TOWN OF PROSPECT
BLASTING ORDINANCE

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

A. Applicability.

This ordinance shall apply to all blasting operations, as defined herein, within the Town of Prospect.

B. Intent and Purposes. Blasting is a common, longstanding, 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 Prospect establishes this ordinance. This ordinance establishes specific standards for blasting operations, notice requirements, instrument monitoring requirements of blasting operations, and a permit process for blasting operations. It is intended to:

(1) Minimize the effects of Airblast overpressure, ground vibration, 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;
(2) Provide standards that will prevent permanent damage to the geologic, hydrogeologic, and wildlife resources and ecological balance in the region outside the immediate blast area;
(3) Protect the quality of life and the homes of residents, neighborhoods, property, groundwater, surface water, wildlife resources, scenic beauty and/or businesses, all lying outside the approved work area and potentially affected by the blasting; and
(4) Be effectively and efficiently administered without causing undue financial and administrative hardship to blasting operators.

C. Conflicts; Effect of Other Regulations. This ordinance does not replace or negate federal and/or state requirements pertaining to explosives. Nothing herein shall relieve the user of explosives from complying with any state or federal laws relative to the use of explosives. The requirements of this ordinance are in addition to any other ordinances, regulations, and laws. Where different standards are contained elsewhere, the more restrictive standards shall apply, except that this ordinance shall control with respect to application submission requirements, procedural requirements, or enforcement provisions.

Article 2: Authority; Administration.

A. Authority. This ordinance is enacted pursuant to Article VIII, Part Second, of the Maine Constitution, 30-A M.R.S.A. § 3001 *et seq.,* and any other enabling statutes. This ordinance constitutes and may be known and cited as the "Town of Prospect Blasting Ordinance."

B. Administration. This ordinance shall be administered by the Planning Board of the Town of Prospect.

Article 3: Permit Required; Applications; Hearings; Fees; Bond and Insurance; Permit Expiration.

A. Notice and Record-keeping. Any person, corporation, or other legal entity intending to conduct blasting must comply with the notice provisions of this ordinance as set forth in Article 5 and the record-keeping provisions set forth in Article 8.

B. Planning Board Approval for Certain Blasting Operations. In addition to compliance with the notice and record-keeping provisions specified in subsection A, any person, corporation, or other legal entity intending to conduct any of the following categories of blasting operation must first submit an application and obtain Planning Board approval pursuant to the provisions of this ordinance:

(1) Any blasting operation, other than a production blasting operation, with a blasting area of ~~1~~ 0.5 acre or more;

(2) Any production blasting operation with a blasting area of 1/2 acre or more; and

(3) Any blasting operation with a blasting area of any size located within ~~250~~ 500 feet of any structure on an adjacent parcel of land not owned by the applicant proposing such blasting.

If Blasting will be conducted as part of a development or activity requiring Planning Board approval, such as site plan, subdivision, and/or mineral extraction, the Planning Board shall apply the requirements of this Ordinance as part of that review.

C. Code Enforcement Officer Approval for Other Blasting Operations. Blasting that does not meet the criteria set forth in Section 3(B) of this Article shall be approved by the Code Enforcement Officer, who may utilize a separate form for such applications.

D. Applications. Applications for a permit may be obtained in the Town Office or on the Town website.

E. Submission Requirements. Applications for blasting permits shall contain the following information. Waivers may be granted upon written request of the applicant to the Planning Board and a vote of the Planning Board in a public meeting, on the basis that the submission requirement is irrelevant or overburdensome on the applicant and is not to provide any information having bearing on the Planning Board's ability to find compliance with the standards of this Ordinance.

(1) The name, address, email address and phone number of the applicant.

(2) The name, address, email address and phone number of the property owner.

(3) The Town of Prospect Tax Assessor's map and lot number(s) for the parcels identified in the application.

(4) The name, address, email address and phone number of the person responsible for the blasting operation.

(1) The locations of the proposed blasting activity.

(2) The estimated total number of cubic yards of material, not including overburden, to be removed by blasting.

(3) An estimate of the number of blasts required to remove the specified amount of material.

(4) A description of the blasting operation for which the blasting is being undertaken.

(5) Adjacent land uses.

(1) The location of adjacent structures and distance to those structures.

