

SECTION 600 - MINERAL EXTRACTION**Sections**

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601 Purpose

- A. The purpose of this section is to regulate sand and gravel and other quarrying operations, including the removal, processing and storage of topsoil or loam, rock, sand, gravel and other earth materials (hereinafter "mineral extraction"). The Planning Board shall follow the site plan review requirements in Section 800 when more than 25,000 square feet of gross area is to be developed, as defined in Section 300. (See definition of "Development")
- B. The removal of stone, sand and gravel from banks or quarries and the processing of said materials shall not be permitted without the approval of the Planning Board. The removal of loam, topsoil or sod is permitted in any of the Town's zoning districts. Such material may be hauled away to other locations, either inside or outside the Town of Windham. The Planning Board may approve the removal and processing of such materials after public hearing thereon, and a finding that such removal and processing will be performed subject to the conditions and safeguards set forth in this section.
- C. These regulations are intended to protect the quality and quantity of the ground and surface waters, to control erosion, to provide for the reclamation and rehabilitation of mineral extraction sites so that future uses shall be compatible with the surrounding neighborhood, and to minimize any adverse impact of such pit operations on adjacent and nearby properties.

602 Applicability

- A. Existing pits, expansions over five (5) acres, loam stripping exceeding one quarter (1/4) of an acre, and new operations which are started or approved after the effective date of this amendment shall be governed by this section. This section applies to all private, public and municipal mineral extraction operations within the Town of Windham.

- B. Whereas the Town of Windham recognizes that exceptions to this section may become necessary in a time of great need, such as a natural disaster necessitating ready and immediate access to sand, gravel and other earth materials, provision is herein made for the temporary suspension of the application process included herein if approval for said suspension is granted by a majority of the Town Council.
- C. The applicant shall pay a processing fee and establish a peer review escrow account as set by the Town Council in the Windham Fee Schedule (*See Appendix A Fee Schedule*)

603 Exemptions

- A. The following activities are exempt from the provisions of this section of the Ordinance:
 - 1. Excavation whose sole purpose is to determine the nature or extent of mineral resources. It is accomplished by hand sampling, test boring, or other methods which create minimal disturbance. Test holes shall be filled in immediately after use.
 - 2. The removal of less than two hundred (200) cubic yards of material (except topsoil) in any one (1) year, provided such removal does not disturb more than one (1) acre of land.
 - 3. The removal of any amount of sand, gravel, or loam from a site is an exempt activity if it is part of normal farm operations, or the sand, gravel, or loam is being moved to a contiguous site having the same ownership or is being used by the owner for their own use.
 - 4. Excavation or grading which is undertaken as part of and subordinate to an approved construction project such as a subdivision, permitted structure or road, unless it is intended to circumvent this section
 - 5. Existing pits may only expand in conformance with this section. The owner(s) must file a plot plan within ninety (90) days of the effective date of this section, showing the active part of the pit, as distinguished from those slopes and setbacks existing at the time of adoption of this section, which shall be exempt.

604 Permit Application Requirements

- A. All applicants shall submit an application to the Planning Department. The Planning Department shall verify that the application is complete prior to placing the applicant on an agenda to appear before the Planning Board. Approval from the Planning Board is required prior to the applicant initiating any phase for which the applicant seeks approval. This information is in addition to information provided as part of the site plan review criteria required under section 800 et seq. The following information shall be

submitted to the Planning Board when applying for a permit. All plans shall be drawn to a scale not greater than one inch equals one hundred feet (1"=100').

