



Chairman Worcester and Members of the Land Use Planning Commission (LUPC)  
Via Electronic Mail  
October 3, 2021

Dear Chairman Worcester and Members of the LUPC:

My name is Nick Bennett. I am the staff scientist for the Natural Resources Council of Maine (NRCM). NRCM is Maine's largest environmental advocacy group with more than 25,000 members and supporters. I am writing in strong opposition to Wolfden's revised rezoning petition for land it owns near Patten where it wishes to develop a mine.

Last February, LUPC staff sent Wolfden an excellent letter asking for additional information by the beginning of April. Wolfden missed this deadline and asked for an extension until June. Wolfden then missed that deadline and asked for an indefinite extension. LUPC staff wisely rejected this request and required a response from the company by September 1.<sup>1</sup> Wolfden's inability to respond to staff's reasonable questions in a timely manner is a sign that the company is not a good candidate to run a mine. Indeed, Wolfden has never operated a mine and has never generated any income from mining.

I was deeply involved in the many years of debate in the Legislature over the mining law that passed in 2017: LD 820, "An Act to Protect Maine's Clean Water and Taxpayers from Mining Pollution." Legislators in both parties who supported the bill, which passed with overwhelming bipartisan support and survived a gubernatorial veto, agreed that a key goal of the law was to ensure that any company mining in Maine would have extensive technical experience and strong finances. Their reasoning was that strong technical experience would help prevent disasters from happening, and strong financing would prevent Maine people from having to pay to clean up a mining disaster. Maine taxpayers are still paying for the clean-up of the Callahan Mine, which closed in 1972. This must not happen again.

Wolfden has neither strong technical experience, having never operated a mine, nor strong finances. As of its latest financial report, Wolfden was more than \$35 million in debt, and there were "material uncertainties that cast significant doubt on the Corporation's ability to continue as a going concern."<sup>2</sup>

Wolfden's inability to respond to requests for information in a timely manner, lack of mining experience, and lack of financial capacity alone should disqualify Wolfden from receiving a rezoning. In addition, Wolfden admits in its response to LUPC's information request that the company's own numbers are not reliable. Specifically, Wolfden stated: "Please note that given the size of and the amount of content within the Petition, it is anticipated that a few minor inconsistencies may still appear [sic]. Most material numeric values in the Petition are mentioned more than once, and so any single outlier that is not the

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<sup>1</sup> LUPC director's report recording for July 14, 2021. Accessed at [https://www.maine.gov/dacf/lupc/agenda\\_items/071421/Directors-Report.mp3](https://www.maine.gov/dacf/lupc/agenda_items/071421/Directors-Report.mp3) at 9:12

<sup>2</sup> Wolfden Resources. 2021. June 2021 financial statement. P. 7. Accessed at <https://www.wolfdenresources.com/wp-content/uploads/2021/09/WLF-Q2-FS-2021.pdf#page=7>

same as all the others, should be overlooked.”<sup>3</sup> In 25 years of working at NRCM and reviewing permit applications, I have never seen a company admit up front that its numbers are inconsistent. For a company that is proposing the dangerous activity of mining, such an admission is especially shocking.

Clearly, Wolfden’s proposal does not meet Chapter 12’s requirement that the “purpose of the D-PD subdistrict is to allow for large scale, well-planned development (Planned Development).”<sup>4</sup> There is nothing about Wolfden’s proposal that is “well-planned.”

In addition, Wolfden’s proposal is not consistent with the Comprehensive Land Use Plan (CLUP) or Chapter 12. The CLUP calls on LUPC to “Assure that development fits harmoniously into the existing communities, neighborhoods and the natural environment.”<sup>5</sup> Chapter 12 states that rezoning to D-PD can only occur if it “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 within the affected area.”<sup>6</sup> A mine clearly does not “fit harmoniously” in the shadow of Baxter State Park or the Katahdin Woods and Waters National Monument, or next to outstanding cold-water fisheries. It would clearly have an undue adverse impact on these resources.

As Bill Bridgeo noted in his excellent May 2020 letter to LUPC:

I am a native of Aroostook County and current resident of Augusta. For decades, I have enjoyed the robust fresh-water fishery comprised of Pleasant Lake, its flowage into Mud Lake, which is the headwater of the west branch of the Mattawamkeag River, downstream to Duck Pond and then into Rockabema Lake and beyond. I speak from extensive personal experience when I assure the Commission that these waters have been and continue to be some of the best brook trout and landlocked salmon fisheries I have experienced since my boyhood adventures in the wild expanses of northern Maine in the 1950's and 1960's.