(6) The projected dates that blasting is to be undertaken.

(2) Any other information deemed necessary by the Planning Board.

D. Public Hearing. Following its determination that a completed application has been submitted, the Planning Board shall schedule a public hearing on the application.

(1) The applicant shall send a notice of public hearing to all property owners within 1,000 feet of the boundary lines of the property for which a permit is requested, by first class certified mail, return receipt requested, at least 14 days prior to the date of the public hearing. The notice must contain the date, time, and location of the public hearing and a general description of the proposal. A list of names and mailing addresses of the recipients of said notice shall be provided to the Planning Board as part of the application.

(2) Notification of the public hearing shall also be given by the Planning Board or its designee by posting it in the Town office, the Town's website, and any other physical or digital locations typically used for such notices.

E. Written Decision. Within thirty (30) days following its verbal decision, the Planning Board must issue a written decision to approve, approve with conditions, or deny the application based on the performance standards contained in Article 4 as well as all other applicable provisions of this Ordinance. A copy of the Notice of Decision shall be provided by mail to the applicant and to any interested abutters who appeared at the public hearing.

F. Fees. All applications for blasting permits shall be accompanied by a fee according to the fee schedule established by the Prospect Select Board.

G. Bond. The Planning Board may require, as a condition of approval, the applicant and/or the blaster to post a blasting operator surety bond that guarantees the blasting operator will comply with all applicable laws and regulations, including this ordinance, that explosives will be handled safely, and that the public will be compensated if the blaster fails to detonate explosives safely. The bond shall be in such form and amount as determined by the Planning Board or its designee.

H. Insurance. The applicant shall present proof of liability insurance with a policy limit of not less than $2,000,000 combined single limit per occurrence for production blasting, and $1,000,000 combined single limit per occurrence for other blasting.

I. Permit Expiration. Permits shall expire 365 days from the date of approval unless issued in accordance with a subdivision, site plan, mineral extraction or other approval that, by operation of such ordinance, provides for a longer expiration period, in which case such expiration provision shall apply.

Article 4: Performance Standards.

Blasting operations requiring Planning Board approval pursuant to Article 3(B) must comply with the following performance standards. The burden of proof rests on the applicant.

A. State Law Compliance. The blasting standards in 38 M.R.S.A. § 490-Z(14), as they may be amended from time to time, shall apply to the blasting operation..

(1) The stricter of the standards set forth in this Article 4 or in 38 M.R.S.A. § 490-Z(14) shall apply. If 38 M.R.S.A. § 490-Z(14) is amended to be less restrictive than the standards set forth in this Article 4, such amendments shall not apply.

(2) All notices sent to the Maine Department of Environmental Protection (the "DEP") pursuant to 38 M.R.S.A. § 490-Z(14) shall simultaneously be sent to the Town Clerk of the Town of Prospect.

(3) Waivers or variances granted by the DEP shall not be binding on the Town unless a comparable waiver is granted by the Planning Board pursuant to Section 10.B.

(4) A valid DEP permit must be submitted to the Planning Board for any blasting operation requiring such permit pursuant to 38 M.R.S.A. § 490-Z(14).

B. Hours of Detonation.

(1) Hours of detonation for production blasting operations shall be no earlier than 9:00 a.m. or later than 3:00 p.m. Monday through Friday inclusive. Production blasting may not occur more frequently than two times per day.

(2) Hours of detonation for all blasting operations other than production blasting operations, and for drilling in preparation for both production and non-production blasting operations shall be no earlier than 8:00 a.m. or later than 4:00 p.m. Monday through Friday inclusive.

(3) In no case shall blasting or drilling occur on a recognized State of Maine holiday.

C. 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 the blasting operation 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 such animal or plant life in any significant way shall be *prima facia* evidence of such determination.

D. Surface Water and Groundwater Protection. The blasting operation shall not impair or degrade groundwater or surface water quality.

(1) Water quality and quantity shall be documented by pre-blast and post-blast surveys in the ~~nearest~~ all wells not owned by the applicant located within ~~250~~ 1,000 feet from the property line and/or by any other means and testing sources identified by the Planning Board, subject to landowner consent. Post-blast testing shall be done no sooner than 24 hours and 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.

