

Planning Board suggestions and comments – 12/10/24

To: the Alna Selectboard
From: the Alna Planning Board
Cc: Town Counsel
Date: Dec. 15, 2024
Re: Planning Board suggestions and comments regarding the Ad Hoc Committee's draft Blasting Ordinance

Attached is an edited version of the Ad Hoc Committee's draft Blasting Ordinance with suggested edits and comments from the Planning Board.

Planning Board Process:

The Planning Board spent a portion of its Dec. 3 meeting and an additional Dec. 10th meeting reviewing the draft ordinance. We received a handful of written comments from the public, all of which are posted on the Planning Board's "Agendas" page on the town website. We took oral public comment from the public on Dec. 10 which can be seen on the zoom of that meeting. We understood your request to provide comments by Dec. 15, 2024.

The Planning Board focused its limited time to review the ordinance on identifying those areas that we felt needed clarity in order for us to administer the ordinance assuming it is adopted by the town meeting. We tried to stay within the spirit of the intent of the Ad Hoc Committee as we understood it.

In some cases, a suggested edit was straight forward and is included in the edited attachment. In other cases, where a suggestion was more complicated or time consuming to resolve, we just flagged it in a comment as an issue needing further attention.

A few notes regarding our suggestions:

1. **Consultation with town attorney:** We identified (in the comments) several issues of significance where we did not have sufficient time and/or expertise to resolve the issues and we suggest consultation with the town attorney. These issues include:
 - Section 1(A): Clarifying the applicability paragraph, and the definitions used in that paragraph to clarify which activities (and their geographical area) require a permit and which do not;
 - Section 1(A): How to add limited notification and hours of operation requirements for those activities which do not require a permit;
 - Section 9: Clarifying the impact of this section on existing operations;
 - Section 10: The correct language to use for the "exception"/variance.

2. **Inconsistencies between state law and proposed ordinance:** We noted several instances where the ordinance and the incorporated 38 MRS 490-Z section addressed the same issue in different ways. The ordinance is clear that the more restrictive language would apply, but for provisions like submission requirements or topics to cover in the report, one section is not necessarily more restrictive than the other, simply different. We recommend reconciling those if possible and including the language of 490-Z in an appendix or otherwise in the ordinance so that applicants and the public will understand that both sets of standards apply.
3. **Ensuring internal consistency:** Definitions need to be reviewed to ensure that it is clear how they relate to each other and that the definitions and all other language are used consistently in the ordinance. Several of both the written and oral public comments raised this issue.
4. **Issues not addressed:** Members of the public brought up a number of other valid issues that the planning board did not have time to address:
 - **Additional clarification/definition/consistency issues** (see written public comments);
 - Recommendation that there be a **limit on the cubic yards** of material that could be blasted during a year;
 - Recommendation that there be a **limit on the acreage** that could be blasted in a year;
 - Recommendation that there be a **limit on the total acreage** that could be blasted on a particular parcel;
 - Recommendation that there be a **limit on the length of time** a parcel could be blasted, for example five or ten years;
 - Recommendation that **reclamation be required**, for example, after five acres have been blasted;
 - Recommendation that the **number of production quarries using blasting in town be limited**.

ALNA BLASTING ORDINANCE

Section 1: Applicability; Intent and Purposes of this Ordinance.¹

- A. Applicability Clause. This Ordinance shall apply to all blasting operations for ~~Projects~~ of 1 acre or more, ~~and~~ all production blasting operations for Projects of 1/2 acre or more, ~~and all~~. ~~No~~ blasting ~~shall be done~~ within 250 feet of any structure on an adjacent parcel of land not owned by the person doing such blasting, ~~without a permit~~. No ~~blasting operation Project~~, subject to the provisions of this Ordinance may commence operation until an application pursuant to this Ordinance has been submitted to and reviewed and approved in writing by the Planning Board. ~~Nothing herein shall relieve the user of explosives from complying with any state or federal laws relative to the use of explosives.~~ Any person, corporation, or other form of legal entity, not subject to the foregoing terms, shall nevertheless be subject to the provision of the Ordinance set forth in Section 5: Notice B.
- B. ~~Blasting~~ is a common, long and generally accepted activity in the production of various stone and gravel products in the mining and quarrying industries. It is also regularly employed in site preparation for building construction, and occasionally in farming. To avoid possible negative consequences that may derive from unregulated blasting, the Town of Alna establishes this ordinance.
- C. This ordinance establishes specific standards for blasting operations, notice requirements, instrument monitoring requirements of blasting operations, a permit process for blasting, and other associated standards and requirements.
- D. It is intended to minimize the effects of airblast overpressure, ground vibration, ~~flyrock~~, dust, and noise associated with blasting which may be detrimental to the enjoyment of life, property, and the conduct of business for those individuals affected.