- B. The location of existing wells, streams, springs, intermittent streams and wet areas. The depth of groundwater at the site of the proposed excavation as determined by test borings shall substantiate that groundwater will not be disturbed.
- C. Contours of the land within and extending beyond the boundaries of the parcel for two hundred (200) feet at five (5) foot intervals, or at intervals acceptable for a MaineDEP permit application, or at intervals required by the Planning Board for mineral extraction operations of under five (5) acres.
- D. The location of all proposed hazardous materials storage areas. Hazardous materials (including equipment fuel, petroleum products, oil, hydraulic fluids, etc.) shall be located in an impervious containment area designed to contain spills and provide for secondary containment.
- E. Plans for controlling access to the site. At a minimum, a solid gate with a lock shall be located at any entrances or exits.
- F. Provisions for shielding the excavation from surrounding properties with adequate screening or buffering for a visual and acoustical buffer between the project and adjacent properties if a natural buffer does not exist. Signs and lighting shall be designed to prevent public nuisance conditions or undesirable aesthetic effects on the neighborhood.
- G. A final rehabilitation plan including seeding, planting, drainage, erosion control, final grading, shaping, and surface stabilization plans showing contours at five (5) foot intervals. Plans shall be approved by the Cumberland County Soil Conservation Service, a Registered Forester, a Certified Soils Scientist or a Registered Maine Civil Professional Engineer. The proposed use of the property at completion of the project shall be described. A time schedule for rehabilitation shall be included. Any project which is proposed to operate for more than five (5) years shall be designed to operate in phases, if possible.
- H. Applicable state and/or federal permits shall be required prior to final approval from the Planning Board. For applications requiring site plan review, the Planning Board shall have the authority to review the applicant's technical capacity to comply with state and federal permitting requirements, including those for temporary or permanent drainage and sedimentation control, storage and containment of any materials, noise, vibration levels, and dust levels and measures for minimization.
- I. Hours of operation. These shall be compatible with the surrounding neighborhood and shall minimize any adverse impact of the pit operations on adjacent and nearby properties.

605 Plan Review

- A. The Planning Board may impose such conditions as are necessary to safeguard the health, safety and welfare of the community. Where considered necessary by the Planning Board, the plan required to accompany the application shall be prepared by a Registered Maine Civil Professional Engineer and/or Maine Certified Geologist at the applicant's expense. The plan review shall take into consideration at least the following:
1. Fencing, landscaped buffer strips, and other public safety and nuisance considerations for compliance with Sections 604(F) and 606(B).
 2. Signs and lighting for compliance with Section 604(F).
 3. Adequate parking spaces, loading and unloading areas for compliance with Section 812(C).
 4. Safe entrances and exits for compliance with Sections 604(E) and 812(B).
 5. Total estimated life of the pit for compliance with Section 608.
 6. Days and hours of normal operation for compliance with Section 604(I).
 7. Methods of operation, removal or processing for compliance with Sections 604(H) and 606(A).
 8. Area and depth of excavation for compliance with Sections 604(B), 604(H) and 606(A).
 9. Provision for temporary or permanent drainage and sedimentation control for compliance with Sections 604(H) and 606(A).
 10. Disposition of stumps, brush and boulders with Section 812(O) and 606(A).
 11. Type and location of temporary and permanent structures for compliance with applicable zoning requirements.
 12. Storage and containment of any materials (e.g., petroleum products, salt, hazardous materials, rubbish, treated timber) on the property for compliance with Sections 604(D), 606(A), 812(L) and (O).
 13. Complete rehabilitation proposals for compliance with Section 607.
 14. Noise levels for compliance with Section 812(S).
 15. Vibration levels in compliance with Sections 604(H) and 606(A).

16. Dust levels and measures for minimization in compliance with Sections 604(H) and 606(A).

606 Performance Standards

A. Mineral Extraction operations within the Town of Windham must comply with the applicable performance standards below unless a variance is first obtained from the Maine Department of Environmental Protection as set forth in Maine Statutes Title 38 Section 490 and approved by the Planning Board. Any existing Mineral Extraction operation shall be required to meet the performance standards contained within the version of this Ordinance under which the Mineral Extraction operation was approved.