(2) No blasting operation shall cause excavation or extraction to occur within 5 feet of the seasonal high ground water table, except that for a blasting operation operating pursuant to a permit or approval granted by the Planning Board prior to the effective date of this Ordinance, no such blasting operation shall cause excavation or extraction to occur within 2 feet of the seasonal high ground water table.

(3) The applicant shall submit a site-specific groundwater and surface water quality monitoring plan that specifies the locations, timing, and parameters to be measured as part of pre-blast and post-blast testing. 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, Ammonia and perchlorate.

(1) Where the Planning Board determines that a blasting operation may impact groundwater or surface water or drinking water supplies, the applicant shall perform such additional pre-blast and post-blast water quality tests or hydrogeological studies as the Planning Board determines is necessary for the applicant to develop a water quality monitoring program in order to monitor any

adverse impacts of the operation on the quality or quantity of surface water, groundwater, and drinking water supplies. Testing shall not be required if all of the abutting property owners refuse access to their property or decline such testing in writing.

(2) Explosive products shall be selected that are appropriate for site conditions and safe blast execution, and that have adequate water resistance to minimize the potential for groundwater contamination.

(3) Muck piles (the blasted pieces of bedrock) and rock piles shall be managed so as to reduce the potential for surface water and 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.

E. Qualified Blaster. All blasting operations shall be conducted by a blaster who is 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.

F. Blasthole Loading Practices. The following blasthole loading practices shall be followed:

(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 surface water and 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.

G. Noise. Sound from production blasting, including all test blasts, shall be limited to 110 dB(A) and 126dB(C).

Article 5: Pre-blast Notice and Inspection.

A. All blasting operations approved by the Planning Board in accordance with Article 3(B) shall, no later than 30 days of the verbal approval vote by the Planning Board, and no less than 14 days prior to the first planned blast, provide written notice to all property owners within 2,640 feet of the boundary lines of the property on which the blasting will be conducted, explaining that the owner/operator has been approved to conduct blasting operations on the property. The notice shall include an email address and mailing

address by which a property owner may request (1) to be informed of any future blasting; and (2) that a pre-blast survey be conducted to document the existing condition of the property owner's structures.

B. An operation subject to Article 3(B) shall arrange for a pre-blast survey to be conducted of any occupied property within 2,640 feet of the boundary lines of the property on which the blasting will be conducted, if the property owner (1) makes a written request for such survey within 30 days of the date of the notice required by subsection A; and (2) provides necessary physical access to the owner/operator to conduct such survey. Copies of the results of any completed pre-blast survey report shall be provided to the property owner as well as to the ~~Town's~~ Town Clerk and Code Enforcement Officer.

C. For all blasting operations, whether or not covered by Article 3(B), the owner/operator shall notify (1) the Prospect Code Enforcement Officer; (2) the Prospect Volunteer Fire Department Chief; and (3) for operations subject to Article 3(B), all property owners who have made a request to the owner/operator to be so informed, of the impending blast. Such notification shall be given by telephone or email at least 24 hours prior to the blast stating the time of the blast within one hour. Signs shall be posted on the day of blasting along public roads that there will be blasting.

Article 6: Instrumentation.

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

A. Seismic frequency range: two to 200 Hz (±three± Hz).
B. Acoustic frequency range: two to 200 Hz (±one± db).
C. Particle 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.

Article 7: Inspection and Monitoring.

The CEO or their designee may conduct tests and observe any blasting operations, and for any blasting operation approved by the Planning Board may also order that additional ground vibration and airblast overpressure measurements using approved instrumentation be made by the blaster to ensure that the performance standards specified in Section 4 are not exceeded.

Article 8: Record.

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

A. The name of the blaster and, if different, the person responsible for the blasting operation.
B. The location, date, and time of the blast.
C. The name, signature and social security number of blaster.
D. The type of material blasted.
E. The number and spacing of holes and depth of burden or stemming..

F. The diameter and depth of holes.
G. The types of explosives used.
H. The total 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.
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. The type of mats or other protections, if used.
O. The type of detonators used and delay periods used.
P. The exact location of each seismograph and the distance of each seismograph from the blast.
Q. The seismograph and airblast readings, when measured, and from where measured.
R. The name and signature of the person operating each seismograph.
S. The names of the person and the firm analyzing the seismographic data.
T. If DEP shall, from time to time, require the maintenance of additional data, the blaster shall provide such additional data to the Planning Board.

