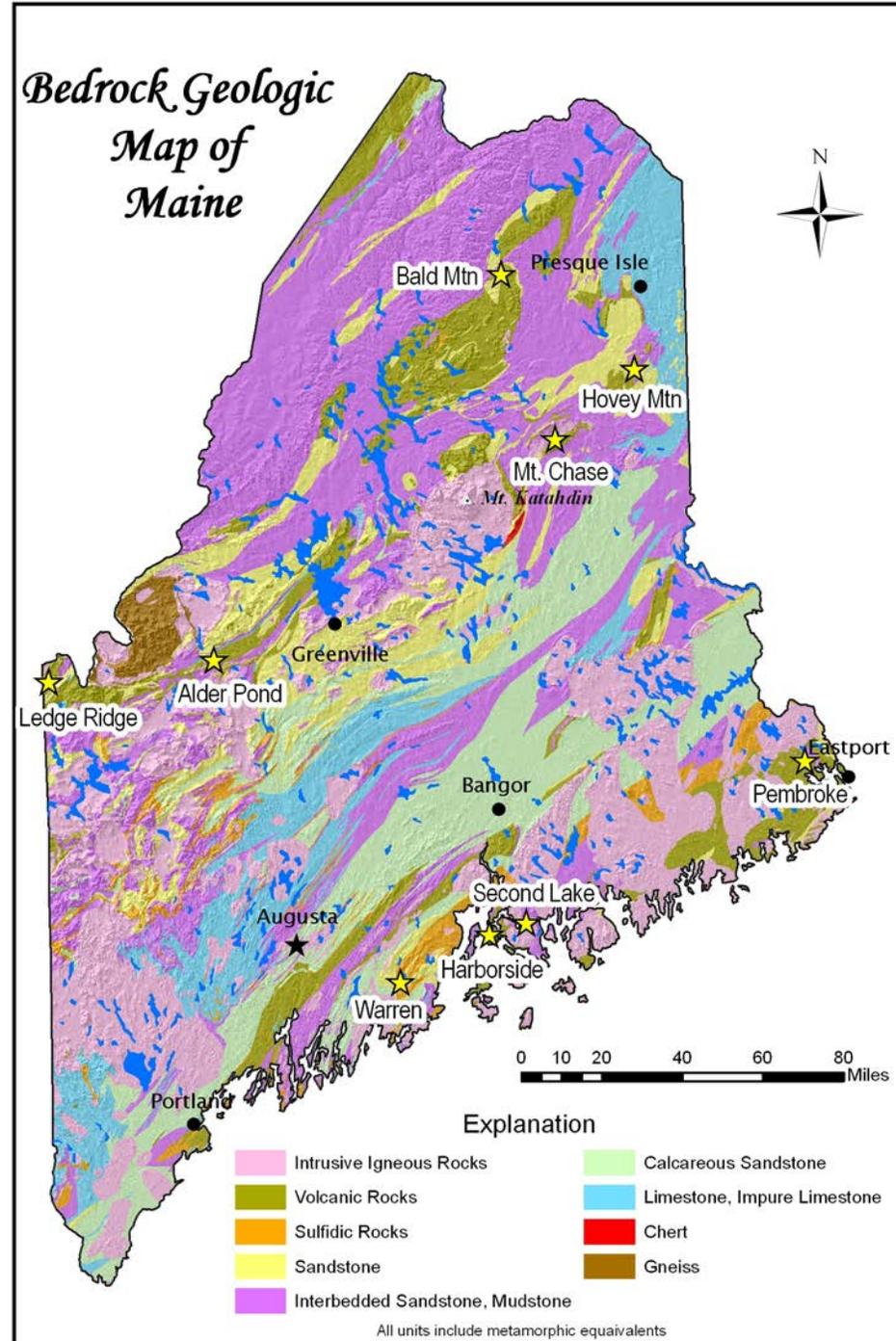
**Bald Mountain: 30 MT Cu, Zn,
Au, Ag**

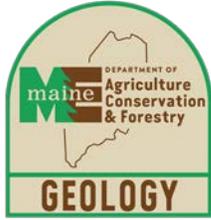
**Mt. Chase / Pickett Mountain:
4 MT Zn, Pb, Cu, Ag**

**Alder Pond: 3 MT Zn, Cu, Pb,
Ag**

Warren: Nickel, Cobalt

**Harborside and Second Pond:
Mined in the 1970s**





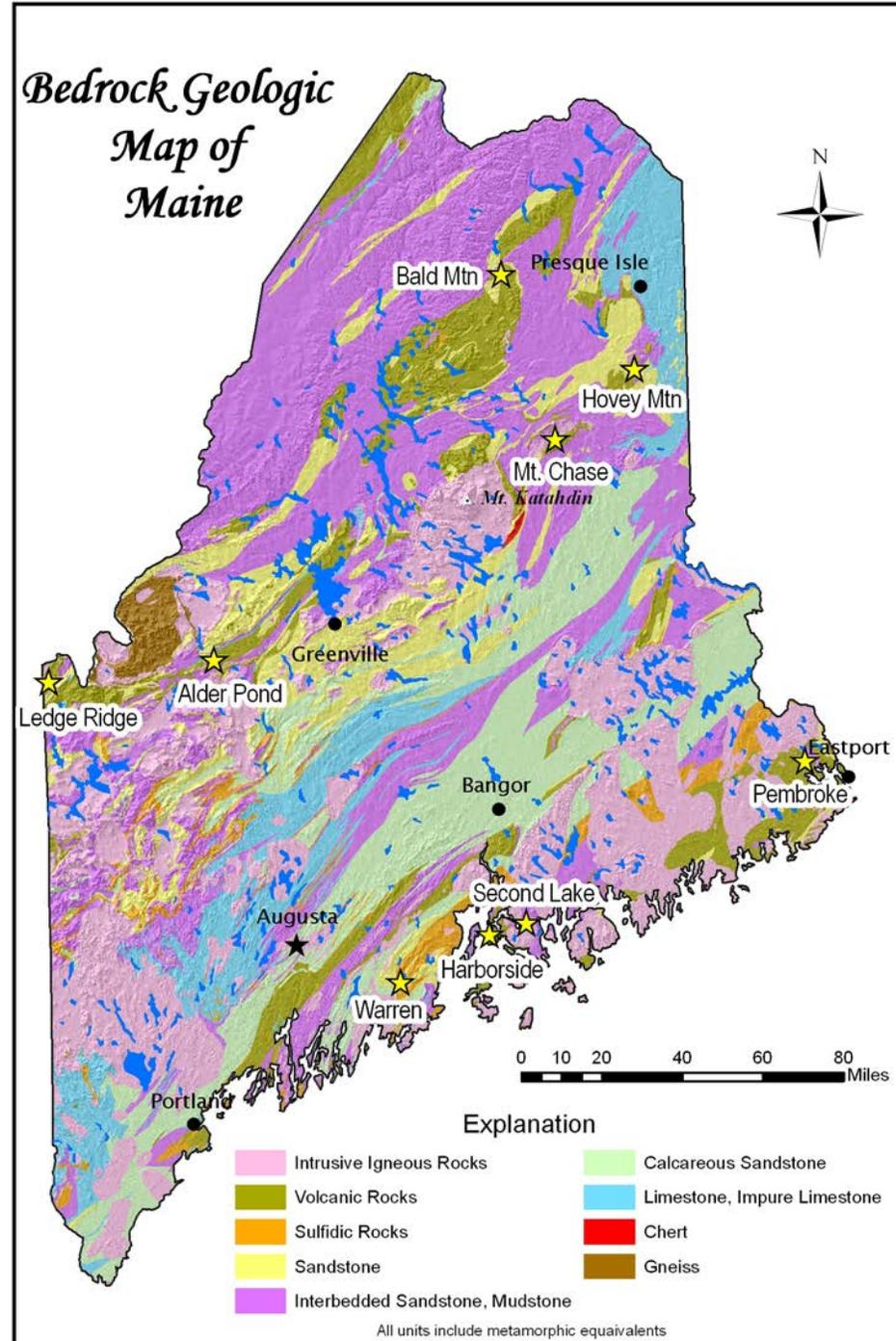
Exploration History

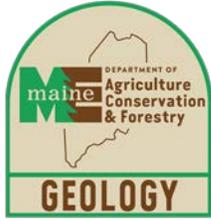
Basic geologic mapping 1837-1950 identified coastal base metal deposits.