Commented [CJ1]: The definitions of “Blasting Operations,” and “Project or Blasting Operation Project” are confusing. It is unclear which definition should be used for determining the 1 acre and ½ acre thresholds. Consider eliminating the “project” definition and/or more clearly defining what area should be considered in determining whether the thresholds have been met.

Commented [CJ2]: Clarifying that a permit is needed for blasting within 250 feet of a structure on an adjacent parcel of land not owned by the person doing such blasting.

Commented [CJ3]: Same as first comment.

Commented [CJ4]: This sentence can be deleted as it is covered in Section 2 (C)

Commented [CJ5]: We recommend consulting with the town attorney on the best way to incorporate this concept. It is unclear what the word “terms” refers to. Perhaps a separate exemption paragraph would be clearer. Also, we suggest any project that is exempt except for Section 5 should still comply with the hours limitation in Section 4(D).

Commented [CJ6]: Flyrock is defined in the definition section but not otherwise mentioned in the ordinance. This seemed the appropriate place.

¹ Definitions of terms used herein can be found in Section 13 starting at page 12

- E. It is intended to provide standards that will also prevent permanent damage to the geologic, hydrogeologic, and wildlife resources and ecological balance in the region outside the immediate blast area. The ordinance is intended to protect the quality of life and the homes of residents, neighborhoods, property, groundwater, wildlife resources, scenic beauty and/or businesses, all lying outside the approved work area and potentially affected by the blasting.
- F. It is intended to be effectively and efficiently administered without causing undue financial and administrative hardship to blasting operators or to town officials.

Section 2: Statutory authority; administration; effect on other regulations.

- A. This ordinance is enacted pursuant to 30-A M.R.S.A. §3001 and shall be administered by ~~the CEO and the~~ Planning Board of the Town of Alna.
- B. The requirements of this ordinance are in addition to any other ordinances, regulations, and statutes, and where different standards are contained elsewhere, the more restrictive standards shall apply.
- C. This ordinance does not replace or negate federal and/or state requirements pertaining to explosives.

Commented [CJ7]: The ordinance doesn't set out a clear role for the CEO. If the CEO is to have a role in permitting under this ordinance, it needs to be clearly defined.

Section 3: Permit required; applications; hearings; fees; bond and insurance.

A permit shall be required for all blasting operations identified in Section 1 A and obtained prior to any blasting with explosive devices or materials within the boundaries of the Town of Alna.

- A. Applications for a permit may be obtained in the Town Office or on the Town Website.
- B. Applications for blasting permits shall be submitted to the Planning Board and shall contain the following information:
 - 1) The name address, email address and phone number of the applicant.

Commented [CJ8]: These submission requirements are incomplete. While the PB can ask for any information it deems necessary, a more complete list of submission requirements is helpful to applicants and is more efficient.

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- 2) The name, address, email address and phone number of the property owner the Town of Alna Tax Assessor's map and lot number(s) for the parcels identified in the application.
- 3) The name, address, email address and phone number of the general contractor and the blasting contractor.
- 4) A site plan showing the locations of the proposed blasting activity, adjacent land uses, adjacent structures and distance to those structures, and all rare, threatened or endangered species.
- 5) The estimated total number of cubic yards of material, not including overburden, to be removed by blasting.
- 6) An estimate of the number of blasts required to remove the specified amount of material.
- 7) A description of the project for which the blasting is being undertaken.

~~8) Adjacent land uses.~~

~~9) The location of adjacent structures and distance to those structures.~~

~~10)8)_____~~ The projected dates work is to be undertaken.