The extensive, 100 plus page application that you have before you submitted by Wolfden woefully misrepresents the quality of that fishery and grossly understates this important element of the local environment abutting the Wolfden property (in fact, the entire discussion in their application related to fisheries occupies less than half of one page-three short paragraphs) [sic]. It ignores entirely the fact that the 200-acre parcel in question is but a few hundred feet uphill from the point where Pickett Mountain Stream forms up. Pickett Mountain Stream in turn flows into Pickett Mountain Pond, which again becomes Pickett Mountain Stream which then flows directly into Mud Lake near the outlet of the lake which, in turn, is the

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<sup>3</sup> Wolfden Resources. 2021. Letter to Stacie Beyer Re: Responses to State agency and third party review questions related to petition ZP 779, to Rezone Portion of Township 6, Range 6 Penobscot County, Maine for Development of an Underground Metallic Mineral Deposit. September 1. P. 11. Accessed at [https://www.maine.gov/dacf/lupc/projects/wolfden/hearing\\_record/2.35\\_2021-09-01\\_WolfdenMtChaseLLC\\_LUPCQuestionResponses.pdf#page=11](https://www.maine.gov/dacf/lupc/projects/wolfden/hearing_record/2.35_2021-09-01_WolfdenMtChaseLLC_LUPCQuestionResponses.pdf#page=11)

<sup>4</sup> 01-672 C.M.R. ch. 10, § 10(H)(1). Accessed at: [https://www.maine.gov/dacf/lupc/laws\\_rules/rule\\_chapters/Ch10\\_SubchapterII.pdf#page=35](https://www.maine.gov/dacf/lupc/laws_rules/rule_chapters/Ch10_SubchapterII.pdf#page=35)

<sup>5</sup> Maine Land Use Regulation Commission. 2010. Comprehensive Land Use Plan for Areas Within the Jurisdiction of the Land Use Regulation Commission. P. 7. Accessed at [https://www.maine.gov/dacf/lupc/plans\\_maps\\_data/clup/Chapter1.pdf#page=7](https://www.maine.gov/dacf/lupc/plans_maps_data/clup/Chapter1.pdf#page=7)

<sup>6</sup> 01-672 C.M.R. ch. 12, § 4(B)(1)(b). Accessed at [https://www.maine.gov/dacf/lupc/laws\\_rules/rule\\_chapters/Chapter12\\_ver2013.pdf#page=3](https://www.maine.gov/dacf/lupc/laws_rules/rule_chapters/Chapter12_ver2013.pdf#page=3)

headwater of the west branch of the Mattawamkeag River, which then flows into Duck Pond and, a mile or so later into Rockabema Lake. All of these waters are teeming with native brook trout and landlocked salmon in the weeks after ice-out and in the fall. I have years worth of photographs attesting to the abundance of this fishery and friends who annually share these experiences who are happy to support what I am saying.<sup>7</sup>

Wolfden's initial petition stated that the ponds Mr. Bridgeo describes in the vicinity of its proposed mine site "did not have conditions supportive of cold-water fish species at the time of these surveys," referring to IFW surveys from 1953 and 1958. Wolfden did not cite modern, publicly available information that "Pleasant Lake, Mud Lake and Grass Pond are designated as 'State Heritage Fish Waters', indicating that they contain wild brook trout populations, have not been stocked with brook trout or any other fish for at least 25 years, and have specific legislative policy that restricts fish stocking and the use of live fish as bait to protect their unique brook trout resources. Pleasant and Mud Lakes were last stocked in 1956; Grass Pond has never been stocked."<sup>8</sup>

If Wolfden deliberately ignored this information and expected no one would notice, they made a big mistake. If Wolfden made an error by not understanding the high value of the fisheries near its proposed mine, and the fact the entire West Branch of the Mattawamkeag is within critical habitat for endangered Atlantic salmon, the Commission should still hold Wolfden accountable. There is no conceivable way that this mine can be a compatible use in the middle of an area with cold-water habitat of this caliber. Wolfden should have understood this before purchasing its property.

The proposed mine is also a direct threat to the guiding and tourism industries that are critical to the economy of the Katahdin region. As the owner of Chandler Lake Camps and Lodge stated:

The area of concern is in the headwaters of many watersheds of importance and more specifically within the boundaries of many historical heritage waters for native Maine wild brook trout and landlocked Salmon.