1950s-1960s: Government-funded airborne geophysical surveys identified prospective areas.

1970s-1980s: Privately funded exploration in northern volcanic belts.

Post-1980s: Localized privately funded exploration.





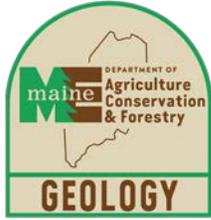
March 2018



October 2018

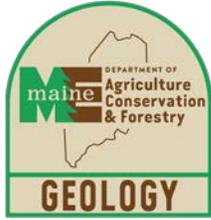


- **Drilling Program – Pickett Mountain exploration program, 2018**



Presentation Outline

- Important Mineral Discoveries
 - Exploration history
- **Mine Components**
 - Open pit
 - Underground
- Ore Processing
- Mine Environmental Concerns
- Summary



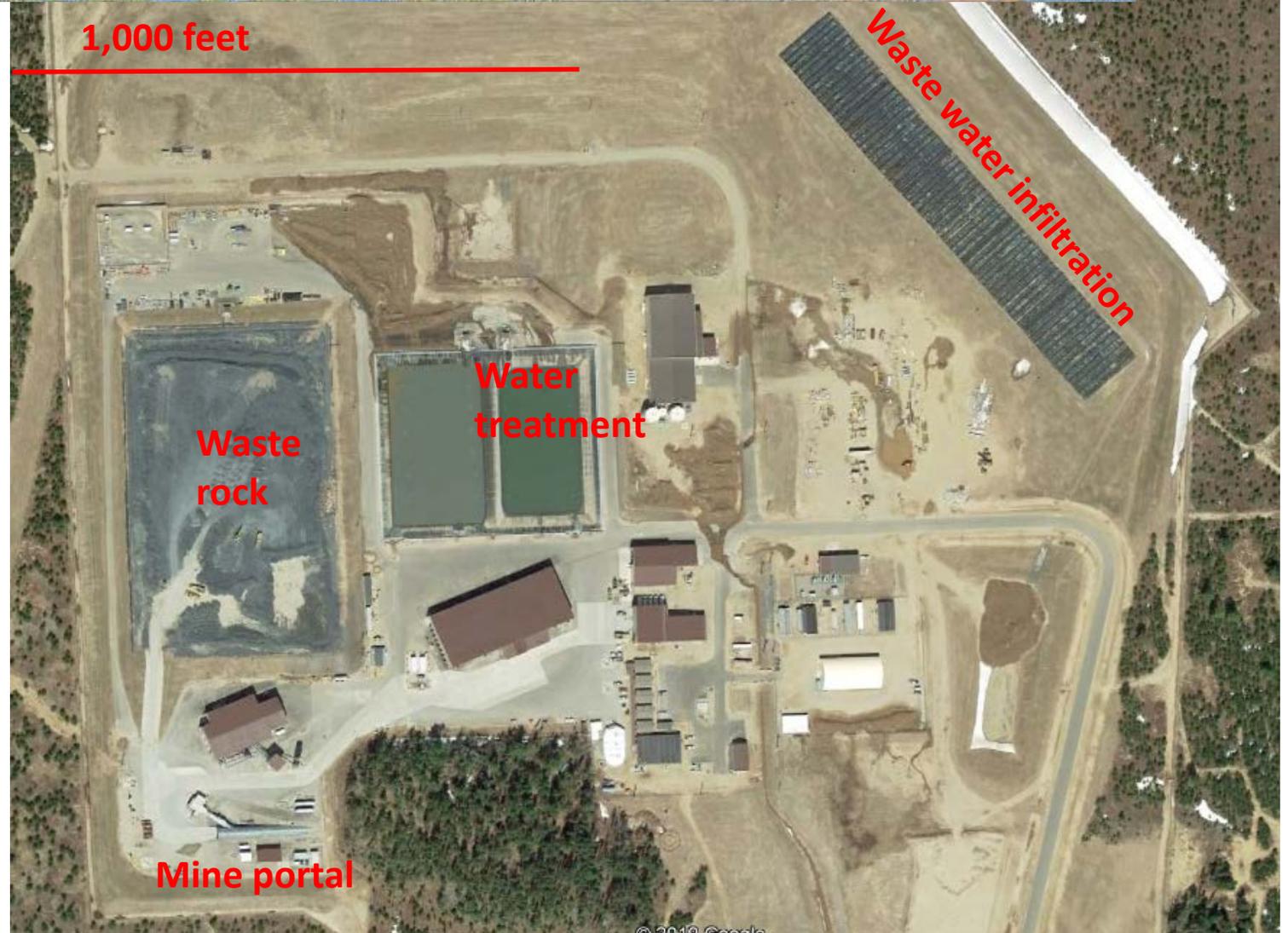
Components of a Mine

- **Mineral extraction site**
 - Surface – Open pit
 - Underground workings
- **Milling facilities**
 - Rock crushers
 - Concentrators – flotation cells
- **Mine Wastes**
 - Waste rock
 - Tailings

Components of a Mine

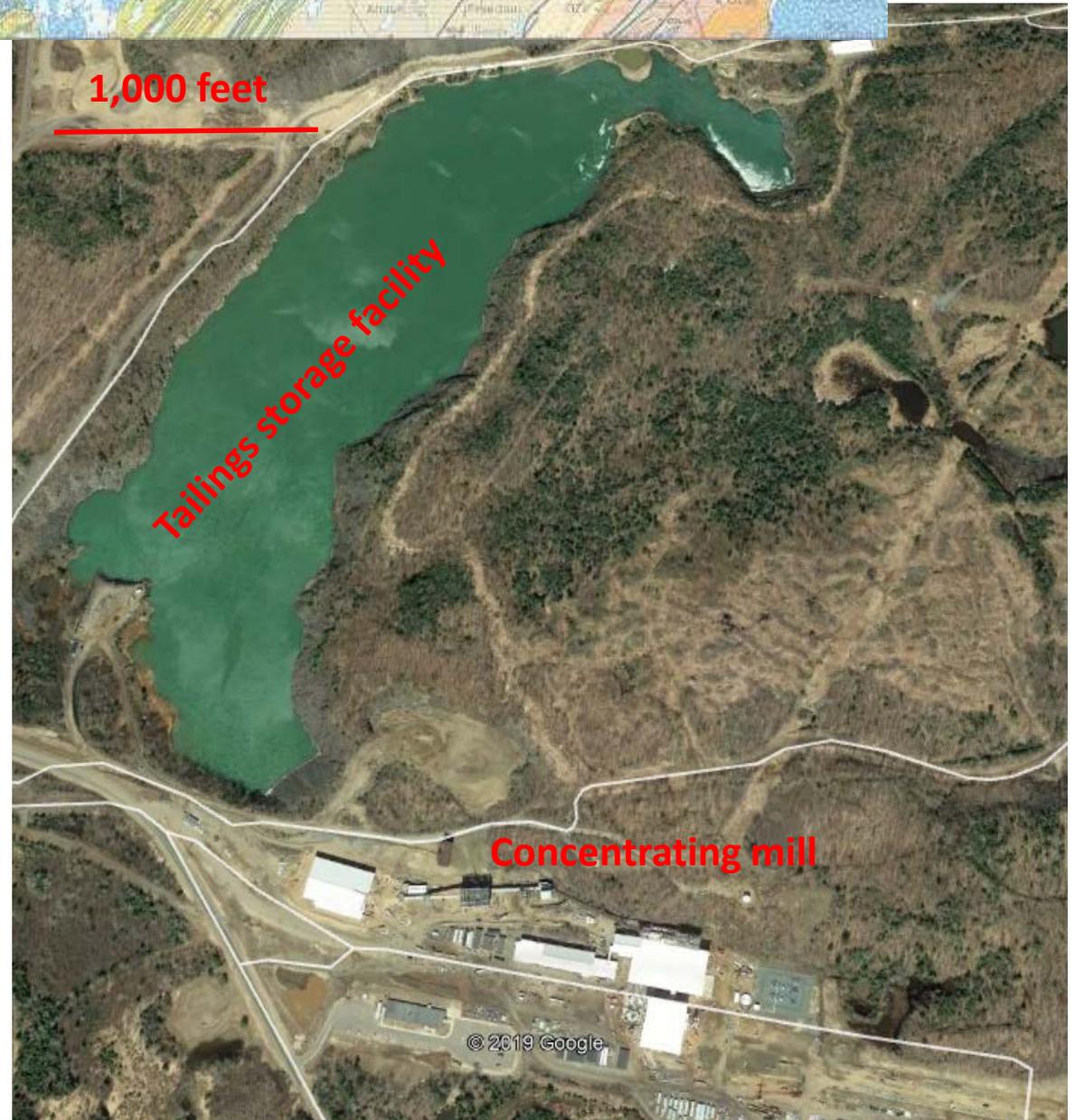
- Eagle Mine, Michigan
UP
- 4.6 MT Ni (3.7%), Cu
(3.1%)
- Underground
extraction site
- Milling at separate site