~~11)9)_____~~ Any other information deemed necessary by the Board.

C. Upon determination by the Planning Board that a blasting application is complete for processing the Planning Board shall review and act upon the application within ~~60~~ calendar days.

- 1) The Board may approve, approve with conditions, or deny the application based on the performance standards contained herein. The applicant must be notified in writing by first-class mail within 10 days of the decision.

Commented [CJ9]: We recommend requiring a site plan and combining this with sections 8 and 9 below. And adding rare, threatened and endangered species (relative to performance standard Section 4 (H)).

Commented [CJ10]: In 60 days, the Planning Board might have only one regular meeting. 90 days would ensure that there are at least two regular meetings and provide time for the required public hearing.

D. Public hearing. A public hearing shall be held on all blasting applications.

- 1) All abutting property owners and/or those property owners within 1000 feet of the property line of the property for which the permit is requested shall be notified by first class certified mail, return receipt requested, at least 10 days prior to the date of the hearing. A list of names and mailing addresses shall be provided as part of the application. Such notification shall be the responsibility of the applicant, and evidence of such notification shall be provided to the Planning Board.
- 2) Notification of the public hearing shall be given by the town in a newspaper of local publication twice, the first time being at least two weeksseven days prior to the date of the hearing and the second time at least one weekfour days prior to the date of the hearing. The cost of this publication will be paid by the applicant.

E. Fees. All applications for blasting permits shall be accompanied by a fee according to the fee schedule and deposit as determined by the Alna Select Board.

F. Bond and proof of insurance.

- 1) The applicant and/or the blaster may be required to post a bond in an amount to be determined by the Planning Board for those cases reviewed by the Board.
- 2) The applicant and/or the blaster shall present proof of liability insurance in a minimum amount of \$2,000,000 combined single limit per occurrence for production blasting, and a minimum amount of \$1,000,000 combined single limit per occurrence for other blasting.

G. Effective period. Permits shall be effective for no more than 365 days from the date of approval.

Section 4: Performance Standards

Except as otherwise specifically set forth herein, the performance standards set forth in the blasting provisions found in MRS Title 38 Section 490-Z, Section 14 (Blasting) effective as of the date of the adoption of this ordinance, as they may be amended from

Commented [CJ11]: This timing doesn't work because Lincoln County has weekly, not daily, papers. We suggest requiring notice for two consecutive weeks, beginning three weeks before the hearing.

Commented [CJ12]: We suggest that the fees be set tythrough a schedule rather than a permit by permit determination.

Commented [CJ13]: We don't know what the deposit is referring to.

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time to time, shall apply to blasting in the Town of Alna. It is intended that the stricter standards, whether set forth herein or in Section 490 Z, Section 14, are to be applied. Further, if Section 490 Z, Section 14, is amended to make any of such standards less restrictive such amendments shall not apply, unless and until they are specifically adopted by the town of Alna.

All notices sent to the Maine Department of Environmental Protection (the “Department”) under Section 490-Z, Section 14 shall simultaneously be sent to the Clerk, Town of Alna. Waivers or variances granted by the Department shall only be binding on the Town if similarly granted by the Planning Board.

- A. Applications for a production blasting permit for a quarry must provide a valid permit for the quarry in which the blasting will occur.
- B. Applications for a blasting permit as required by this Ordinance, must provide a valid permit, if required, for the project with which the blasting is associated.
- C. Hours of detonation. Hours of detonation for production blasting shall be limited to daylight hours, no earlier than 10:00 a.m. or later than 1:00 p.m. Monday through Friday inclusive, except by special exception as in Section 11 of this ordinance, excluding the following legal holidays: New Year’s, Memorial Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving, and Christmas. Blasting may not occur more frequently than 3 times per day. Underground production blasting may be exempted from these requirements provided that a waiver is granted by the Planning Board.
- D. Hours of detonation for all non-production blasting and drilling in preparation for both production and non-production blasting. Hours of detonation and drilling in preparation for blasting are limited to ~~between sunrise and sunset or~~ between 8:00 a.m. and 4:00 p.m., ~~whichever is greater,~~ Monday through Friday inclusive. In no case shall a blast ~~and or~~ drilling occur on the following legal holidays: New Year’s Day, Memorial Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving and Christmas.