We not only base our existence on these heritage waters but Maine itself is one of the last safe zones for wild native Brook Trout and Salmon. Why would we take a chance and put this valuable resource at risk?

As a long time, sporting lodge owner and master Maine guide I would strongly request the Maine LUPC take a firm stance against any chance that this proposal could jeopardize the natural resources that all Mainers cherish. A risk that could change the resource forever. Thank you for allowing our industry to comment on this important matter and we will be following the process closely.<sup>9</sup>

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<sup>7</sup> William Bridgeo. 2020. Letter to LUPC on Wolfden rezoning petition. May 13. P. 1 Accessed at: [https://www.maine.gov/dacf/lupc/projects/wolfden/hearing\\_record/PublicComment\\_Wolfden\\_05272020.pdf#page=2](https://www.maine.gov/dacf/lupc/projects/wolfden/hearing_record/PublicComment_Wolfden_05272020.pdf#page=2)

<sup>8</sup> Jeff Reardon, Trout Unlimited Maine Brook Trout Project Director. 2020. Letter to Stacie Beyer. September 10. P. 3. Accessed at:

[https://www.maine.gov/dacf/lupc/projects/wolfden/notice/PublicCommentWolfden\\_09152020.pdf#page=6](https://www.maine.gov/dacf/lupc/projects/wolfden/notice/PublicCommentWolfden_09152020.pdf#page=6)

<sup>9</sup> Jason and Sherry Bouchard, Owners, Chandler Lake Camps and Lodge. 2020. Email to LUPC on the Wolfden mining proposal. Accessed at:

[https://apps.web.maine.gov/dacf/lupc/projects/wolfden/notice/PublicCommentWolfden\\_09152020.pdf#page=37](https://apps.web.maine.gov/dacf/lupc/projects/wolfden/notice/PublicCommentWolfden_09152020.pdf#page=37)

In addition to the above overarching concerns, NRCM also has the following specific technical concerns with Wolfden’s amended rezoning petition discussed below. As we continue to review this document, we will likely have additional concerns in the future.

**1. Wolfden’s proposal hinges on its claimed ability to discharge wastewater from its mine, including ore processing wastewater, that is as clean or cleaner than natural groundwater at the site. Despite having nearly two years to provide an example of a mine that can discharge wastewater that is this clean, Wolfden has failed again to do so in its revised petition.** That is because such a mine does not exist. What Wolfden instead provided was the example of the Halfmile Mine in New Brunswick, yet another time.<sup>10</sup> LUPC staff pointed out in its February 2020 letter requesting additional information that this mine is not a valid comparison because it lacks an ore processing facility.<sup>11</sup> Ore processing is the dirtiest part of mining operations and involves the use of hazardous chemicals to concentrate target metals. It also increases the likelihood of toxic metals entering mine wastewater because the process involves crushing ore to a fine powder, thereby greatly increasing its surface-to-volume ratio. This same process of increasing surface-to-volume ratio also increases the likelihood of oxidation of iron sulfide, present in ores of the type at Pickett Mountain, and the production of acidic wastewater. A mine lacking an ore processing facility is simply not a reasonable comparison for the mine Wolfden is proposing at Pickett Mountain.

In addition, Wolfden provided limited information on discharges from a mine that wished to remain “confidential” but which Wolfden claims is an example of mine that discharges at levels cleaner than or as clean as natural background levels of groundwater.<sup>12</sup> Wolfden provides no information on consistency of results of treatment over time and no information on mine production (this information is essential as the data could be from a time when the mine is not running at a high level). These data are almost useless. Moreover, the fact that Wolfden refused to disclose the name of the mine makes the data, limited as they are, impossible to verify independently. Finally, any hard rock mining company capable of discharging water as clean as Wolfden claims the Pickett Mountain Mine will discharge is very unlikely to want to remain confidential. They would be touting the results of their treatment process far and wide.

In its revised petition, Wolfden then provided limited data for four other unnamed sites, one of which may not even have been a mine (Wolfden labeled it an EPA Superfund site).<sup>13</sup> Again, Wolfden’s failure to

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<sup>10</sup> Wolfden Resources. 2021. Petition to Rezone Portion of Township 6, Range 6, Penobscot County, Maine for Development of an Underground Metallic Mineral Deposit. September 1. Exhibit 10, P. 10-22. Accessed at [https://www.maine.gov/dacf/lupc/projects/wolfden/hearing\\_record/2.33\\_2021-09-01\\_WolfdenMtChaseLLC\\_PetitionRevision.pdf#page=236](https://www.maine.gov/dacf/lupc/projects/wolfden/hearing_record/2.33_2021-09-01_WolfdenMtChaseLLC_PetitionRevision.pdf#page=236)