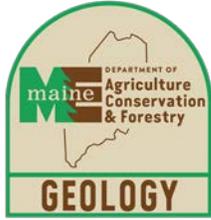
Image source: Google Earth



Components of a Mine

- Eagle Mine, Michigan UP
- Mill site and tailings storage
 - Tailings storage is in an old open-pit iron mine





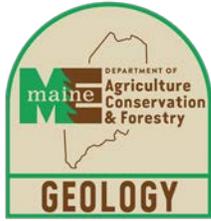
Components of a Mine – Open Pit

- Commonly used for near-surface, low grade deposits

Maine's 2017 Metallic Mineral Mining Law bans open pit mining.



Callahan mine open pit, Maine, 1972. Total production 0.8 million tons of ore (MT). 360 feet deep, ~500 feet wide. F.M. Beck photo



Components of a Mine – Underground

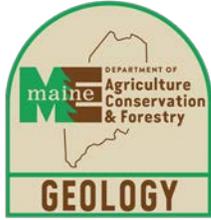


Eagle Mine portal, MI, 2016.

R. G. Marvinney photos

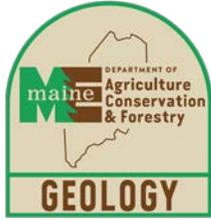


Half Mile Mine decline, NB, 2013.



Presentation Outline

- Important Mineral Discoveries
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 - Open pit
 - Underground
- **Ore Processing**
- Mine Environmental Concerns
- Summary



Ore Processing Steps

- **First Stage – Crushing and grinding**
 - **Second Stage – Concentration or extraction of valuable mineral (e.g. flotation, leaching, gravity)**
-
- **Third Stage – Metal produced from the mineral (e.g. smelting, refining)**



Nickel-copper ore, Eagle Mine, MI.



Zinc-copper ore, Callahan Mine, ME.

Crushing and grinding

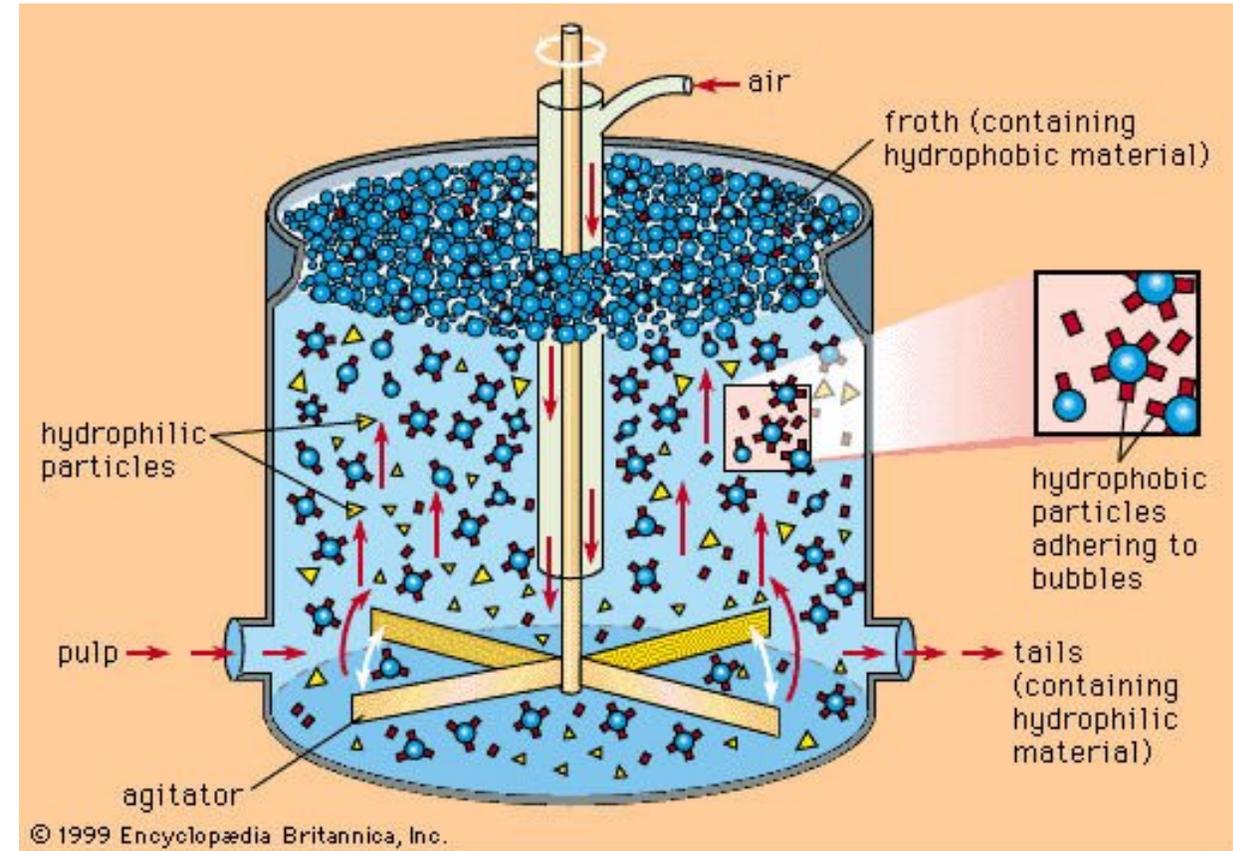
- Reduce mineral size.
Goal is maximum grain size that results in grains of a single mineral and that meets flotation needs.
- Water added for next phase

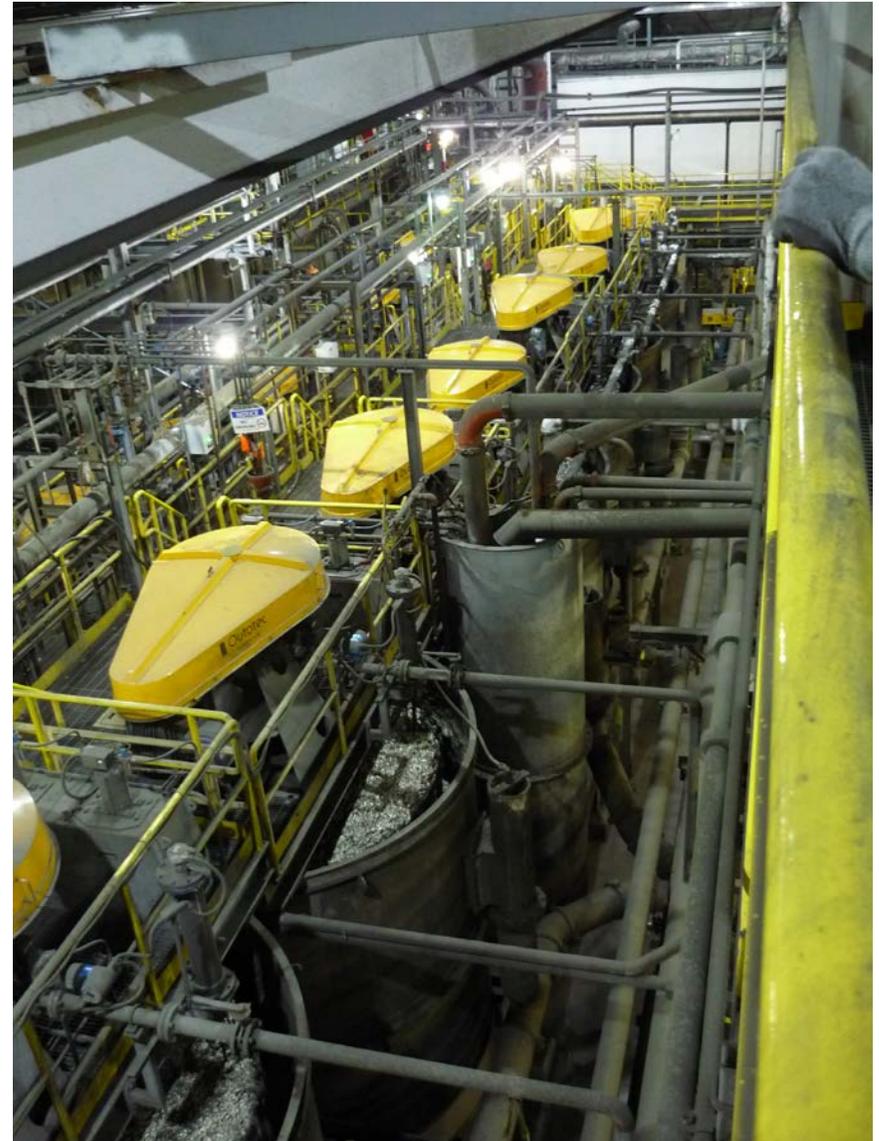
Ball mills at the Centennial Mine, Butte, MT, 2019.