Commented [CJ14]: 8 - 4 is what the Ad Hoc Committee agreed to.

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- E. Emergency situations. Blasting of any type may occur at any time in situations deemed to be emergencies by the CEO after consultation, if possible, with the Select Board. Emergency situations may include, but are not limited to, blasting to install utilities damaged by weather events or blasting to correct a misfire of explosives in an otherwise permitted blast event.
- F. The notification requirements established herein apply to any property of concern as determined by the Planning Board but no closer than the property line of property under the control, through ownership or lease or other contractual arrangement, ~~of~~ persons having blasting operations performed.
- G. The applicant shall also comply with all standards and conditions contained in other permits issued for such projects and local, state, and federal statutes and regulations. The requirements established herein shall be measured at the property line of the applicant or at the closest building(s) on abutting properties as determined by ~~the CEO and/or the~~ Planning Board, as the case may be.
- H. Wildlife ~~and Plant~~ Protection. The blasting operation shall not impair, disturb, or displace any federal or state-listed rare, ~~threatened~~, or endangered form of animal or plant life; nor shall they destroy or impair any wildlife habitat that could be avoided by modification of the proposed operation. A written or electronic communication from the Maine Department of Inland Fisheries and Wildlife, concerning animal life, and the Maine Department of Agriculture, Conservation & Forestry, Natural Areas Program, concerning plant life, indicating that the blasting operation will not impair, disturb, or displace, nor endanger, ~~or destroy or impair~~ such animal or plant life in any significant way shall be ~~dispositive~~, ~~conclusive~~ of such matter.
- I. Groundwater Protection. Water is a precious resource, and measures shall be taken to protect groundwater quality. Water quality shall be as found in the nearest non-owned well within 250 feet from the property line or as determined by the Planning Board and from ~~prepost~~ blast testing results. Post- blast testing shall be done no sooner than 24 hours or no later than 48 hours following a blast. Turbidity in wells tested shall be no greater than that which existed prior to the blasting as established in the pre-blast survey if such survey has been completed.

Commented [CJ15]: The CEO is not assigned responsibilities in implementing the permitting under this ordinance.

Commented [CJ16]: We suggest adding "threatened" species. Both IF&W and MNAP categorize species as rare (the first level of protection), threatened (a higher level of protection), or endangered (the highest level of protection.) The Ad Hoc Committee agreed to include "rare and endangered" but it makes no sense to leave out those species that are "threatened."

Commented [CJ17]: Impair doesn't need to be in this sentence twice.

Commented [CJ18]: Members of the Board suggest a more common, frequently used word such as "conclusive."

Commented [CJ19]: We assume this was a typo.

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- 1) Except as previously permitted, no **blasting** excavation or extraction shall occur within 5_—feet of the seasonal high ground water table.
- 2) The applicant shall submit a site-specific groundwater monitoring plan that specifies the locations, timing and parameters to be measured. At a minimum, water quality testing parameters shall include turbidity, blasting chemicals, volatile organic compounds and semi-organic compounds, metallic metals, radon, specific conductance, sodium, chloride, iron, manganese, nitrate, nitrite, PFAS, pH and perchlorate.
- 3) Where the Board is concerned that blasting operations may impact groundwater quality or drinking water supplies, the applicant shall perform such pre-blast and post-blast water quality tests or hydrogeological studies as **the Board deems may be** necessary to develop a water monitoring program in order to monitor any adverse impacts of the operation on the quality or quantity of groundwater and drinking water supplies. Such testing shall not be required if **thea** property owner **other than the applicant** refuses access to their property or declines such testing in writing.
- 4) Explosive products shall be selected that are appropriate for site conditions and safe blast execution, and that have adequate water resistance for the site conditions to minimize the potential for groundwater contamination.
- 5) Muck piles (the blasted pieces of bedrock) and rock piles shall be managed so as to reduce the potential for groundwater contamination including by removing the muck pile from the blast area as soon as practicable and by managing the interaction of blasted rock piles and stormwater to prevent contamination of surface water and groundwater.