<sup>11</sup> LUPC. 2021. Letter from Stacie Beyer to Jeremy Ouellette. P. 3. Accessed at [https://www.maine.gov/dacf/lupc/projects/wolfden/correspondence/Wolfden\\_Additional\\_Info\\_Request\\_Letter\\_5.pdf#page=3](https://www.maine.gov/dacf/lupc/projects/wolfden/correspondence/Wolfden_Additional_Info_Request_Letter_5.pdf#page=3)

<sup>12</sup> Wolfden Resources. 2021. Petition to Rezone Portion of Township 6, Range 6, Penobscot County, Maine for Development of an Underground Metallic Mineral Deposit. September 1. Exhibit 10, P. 10-24. Accessed at [https://www.maine.gov/dacf/lupc/projects/wolfden/hearing\\_record/2.33\\_2021-09-01\\_WolfdenMtChaseLLC\\_PetitionRevision.pdf#page=238](https://www.maine.gov/dacf/lupc/projects/wolfden/hearing_record/2.33_2021-09-01_WolfdenMtChaseLLC_PetitionRevision.pdf#page=238)

<sup>13</sup> Wolfden Resources. 2021. Petition to Rezone Portion of Township 6, Range 6, Penobscot County, Maine for Development of an Underground Metallic Mineral Deposit. September 1. Exhibit 10, P. 10-29. Accessed at

identify these sites makes independent verification of the data it presented impossible. Wolfden also provides no information about whether these are some sort of mean influent and effluent concentrations, and if so, over what time period. Wolfden has provided no basis to conclude these data are useful to determine whether the company can discharge wastewater clean or cleaner than natural groundwater at Picket Mountain.

NRCM hired a mining expert from the [Center for Science in Public Participation](#) to review Wolfden's initial petition. Regarding Wolfden's claim that it could discharge wastewater as clean or cleaner than natural groundwater, this expert concluded that: "The Center for Science in Public Participation is unaware of any mine that can do this, and Wolfden has provided no example of such a mine despite LUPC staff and others asking it to do so."<sup>14</sup> Nothing Wolfden submitted in its revised petition alters this conclusion.

**2. Wolfden does not provide an adequate description of what it will do with its reverse osmosis brine or explain why it believes reverse osmosis is economically viable for the site.** The brine is the stream of water containing the high levels of unwanted constituents, such as toxic heavy metals, that Wolfden would need to filter from its wastewater. Because the concentrations of such metals may be so high (the whole point of reverse osmosis is to produce one concentrated stream and one clean stream) the brine may constitute hazardous waste. It is unclear whether disposal of this material in a tailings facility would be possible. This same issue came up during the various times companies proposed to use reverse osmosis at the Bald Mountain site. SRK consulting, a consultant for the Swedish mining firm Boliden, which used to own Bald Mountain, stated the following about reverse osmosis and ion exchange systems for treating mining waste:

These latter processes are not preferred due to expense, complexity, and the problems associated with brine or regeneration solutions. The side streams produced from these processes contain very high concentrations of dissolved constituents which can not [sic] be continuously disposed of in the tailings impoundment. A mine water treatment system based on the advanced processes is not practical or justifiable.<sup>15</sup>

Whether this is true for Pickett Mountain is unclear, but reverse osmosis systems are expensive, break down at times, and produce very toxic brine streams. Whether a system large enough to deal with wastewater from ore processing operations is economically feasible, sufficiently reliable, or produces a brine necessitating disposal as hazardous waste are all questions that Wolfden does not address. These questions are critical if Wolfden is predicating its rezoning on using reverse osmosis. Certainly, Wolfden would need something comparable to reverse osmosis to discharge at background levels (although, as stated above, even reverse osmosis has never been used to meet this goal at any other ore-processing

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[https://www.maine.gov/dacf/lupc/projects/wolfden/hearing\\_record/2.33\\_2021-09-01\\_WolfdenMtChaseLLC\\_PetitionRevision.pdf#page=243](https://www.maine.gov/dacf/lupc/projects/wolfden/hearing_record/2.33_2021-09-01_WolfdenMtChaseLLC_PetitionRevision.pdf#page=243)

<sup>14</sup> Stu Levitt, Center for Science in Public Participation. 2020. EVALUATION OF THE SELECTED TECHNICAL AND ECONOMIC COMPONENTS OF WOLF DEN RESOURCES' PROPOSED PICKETT MOUNTAIN PROJECT. November. Page 1. Accessed at:

[https://www.maine.gov/dacf/lupc/projects/wolfden/review\\_process/Public\\_Comment\\_Wolfden\\_11202020.pdf#page=37](https://www.maine.gov/dacf/lupc/projects/wolfden/review_process/Public_Comment_Wolfden_11202020.pdf#page=37)

<sup>15</sup> Steffen Robertson, and Kirsten (B.C.) Inc. 1990. Opinion of Technical and Economic Aspects of Waste Management, Bald Mountain Project. P. 8-5. Accessed at <https://www.nrcm.org/wp-content/uploads/2013/11/miningreportsupportingdocs.pdf#page=72>.

hard rock mine). The answers to these questions may also show that Wolfden’s proposal to use reverse osmosis is not feasible either technically or economically, especially given the uncertainties of the quality of the Pickett Mountain ore. Again, as the Center for Science in Public Participation stated in its initial review of Wolfden’s petition, the “classification of the ore is indicated and inferred, the lowest classes of reserves. Given the small deposit size and poor classification of reserves, it would be difficult to justify mine investment/development.”<sup>16</sup> The lack of proven, high-quality reserves makes Wolfden’s ability to use an unprecedentedly effective reverse osmosis system at this site even more questionable. LUPC should seek answers to these questions about the technical and economic viability of reverse osmosis at this site.

**3. Wolfden’s “worst case” scenario estimates are inadequate and greatly underestimate the amount of money needed to meet Chapter 200 requirements to pay sufficient funds upfront to cover a mining disaster.** Wolfden analyzed two worst-case scenarios:

1. Temporary slope failure with tailings runout during operations
2. Cyclic mobility with tailings slumping and closure damage<sup>17</sup>

These are hardly worst-case scenarios, and Wolfden has clearly ignored what a worst-case scenario is for any mining operation: Large-scale pollution of surface water or groundwater. For example, at mines where acid-generating reactions get out of control, groundwater pollution plumes can become enormous and even contaminate nearby surface waters. These plumes could originate from mine workings where acid-generating material is exposed to air and water, from failures of tailings containment, or from leaks and spills from ore processing tanks. Cleaning up such plumes often takes decades of pumping and treating groundwater. This is extremely costly over a long period of time. Maine taxpayers should never have to pay for decades-long remediation of polluted groundwater or surface water. Chapter 200’s requirement for a mining company to pay the cost of a mining disaster upfront is based in part on concerns of the huge expense of pumping and treating contaminated water over decades. Wolfden’s “worst-case” scenarios completely ignore this issue, and LUPC should not take these scenarios or the low cost to fix them seriously. Any worst-case scenario analysis must consider long-term treatment of polluted groundwater and/or surface water, and the costs should be appropriate for this all-too-common mining disaster.

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<sup>16</sup> Stu Levitt, Center for Science in Public Participation. 2020. EVALUATION OF THE SELECTED TECHNICAL AND ECONOMIC COMPONENTS OF WOLFDEN RESOURCES’ PROPOSED PICKETT MOUNTAIN PROJECT. November. Page 7. Accessed at: [https://www.maine.gov/dacf/lupc/projects/wolfden/review\\_process/Public\\_Comment\\_Wolfden\\_11202020.pdf#page=37](https://www.maine.gov/dacf/lupc/projects/wolfden/review_process/Public_Comment_Wolfden_11202020.pdf#page=37)

<sup>17</sup> Wolfden Resources. 2021. Petition to Rezone Portion of Township 6, Range 6, Penobscot County, Maine for Development of an Underground Metallic Mineral Deposit. September 1. Exhibit 2, June, 5 2021, letter from SLR re: Potential TSF Failure Scenarios Wolfden, Pickett Mountain TSF. Accessed at [https://www.maine.gov/dacf/lupc/projects/wolfden/hearing\\_record/2.33\\_2021-09-01\\_WolfdenMtChaseLLC\\_PetitionRevision.pdf#page=113](https://www.maine.gov/dacf/lupc/projects/wolfden/hearing_record/2.33_2021-09-01_WolfdenMtChaseLLC_PetitionRevision.pdf#page=113)

For the above reasons, NRCM urges LUPC to deny Wolfden's rezoning petition. We will submit further comments as this process continues.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Bennett". The signature is written in a cursive style with a large, stylized initial "N".

Nick Bennett  
Staff Scientist

Cc: Stacie Beyer