Flotation

- Common technique used to separate ore and waste minerals.
- Chemicals added to ground ore cause mineral particles to stick to air bubbles, create a froth, and depress waste minerals.
- Chemicals used depends on minerals sought. May include organic compounds, cyanide, copper sulfate, zinc sulfate, oils, alcohol, lime, acids.





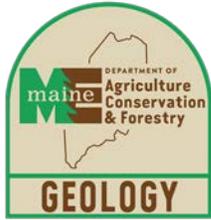
Flotation cells at the Eagle Mine, MI, 2016.

Mine Waste – Waste Rock

- Rock with insufficient metal grade to process.
- Rock typically has sufficient metal content and acid-generating potential to be of environmental concern.
- At the Eagle Mine, all the waste rock is returned to the underground excavations.



Waste rock pile, Eagle Mine, MI, 2016. Note underliner for leachate management.



Mine Waste - Tailings

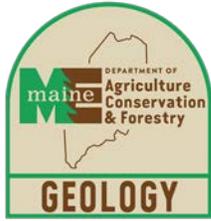
- Waste material from milling process pumped as slurry to impoundment.
- Fine grained.
- Minerals with little economic value.
- Chemicals from concentrating process.
- Significant environmental focus.

Maine's 2017 Metallic Mineral Mining Law bans wet tailings storage.



Tailings Pond, Fort Knox gold mine, Alaska

Source: North Alaska Environmental Center



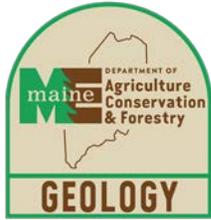
Mine Waste - Tailings

- Dry stack tailings storage.
- Tailings are dewatered at mill and compressed.
- Trucked to storage site.
- Underliner to collect leachate.
- Covered with non-acid generating rock or limestone layers, with geotextile fabric and clay cap.
- Revegetate.
- Implemented sequentially.



Greens Creek, AK, dry tailings storage

Source: Condon and Lear, 2006



Water Treatment

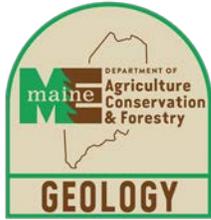
- Necessary for mine, mill, and tailings waters.
- Remove metals.
- Adjust pH.
- Discharge to environment at background levels.

Maine's 2017 Metallic Mineral Mining Law allows only passive water treatment after mine closure.



Eagle Mine, MI, water treatment plant, 2016

R. G. Marvinney photo



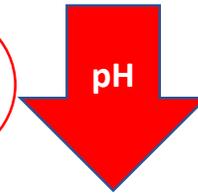
Presentation Outline

- **Important Mineral Discoveries**
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- **Summary**

Environmental concern – Acid Rock Drainage

Acid Rock Drainage (ARD):

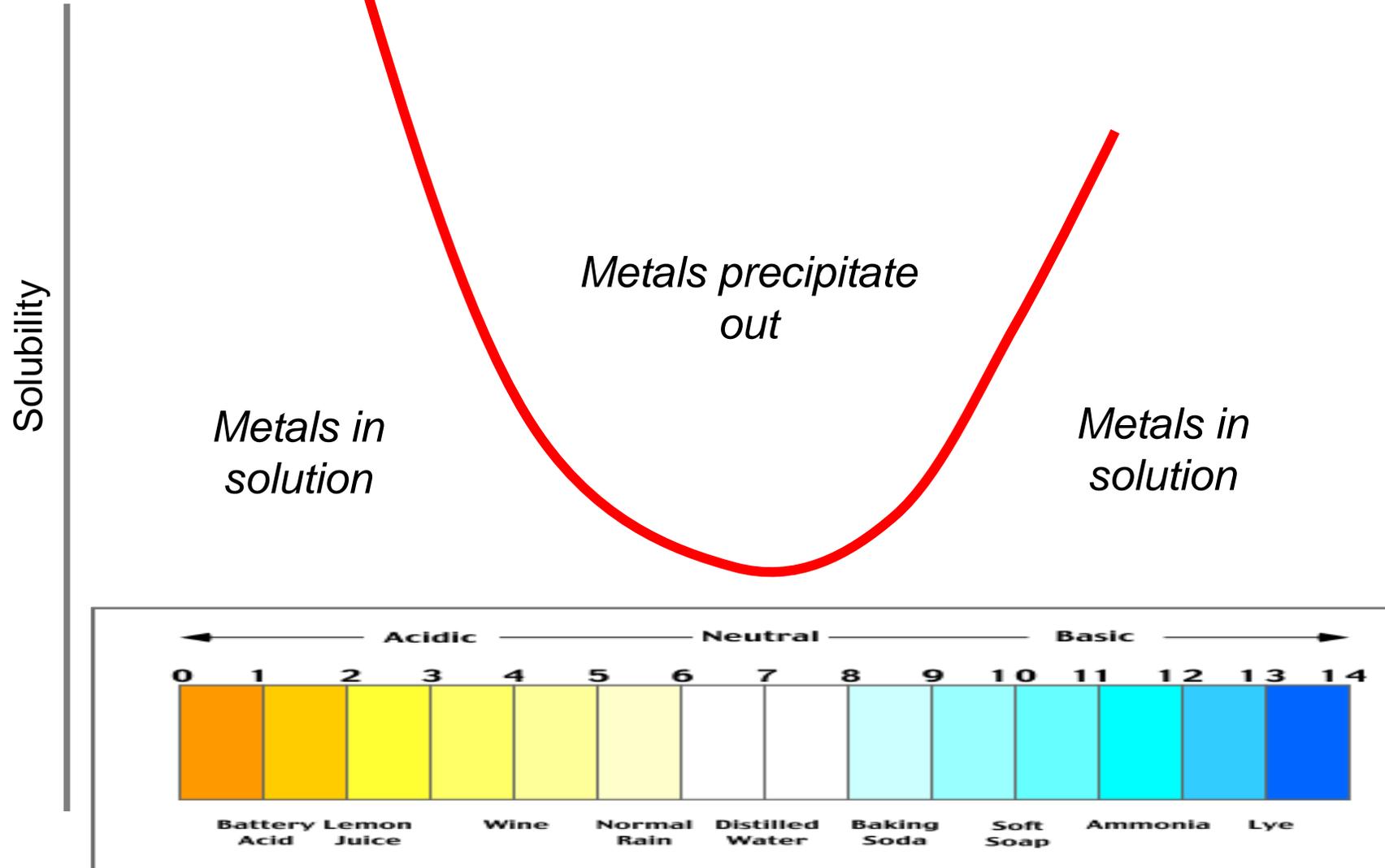
- Oxidation of sulfides exposed to water and oxygen in outcrops, waste rock piles, tailings, or mine workings
- Oxidation of pyrite:



acidic



Environmental concern – Acid Rock Drainage



Environmental concern – Acid Rock Drainage

- Río Tinto (“red river”), Spain
- Mined for copper, silver, gold since 3,000 BC
- River has a pH of 2
- Red hue is due to high iron dissolved in the water
- Other metals also dissolved in water due to low pH



Environmental concern – Tailings storage

- Wet tailings storage.
- Tailings slurry is pumped to an impoundment.
- Water cover is intended to isolate tailings from oxygen and curtail acid generation.
- Typical tailings impoundments are earthen dams.
- Failures can be catastrophic.