J. Qualified Blaster. All blasting operations shall be conducted by a blaster who is fully licensed and insured for the transportation, use and handling of explosives and by experienced, trained, and competent personnel who understand the hazards involved and have demonstrated knowledge of safety requirements and current applicable regulations.

K. Blasthole Loading Practices. The following blasthole loading practices shall

Commented [CJ20]: Added for clarity.

Commented [CJ21]: To clarify who makes the decision about whether the study is necessary.

Commented [CJ22]: To clarify what property owner is being referred to.

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be followed:

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- 1) Drilling logs shall be maintained by the driller and communicated directly to the blaster. The logs shall indicate the depths and lengths of voids, cavities, and fault zones or other weak zones encountered, as well as groundwater conditions.
- 2) Explosives shall be managed on-site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off-site disposal.
- 3) Spillage around the borehole shall be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off-site disposal.
- 4) Loaded explosives shall be detonated immediately and shall not be left in the blastholes overnight, except when safety or weather requires detonation to be postponed.
- 5) Loading equipment shall be cleaned in an area where wastewater can be contained and disposed of in a manner that prevents release of contaminants to the environment.
- 6) Explosives shall be loaded to maintain good continuity in the column load to promote complete detonation. Industry accepted loading practices for priming, stemming, decking, and column rise need to be attended to.

Section 5: Notices.

- A. All production blasting operations shall have notices of such blasting including date, time and location published in a newspaper of local publication 10 days prior to each blast, and Notice of production blasting shall be mailed by certified first class mail to all property owners within 1000 feet of the blasting property 10 days prior to the intended date of the commencement of blasting. Notice shall include the description of the blasting signals to be used during the operation and an address and telephone number where property owners may request further information and notification. Any property owner requesting further notification shall do so in writing to the person conducting the blasting operation.

Commented [CJ23]: We suggest also requiring signs on the day of blasting along public roads advising the public that there will be blasting. (This is the current practice.)

B. Any person intending to perform blasting, not requiring a permit pursuant the Section 1 A. of this Ordinance, shall first notify the CEO, ~~the Selectboard~~ ~~their duly authorized representative~~, property owners within 1000 feet of the blast site, and the Town Clerk, by email or first class mail, that a blast is planned. Such notification shall be received at least 24 hours prior to the planned detonation and shall give the time (within two hours), location where blasting is to be done, the amount of explosives to be used and the name and business address, and phone number of the person responsible for the blasting operation. Additional notification shall be given to those property owners who request it received at least one hour prior to the planned detonation and shall give the time (within 30 minutes). The additional notification may be given orally over the telephone.

~~1) Prior to any blast, the person responsible for the blast shall inform all property owners, who have requested in writing to be so informed, of the impending blast. Such notification shall be given by telephone 24 hours prior to the blast stating the time of the blast [within] one hour.~~

Commented [CJ24]: This paragraph and Paragraph B are not consistent. Abutters won't know to request to be informed if they don't know any blasting is planned. We suggest combining the two paragraphs into Paragraph B as indicated.

Section 6: Instrumentation.

All seismographs used for compliance with this ordinance shall meet the following minimum specifications:

- A. Seismic frequency range: two to 200 Hertz (~~Hz~~)(~~±three±~~ Hz).
- B. Acoustic frequency range: two to 200 Hz (~~±one±~~ decibel (dB)).
- C. Velocity range: 0.02 to 4.0 inches per second.
- D. Sound range: 110 to 140 dB linear.
- E. Transducers: three mutually perpendicular axes.
- F. Recording: provide time-history of waveform.
- G. Calibration: be laboratory calibrated as often as necessary, but at least once every 12 months according to manufacturer's recommendations.

Commented [CJ25]: For clarity.

Section 7: Inspection and monitoring.

The CEO or their authorized representative may conduct tests and observe any authorized blasting operations, and may also order that additional ground vibration and airblast overpressure measurements using approved instrumentation be made by persons responsible for blasting operations to ensure that the limits specified in Section 4 are not exceeded.

Section 8: Record.