Article 9: Existing Blasting Operations

Blasting operations lawfully in existence at the time of adoption of this ordinance may continue to operate pursuant to the previous applicable laws, rules, and permit approvals for a period of six months from the effective date of this ordinance. Thereafter, all preexisting blasting operations shall comply with the provisions of this ordinance, including the need for Planning Board approval for all blasting operations listed in Article 3(B). However, the Planning Board may grant a waiver of a performance standard under this ordinance if it finds that the application of that standard to the existing operation would seriously impede the applicant's existing business operations or would prevent the completion of a development for which there is a preexisting valid approval.

Article 10: Exceptions

Emergencies. Blasting operations are exempt from the permitting requirements of this ordinance if the Code Enforcement Officer ("CEO") determines that the blasting operation is necessary due to an emergency. 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.

Article 11: Violations and Penalties.

A. Enforcement. The CEO is responsible for enforcing the provisions of this ordinance and the conditions of any permit or approval issued hereunder. The CEO may conduct site inspections to ensure compliance with all applicable laws, and all conditions attached to permits and approvals under this ordinance. The CEO shall investigate all written complaints of alleged violations of this ordinance. If, after investigation, the CEO finds that a provision of this ordinance or a condition of a permit or approval issued hereunder has been violated, the CEO must give written notice of the violation to the violator, indicating the nature of the violation and ordering any action necessary to abate it.

B. Submission of False Information. 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 may, after notice and hearing, be cause for the Planning Board to revoke an approval.

C. Damage Caused by Blasting. If the Code Enforcement Officer reasonably concludes, after examination of a pre-blast survey and post-blast conditions and with the benefit of input from relevant experts as needed, that a blast has caused damage to a building within 2,640 feet of the boundary lines of the property on which blasting has been conducted, the CEO may:

   a. Order that no further blasts be conducted until the cause of the damage has been remediated; and
   b. Order that the owner/operator repair the damage at its expense.

Failure of the Owner/Operator to comply with this subsection shall be deemed a violation of this Ordinance.

D. Enforcement Action and Penalties. If, after notice and demand, a violation has not been abated, the CEO shall refer the matter to the Prospect Select Board, which may institute in the name of the town of Prospect any and all actions and proceedings that the Select Board deems necessary or appropriate to prevent, correct, restrain, or abate any violation of this ordinance. Any person who violates any term of a permit or approval or any provision of this ordinance shall be assessed such fines, penalties, actions and orders as are authorized by 30-A M.R.S.A. § 4452. A fine or penalty shall be imposed for each violation. Each day that a violation continues constitutes a separate offense.

Article 12: Appeals.

Any person aggrieved by the Planning Board's issuance or denial of a permit or approval required under this Ordinance shall have the right to file a written appeal by following the provisions set forth in the Town of Prospect Site Plan Review Ordinance.

Article 13: Severability.

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

Article 14: 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.

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 granted a Planning Board permit to conduct a blasting operation.

E. BLASTING

The use of explosives for the purpose of producing an explosion to demolish structures or to fragment rock for mining, quarrying, excavation or construction.

F. BLASTING AREA

The horizontal surface area of any proposed blast site and the immediate surrounding area actively affected by blasting operations. "Blasting area" includes all land that is stripped, cut, graded, grubbed, filled, bulldozed, or excavated during site preparation and all land from which rock is proposed to be removed in connection with a blasting operation, and land on which excavated rock is proposed to be temporarily or permanently stored.

G. BLASTING OPERATION

Any demolition, excavation, construction, or quarry operation involving blasting, including processes conducted in association with site or other preparation for blasting, and the detonation of explosives. A production blasting operation is a type of blasting operation.

H. DECIBEL

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

I. 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.

J. GROUND VIBRATION

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. GROUNDWATER

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

L. HERTZ (Hz)

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

M. PARTICLE VELOCITY

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

N. PRODUCTION BLASTING OPERATION

Any demolition, excavation, construction, or quarry operation involving repetitive blasting for the primary purpose of extracting or removing natural materials for commercial sale, barter, or exchange.

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.

P. SEISMOGRAPH

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