Maine's 2017 Metallic Mineral Mining Law bans wet tailings storage.



Mount Polley, BC, tailings impoundment failure, 2014

Source: Mining.com

Environmental concern – Tailings storage

- Dry stack tailings storage.
- Tailings are dewatered at mill to 7-15% moisture and compressed.
- Trucked to storage site.
- Underliner to collect leachate.
- Cover with non-acid generating rock or limestone layers, with geotextile fabric and clay cap.
- Revegetate.
- Implemented sequentially.



Greens Creek, AK, dry tailings storage

Source: Condon and Lear, 2006

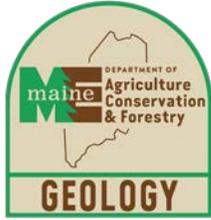
Environmental concern – Tailings storage

- Dry stack tailings storage.
- Proper planning and implementation are key.
- Brunswick No. 12.
 - After-the-fact remediation.
 - Inadequate buffering.
 - Lacks impervious cover.
 - Acid seepage requires perpetual water treatment.



Brunswick No. 12 dry tailings and acid seepage, aerial view.

Source: Google Earth



Summary

- **Metal deposits in Maine**
 - **Numerous mineral occurrences. Widespread.**
 - **Several well-characterized deposits.**
 - **Opportunities for undiscovered resources.**
- **Mines**
 - **Open-pit or underground. Mining Law bans open-pit mining.**
 - **Concentrating facilities.**



Summary

- **Managing Wastes**
 - Sulfide minerals generate acid when exposed to oxygen and water.
 - Acid-generating waste rock managed by returning to excavation.
 - Tailings ponds, while effective at isolating tailings from oxygen, have experienced significant structural failures and are banned by the 2017 Mining Law.
 - Dry stack tailings rely on dewatering, underlining, and capping.



Summary

- **Water Treatment**
 - **Required for mine, mill, and tailings waters.**
 - **Remove dissolved metals.**
 - **Adjust pH.**
 - **Maine's 2017 Mining Law prohibits active water treatment systems after mine closure.**



Questions?



Brunswick No. 12 visit, 2013

R. G. Marvinney photo

robert.g.marvinney@maine.gov, 207-287-2804



Metallic Mineral Mining

Criteria and Process

February 12, 2020

Land Use Planning Commission

Criteria and Process

- ZP 779, Wolfden Mt. Chase LLC
 - 197.5 acres, M-GN to D-PD
 - Pickett Mountain Metallic Mineral Mine

Criteria and Process

- No LUPC Subdistricts allow metallic mineral mining
- D-PD is a custom zone
 - Designed for large, well planned developments
 - Dependent on a particular natural feature available at the site
 - Petitioner develops plan for allowed uses within the zone

Criteria

- Rezoning for Metallic Mineral Mine D-PD governed by Chapter 12
 - General rezoning criteria
 - Provides specific factors for consideration

Department of Agriculture, Conservation and Forestry
MAINE LAND USE PLANNING COMMISSION
22 State House Station, Augusta, Maine 04330. Tel. (207) 287-2631

Mining and Level C Mineral Exploration Activities

Chapter 12 of the Commission's Rules

(APA Office Note dated November 6, 2013: due to a legislatively-mandated reorganization, the Land Use Regulation Commission was renamed as Land Use Planning Commission, with its umbrella-unit number changed from 04-061 to 01-672.)

Effective Date: August 13, 1991

Amended Effective: May 27, 2013

General Criteria

The change would be consistent with

- The standards for the D-PD subdistrict boundaries;
- The Comprehensive Land Use Plan; and
- 12 M.R.S.A. Chapter 206-A.

General Criteria

The change in districting will have no undue adverse impact on:

- Existing uses or resources, or
- A new district designation is more appropriate for the protection and management of existing uses and resources.

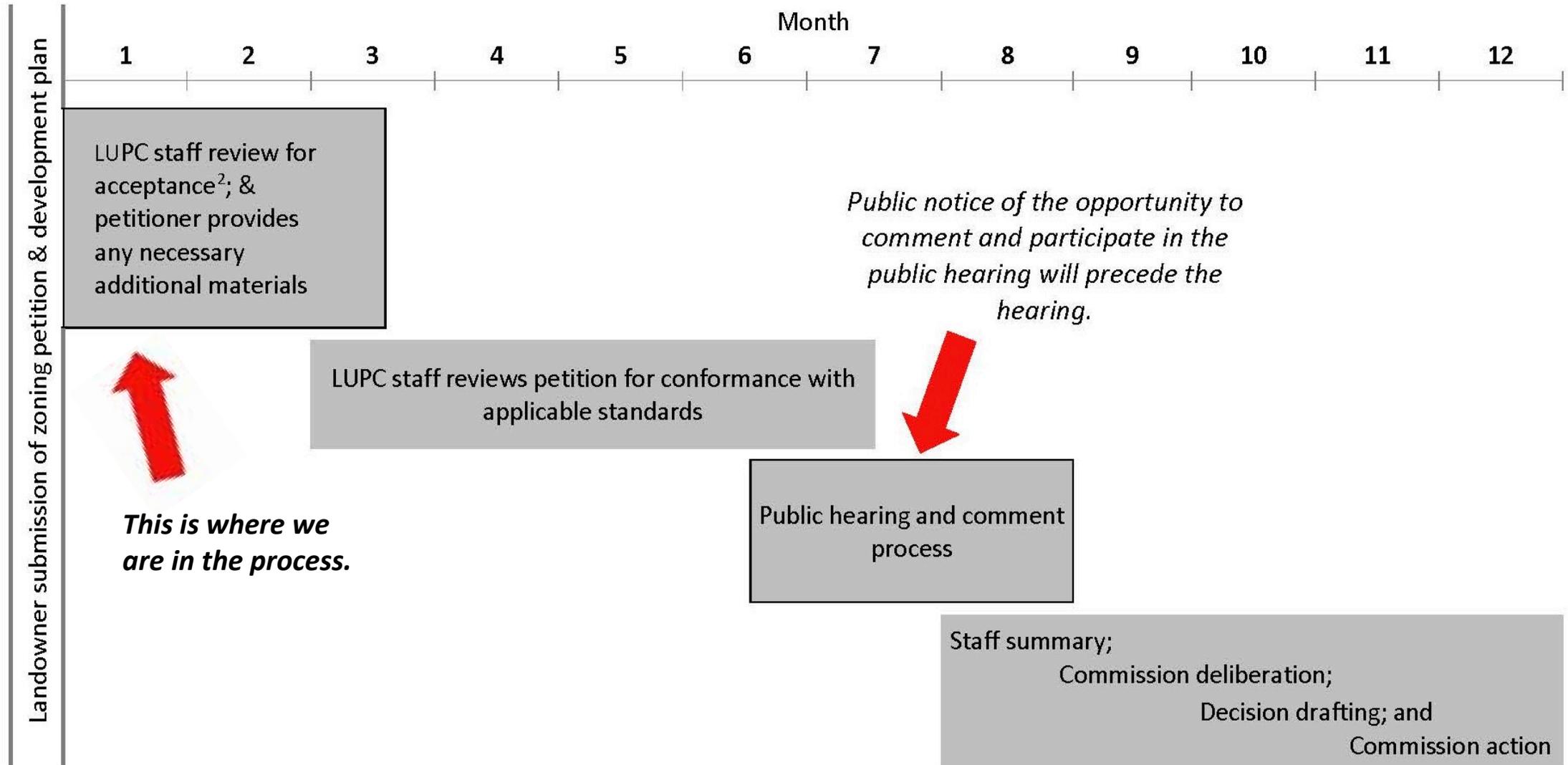
Specific Factors

- Regional economic viability
- Short and long-term socioeconomic impacts
- Maine's natural resource-based economy
- Local residents and property owners
- Ecological and natural values
- Impacts on existing uses and natural resources
- Recreation
- Public health, safety, and welfare
- Transportation routes and other infrastructure
- Impacts on public services
- Future reclamation and beneficial use

Process

- Review process like other zoning petitions
- Public hearing required
- Recommend that the petition:
 - Be determined complete, and
 - Have sufficient information prior the hearing process

Overview of Estimated Timeline



Questions ???