Persons responsible for blast operations shall maintain a record of each blast. All records shall be retained at least three years following cessation of the blasting operation, and shall be available for inspection by the CEO and shall contain the following minimum data:

- A. The name of person responsible for the blasting operation.
- B. The location, date, and time of the blast.
- C. The names of blaster in charge.
- D. The type of material blasted.
- E. The number of holes, burden, and spacing.
- F. The diameter and depth of holes.
- G. The types of explosives used.
- H. The amount of explosives used.
- I. The maximum amount of explosives per delay period of eight milliseconds or greater.
- J. The maximum number of holes per delay period of eight milliseconds or greater.

Commented [CJ26]: We noted that the state provision (38 MRS 490-Z Section L) is more inclusive than this list.

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- K. The method of firing and type of circuit.
- L. The weather conditions (including such factors as wind direction, cloud cover, etc.).
- M. The height or length of stemming.
- N. If mats or other protections were used.
- O. The type of detonators used and delay periods used.
- P. Seismograph and airblast readings, when measured, and from where measured.

Section 9: Compliance schedule.

- A. For blasting operations existing at the time of adoption of this ordinance where this ordinance is more restrictive, a grace period of six months will be granted wherein such operations will be “grandfathered” in order to bring existing operations in line with this ordinance. Six months after the adoption of this ordinance, all preexisting blasting operations shall also be brought under the provisions of this ordinance.
- B. A complete review of all activities under this ordinance shall be undertaken by the CEO and the Planning Board 12 months after adoption of this Ordinance to determine if the levels are adequate and reasonable to achieve the purpose for this ordinance as intended. The results of this review shall be reported to the ~~Select Board of Selectmen of the Town of Alna and the Chairman of the Planning Board of the Town of Alna.~~

Commented [CJ27]: We request clarity from the town attorney about whether and if so, how, this provision would apply to Crooker and its existing or future permits.

Commented [CJ28]: This paragraph is not related to a compliance schedule. We suggest that a new separate section entitled “Review” be included near the end of the ordinance.

Commented [CJ29]: Streamlining and eliminating unnecessary language. If the PB is doing the review, it doesn't need to report it to itself. And the entire ordinance refers to Alna. No need to repeat that here.

Section 10: Exceptions based on undue hardship.

Applications for a permit for exception from the performance standards designated in this ordinance may, on the basis of hardship, be made to ~~the CEO or the~~ Planning Board. Any permit granted hereunder shall contain all conditions upon which said permit has been granted and shall specify a reasonable time that the permit shall be effective.

Commented [CJ30]: We recommend consulting with town counsel on the correct language to use. We note that in the Shoreland Zoning ordinance the term “Variance” is used.

Commented [CJ31]: The CEO's role in this ordinance is enforcement, not permitting.

- A. The ~~CEO or~~ Planning Board, ~~as applicable,~~ may grant the exception as applied for only if:
- 1) The activity or operation will be of a temporary duration, i.e., a limited number of blasts at a specific site, and cannot be done in a manner that would comply with this Ordinance.
 - 2) No other reasonable alternative is available to the applicants; and
 - 3) The applicants represent, and the ~~CEO or~~ Planning Board finds, that blasting as permitted will not violate recognized safety standards.
- B. Upon the issuance of any exception permit, the ~~CEO or~~ Planning Board, as applicable, may prescribe any reasonable conditions or requirements deems necessary to minimize the adverse effects upon the community.

Section 11: Violations and penalties.

The submission of false information required by this ordinance or the violation of this ordinance or the violation of any condition attached to a permit granted under this ordinance shall constitute a land use violation and be penalized in accordance with 30-A M.R.S.A. §4452.

Section 12: Severability.

If any provision of this ordinance is declared unconstitutional or held invalid, it shall not affect any other section, clause, or provision thereof, but the same shall remain in full force and effect.

Section 13: Definitions.

As used in this ordinance, the following terms shall have the meanings indicated:

A. AIRBLAST

An airborne shock wave resulting from detonation of explosives. “Airblast” may be caused by burden movement or the release of expanding gas into the air. “Airblast” may or may not be audible.