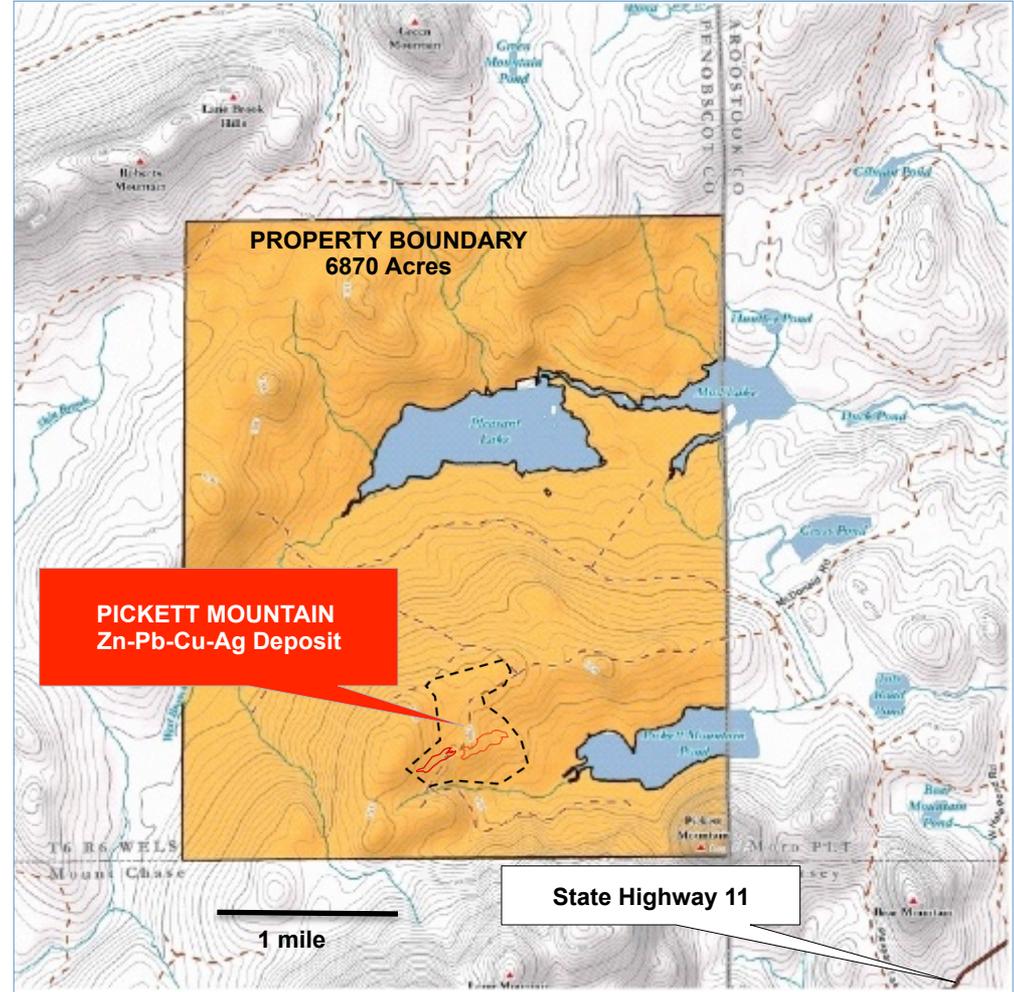
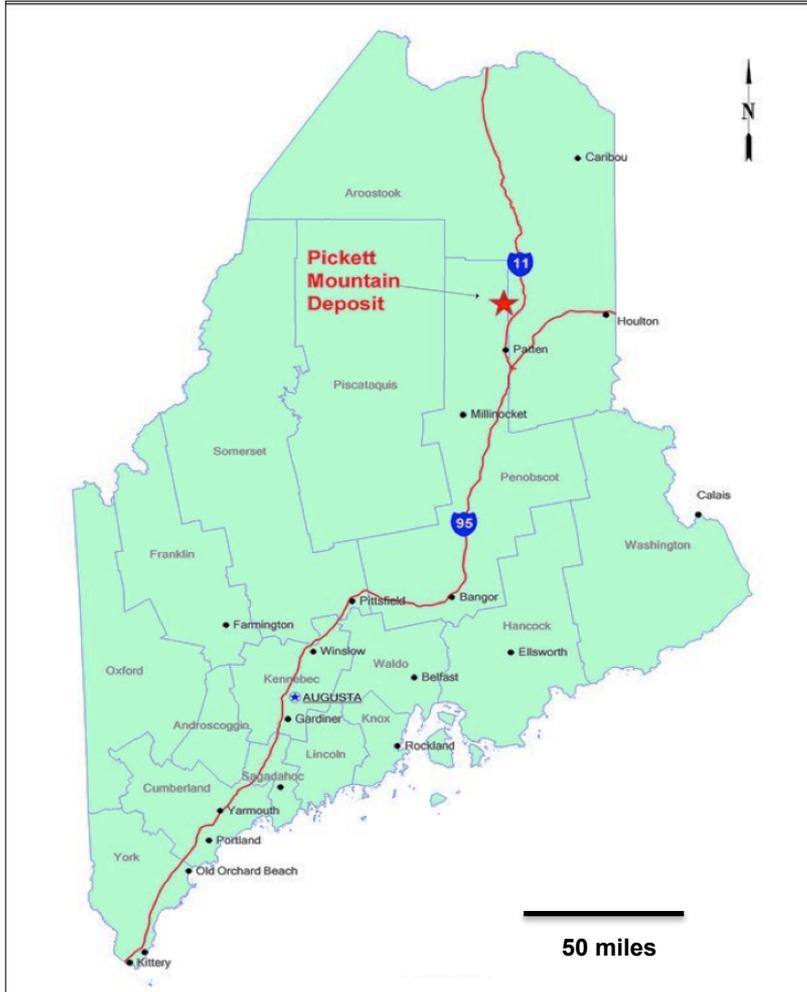


WOLFDEN

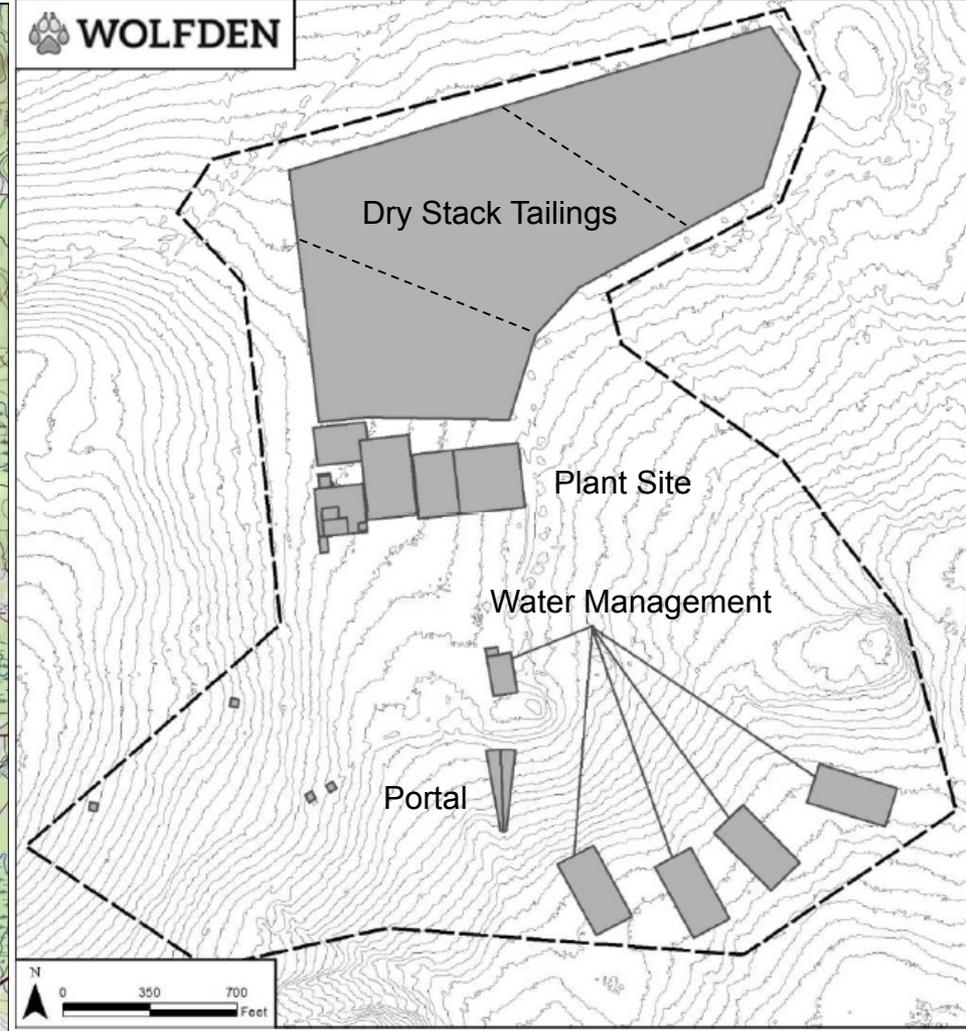
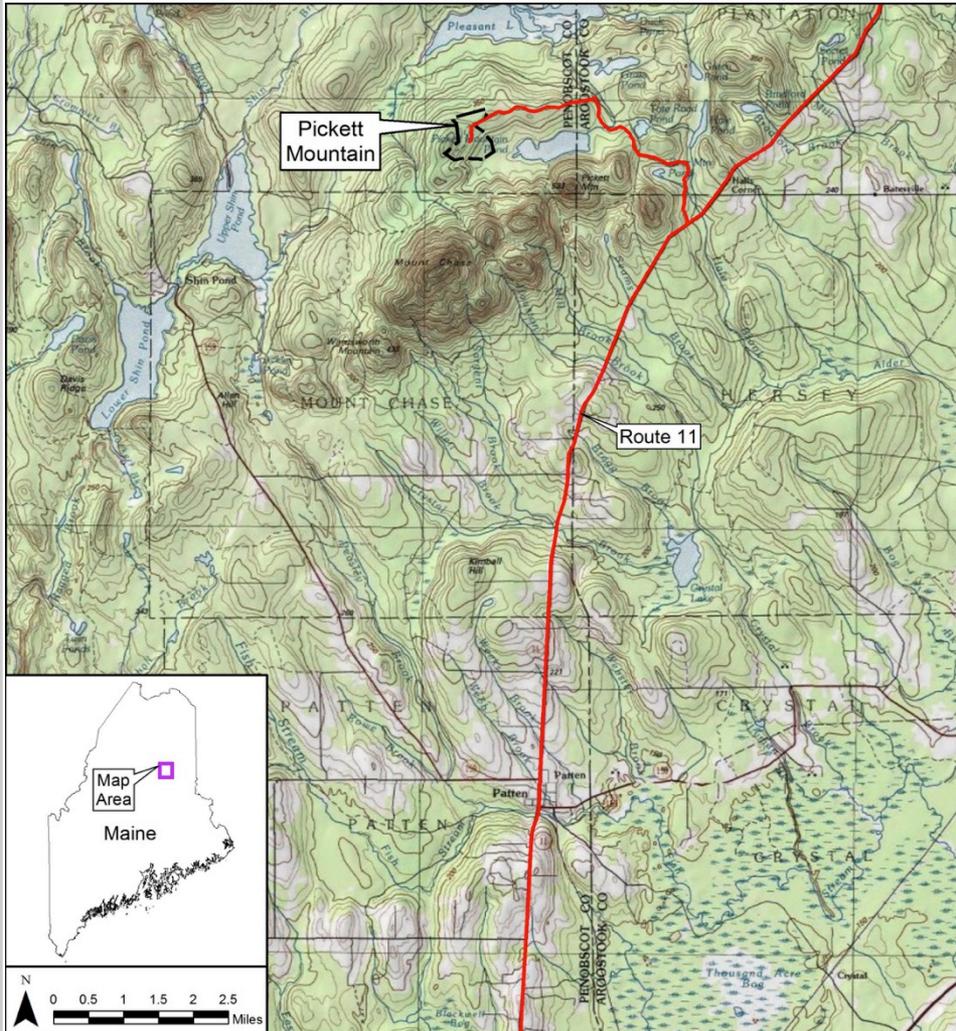
WLF.V

Pickett Mountain Project
Rezoning Introduction February 2020

Project Location



Project Location



Estimated Project Timeline

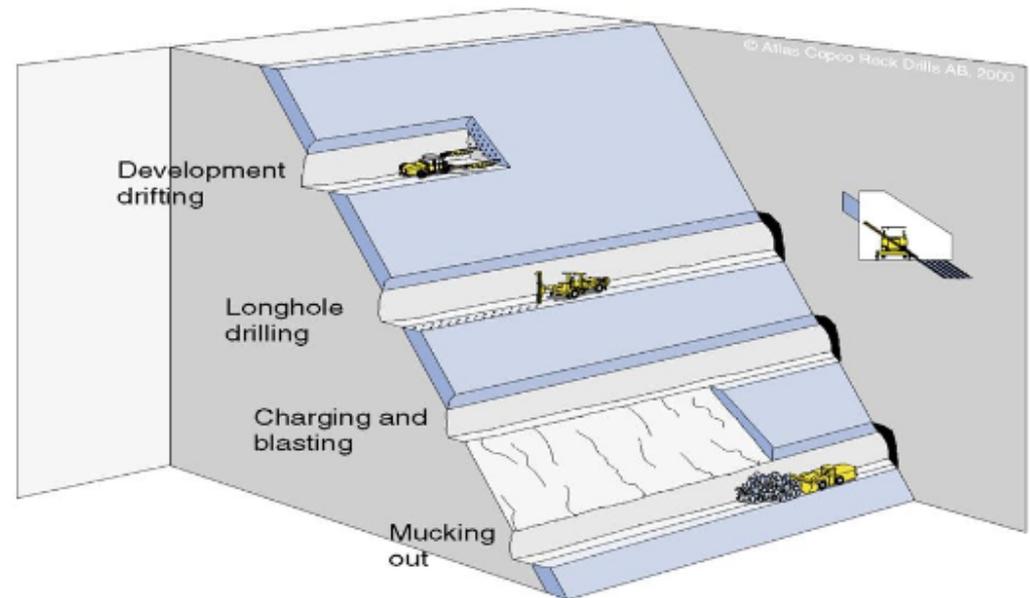
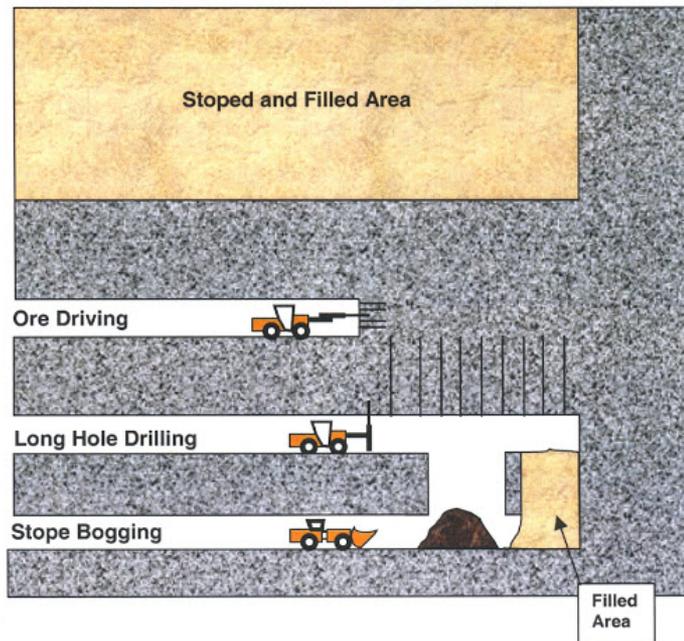


Annual Schedule Starting in 2020															
Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Re-zoning	█														
Permitting		█	█												
Construction				█	█										
Operations					█	█	█	█	█	█	█	█	█		
Reclamation							█				█			█	█

Assumptions

- Re-zoning approval approximately 1 year
- Baseline data collection to commence 2020
- Construction commences after approvals and project financing
- Pre production mine development during construction
- Reclamation of tailings cells during operations

- **Mining Method – Ramp Access, Long Hole Stopping**
- **Underground loaders and haulage trucks transport material to surface**
- **Waste rock hauled back underground to backfill mined out openings**