Commented [CJ32]: Several members of the public have asked that the definitions be at the beginning rather than the end of the ordinance. We note that SZO and FMO have definitions at the end and the Land Use Ordinance (formerly the BCO) has definitions in the middle.

B. APPLICANT

The owner or other individual, corporation or other business entity who or which applies for the legal right to conduct blasting at real property which it has the legal right to use and is responsible for managing and conducting blasting operations.

C. BLAST SITE

The area where explosive material is handled during the loading of drilled blastholes, including the perimeter formed by the loaded blastholes and 50 feet in all directions from loaded blastholes [see 38 M.R.S.A. § 490-W(5)].

~~D. BLASTER~~

~~An applicant who has been awarded a permit to conduct blasting.~~

Commented [CJ33]: We recommend deleting this definition since the applicant is not generally the blaster and the blaster is defined in Section 4(J) above.

~~E.D. BLASTING~~

~~Any activity entailing the use of explosives for the purpose of producing an explosion to demolish structures or to fragment rock for mining, quarrying, excavation and construction.~~

~~F.E. BLASTING OPERATIONS~~

~~All processes conducted in association with site or other preparation for blasting, and the detonation of explosives. For the purposes of determining the applicability of this ordinance, the area of blasting operations is the area actively affected by these processes.~~

~~G.F. DECIBEL or dB~~

~~The unit of sound pressure commonly used to measure airblast from explosives. The decibel scale is logarithmic.~~

~~H.G. EXPLOSIVES~~

~~Any substance, chemical compound, or mechanical mixture that is commonly used for the purpose of producing an explosion to fragment rock for mining, quarrying, excavation, and construction. Initiation devices (detonator, detonating cords, etc.) are also included under this definition.~~

~~H.H. FLYROCK~~

~~Rock that is propelled through the air or along the ground which leaves the secured blast site area as a result of the detonation of explosives.~~

Commented [CJ34]: There are significant ambiguities in the ordinance's definitions, uses covered, and geographical extent of the terms blast site, secured blast area, blasting operation, project and blasting operation project, and quarry. These need to be clarified throughout the ordinance.

J.I. GROUND VIBRATIONS

Shaking of the ground caused by blasting. Ground vibrations are to be measured along three principal axes (x, y, z); namely, transverse, vertical, and longitudinal, all of which are subject to the performance standards herein.

K.J. GROUNDWATER

Water beneath the earth's surface often between saturated soil and rock that supplies wells and streams.

L.K. HERTZ

A term used to express the frequency of ground vibrations and airblast. One "hertz" is one cycle per second.

M.L. PARTICLE VELOCITY

A measure of ground vibration. "Particle velocity" describes the velocity at which a particle of ground vibrates when excited by a seismic wave. It is measured in inches per second.

N.M. PRODUCTION BLASTING

Repetitive blasting for the primary purpose of extracting or removing natural materials for commercial sale, barter, or exchange.

O.N. PROJECT or BLASTING OPERATION | PROJECT

For the purposes of this Ordinance, the "Project" shall include all blasting anticipated to be undertaken during the completion of a contract or series of contracts, for demolition, excavation or construction, or during the life of a quarry operation.

Commented [CJ35]: See comment above. This definition needs to be consistent with Section 1(A) of the ordinance.

P.O. QUARRY

The property designated in the application and permit where rock is excavated for the purpose of extracting or removing natural materials for commercial sale, barter, or exchange.

~~Q. SECURED BLAST AREA~~

~~The area designated by permit in which blasting is permitted.~~

Commented [CJ36]: This term is only used in the definition of flyrock. See comment above. It is unclear what the distinction is between secured blast area and blast site.

R.P. SEISMOGRAPH

An instrument that measures and may supply a permanent record of earthborn vibration induced by blasting.

Additional comments:

1. The ordinance needs to include a date of applicability and an effective date.
2. The ordinance needs an enforcement paragraph. We suggest using, for consistency, the same language found in Section 16(H)(2)(a) of the Shoreland Zoning Ordinance.
3. The ordinance lacks a provision authorizing the town to hire, at the applicant's expense, a consultant or expert, if needed, in order to review the application or enforce the ordinance.

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