Typical ramp portal access with ventilation, power and plumbing

- Stage 1 – Crushing and grinding of ore (mineralized rock) from underground to powder size material
- Stage 2 – Flotation of rock powder into three separate concentrates of Copper, Lead and Zinc
- Stage 3 – Tailings (rock powder of no value) from the flotation is filtered and moved to dry stack tailings pad
- Stage 4 – The water extracted from metal concentrates and tailings is recirculated back to stage 2 for reuse
- Stage 5 – Metal concentrates are shipped via transport truck to refinery or port

Typical view of Concentrator Plant site

Greens Creek Alaska



Agitation pre-float



Flotation cell

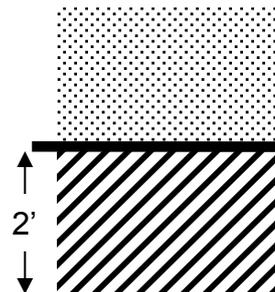


Copper attached to bubbles



Laying liner in Alaska

Tailings Liner Bed Example



Leachate collection layer

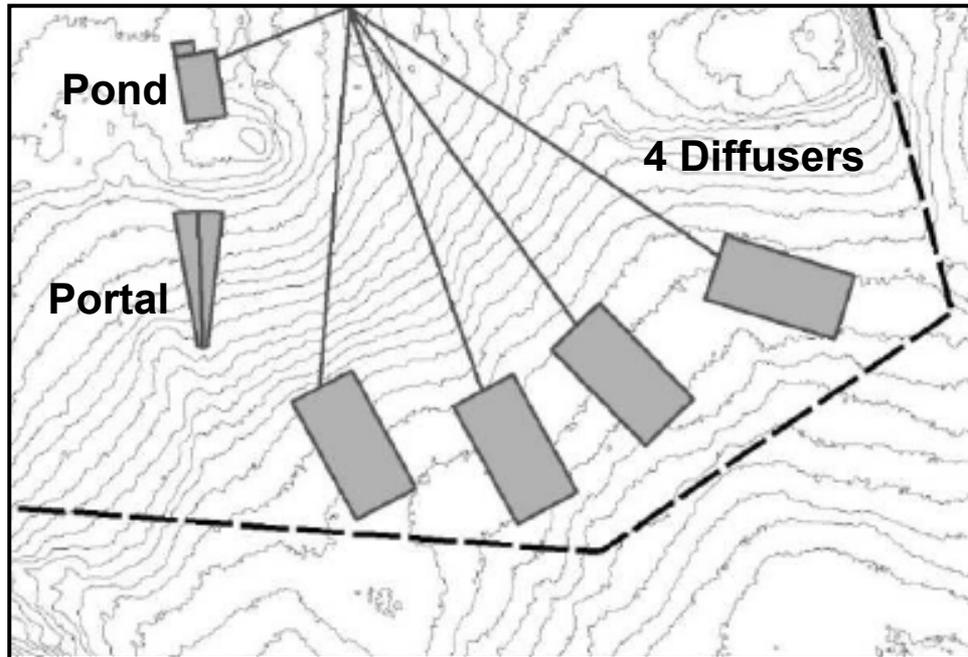
60 mm HPDE Geomembrane

10E-6 compacted till or clay

Greens Creek Dry Stack Tailings - Alaska



- ✓ **Legislated and proven** - method of safe tailings management
- ✓ **Engineered liner** - at the base of tailings
- ✓ **Capture and reuse** – process water and precipitation from tailings
- ✓ **Staged construction** - continuous closure and reclamation with monitoring
- ✓ **Engineered cover** – as final cap and closure of tailings
- ✓ **No impact** – to groundwater or surface water



- **Treated water** - stored in pond and tested prior to discharge to diffusers
- **Diffusers** - Rock and Gravel beds (similar to septic field) to allow seepage back into groundwater with no open surface discharge
- **Flexible Design** - Add more diffusers for increased discharge
- **Daily monitoring** - pond, ground and surface waters



Water Treatment Ponds in Winter



Water Treatment Ponds



Diffuser Construction

Stage 1 – Remove all infrastructure except water management system

Stage 2 – Waste rock and pad material placed underground

Stage 3 – Surface contouring and capping of final tailings cell

Stage 4 – Surface contouring and re-vegetation of site and tailings

Stage 5 – Continuous water treatment management and monitoring

Stage 6 – Removal of water treatment facility only upon clean water approvals

Stage 7 – Final closure of portal and any mine openings

Stage 8 – Re-zoning of the site back to non-industrial use

Current Road Access Conditions

Site Photographs	
<i>Client:</i> Wolfden Resources	<i>Project Number:</i> 3617197478
<i>Site Name:</i> Pickett Mountain	<i>Site Location:</i> T6 R6, Maine
<i>Photo Source:</i> Wood	
<i>Date:</i> October 2019	
<i>Photograph:</i> 3	
<i>Direction (if Known):</i> Northeast	
<i>Description:</i> Route 11 at junction of gravel access road.	
<i>Photo Source:</i> Wood	
<i>Date:</i> October 2019	
<i>Photograph:</i> 4	
<i>Direction (if Known):</i> Southwest	
<i>Description:</i> Route 11 at junction of gravel access road.	

Site Photographs	
<i>Client:</i> Wolfden Resources	<i>Project Number:</i> 3617197478
<i>Site Name:</i> Pickett Mountain	<i>Site Location:</i> T6 R6, Maine
<i>Photo Source:</i> Wood	
<i>Date:</i> October 2019	
<i>Photograph:</i> 7	
<i>Direction (if Known):</i>	
<i>Description:</i> View of existing road. Access (typ).	
<i>Photo Source:</i> Wood	
<i>Date:</i> October 2019	
<i>Photograph:</i> 8	
<i>Direction (if Known):</i>	
<i>Description:</i> View of existing road. Access (typ).	

Current Property Conditions



- **Typical Young Forest**
- **No year round population**
- **Limited Seasonal camps**

- **Manageable topography**
- **Avoid wetlands**
- **Designs flexible to limit impact**



Current Site Conditions



Drill Site



Remediated Drill Site



Drill Site



Remediated Drill Site

Dust Source	Mitigation Solutions
Road Traffic	Water high traffic routes to suppress dust
Plant - Crushing	Proven dust filters and vacuums systems
	Water Sprays
Dry Stack Tailings	Maintain a small footprint (Staged closure)
	Maintain practical moisture content in tailings

All of these will be considered in a detailed Engineering Study so as to limit any impact.

Area	Size (acres)	Overburden Recharge (mgpa)	Bedrock Recharge (mgpa)
Total Drainage Sub-Basin	3330	2,143	113
North of Divide in Basin	2500	1,609	85
South of Divide in Basin	830	534	28
Developed Mine Area Footprint	49	(29)	(3)
Percentage Impact of Mine Area on Total	1%	1%	2%

The proposed mine area represents less than 2% of the total drainage basin that hosts the site. Capturing and treating all water to same quality as existing ground should result in close to net-zero impact on the basin drainage quantity and quality.

Noise Sources	Source (dB)	Property Boundary (dB)	Nearest Neighbour (dB)
Ventilation Fan	110	40.5	31.4
Haul Trucks	76	6.5	0
Portal Blasting	94	24.5	15.4
Rock Drill	84	14.5	5.4

No year round population within several miles of the site. Seasonal use camps located greater than one mile.

Light Sources	Mitigation Solutions
Site light poles	All on site yard and tailings lighting downward facing
Building lights	All building lighting downward facing
Vehicle lights	All vehicles lights will be below tree level and unseen

Limited impacts to

- Forest Resources
- Wetland Resources
- Wildlife Resources/Habitats
- Plant Habitats
- Historical Sites
- Scenic Resources
- Recreational Resources



All of these will be considered in a detailed Engineering Study so as to limit or avoid any impact, preserve and restore to as close to nature as possible.

Local Traffic

- ✓ No impact to traffic – 4 to 10 haul trucks per day plus small vehicles

Local Schools

- ✓ No impact – potentially +10 students that is within annual variance

Local Emergency Services

- ✓ No impact – Use of onsite emergency services, minimal external support

Local Solid Waste Management

- ✓ No impact – Plan for use of contracted waste management

Local Power Supply

- ✓ No impact – Company to Install additional power via power supplier

Sources of Positive Beneficial Impacts:

- Steady State Employment for \pm 60 employees
- Operation Supplies
- Contracted Operational Services
- Supply of Fuels, Energy and Consumables

Estimated Financial Benefits to the:

• Communities	\$165 M
• Counties	\$67 M
• State of Maine	<u>\$246 M</u>
Total	\$478 M