1. Solid waste. Solid waste, including stumps, wood waste and land clearing debris generate on the affected land must be disposed of in accordance with Maine Statutes Title 38 Chapter 13, including any rules adopted to implement those laws.
2. Groundwater protection.
 - a. A 200-foot separation must be maintained between any excavation and any private drinking water supply that is a point-driven or dug well and was in existence prior to that excavation.
 - b. A 100-foot separation must be maintained between any excavation and any private drinking water supply that is drilled into saturated bedrock and was in existence prior to that excavation.
 - c. Separation must be maintained between any affected land and any public drinking water source as follows:
 - i. For systems serving a population of 500 persons or less, the minimum separation must be 300 feet;
 - ii. For systems serving a population of 501 persons up to 1,000 persons, the separation must be 500 feet;
 - iii. (For systems serving a population of more than 1,000 persons, the separation must be 1,000 feet; and
 - iv. For any system that holds a valid filtration waiver in accordance with the federal Safe Drinking Water Act, the separation must be 1,000 feet.
 - d. Refueling operations, oil changes and other maintenance activities requiring the handling of fuels, petroleum products, hydraulic fluids, and other on-site activity involving the storage or use of products that, if spilled, may contaminate groundwater, must be conducted in accordance with the department's spill prevention, control and countermeasures plan. Petroleum products and other substances that may contaminate groundwater must be stored and handled over impervious surfaces that are designed to contain spills. The spill prevention, control and countermeasures plan must be posted at the site.
 - e. Excavation may not occur within 5 feet of the seasonal high water table unless the operator first obtains a variance from the Maine Department of Environmental Protection. A benchmark sufficient to verify the location of the seasonal high water table must be established and at least one test pit or monitoring well must

- be established on each 5 acres of unreclaimed land and maintained by the operator to demonstrate separation above groundwater.
- f. In the event of excavation below the seasonal high water table, the operator of a mining activity that affects a public drinking water source or private drinking water supply by excavation activities causing contamination, interruption or diminution must restore or replace the affected water supply with an alternate source of water, adequate in quantity and quality for the purpose served by the supply. This paragraph is not intended to replace any independent action that a person whose water supply is affected by a mining activity may have. The applicant shall conduct and report all baseline and routine compliance monitoring (i.e., water levels and water quality monitoring) required by MaineDEP Title 38 Section 490 to the Planning Board for review and approval prior to beginning mineral extraction activities and on an annual basis after mineral extraction activities have begun. Water level and water quality monitoring should be conducted by a third-party working under the guidance of a Certified Geologist or Professional Engineer.
 - g. In the event of excavation below the seasonal high water table, a 300-foot separation must be maintained between the permitted limit of excavation and any predevelopment private drinking water supply, and a 1,000-foot separation must be maintained between the permitted limit of excavation and any predevelopment public drinking water source or area previously designated for potential use as a public drinking water source by a municipality or private water company.
3. Protected natural resources. A natural buffer strip must be maintained between the working edge of an excavation and any protected natural resource as defined in the Comprehensive Plan and the Maine Department of Environmental Protection. Excavation activities conducted within 100 feet of a protected natural resource must comply with the applicable permit requirement of the Maine Department of Environmental Protection. The width requirements for natural buffer strips are as follows.
- a. A natural buffer strip at least 100 feet wide must be maintained between the working edge of the excavation and the normal high-water line of a great pond classified as GPA, a river flowing to a great pond classified as GPA.
 - b. A natural buffer strip at least 75 feet wide must be maintained between the working edge of the excavation and any other water body, river, stream, brook, or significant wildlife habitat contained within a freshwater wetland or a freshwater wetland consisting of or containing:
 - i. (Under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or
 - ii. Peat lands dominated by shrubs, sedges and sphagnum moss.

For purposes of this subsection, the width of a natural buffer strip is measured from the upland edge of floodplain wetlands; if no floodplain wetlands are present, the width of the natural buffer strip is measured from the normal high-water mark of a great pond, river, stream or brook or the upland edge of a freshwater wetland.

4. Natural buffer strip. Existing vegetation within a natural buffer strip may not be removed. If vegetation within the natural buffer strip has been removed or disturbed by the excavation or activities related to the excavation before submission of a notice of intent to comply, that vegetation must be reestablished as soon as practicable after filing the notice of intent to comply
5. Public and private roads. A natural buffer strip must be maintained between the working edge of an excavation and a road or right-of-way as follows.
 - a. A natural buffer strip at least 150 feet wide must be maintained between the working edge of an excavation and a road designated as a scenic highway by the Department of Transportation.
 - b. At least 100 feet wide must be maintained between the working edge of an excavation and any public road not designated as a scenic highway by the Department of Transportation.
 - c. A natural buffer strip at least 25 feet wide must be maintained between the working edge of a topsoil excavation and any public road not designated as a scenic highway by the Department of Transportation.
 - d. A natural buffer strip at least 50 feet wide must be maintained between the working edge of an excavation and any public right-of-way that does not contain a road. The width of a natural buffer strip adjacent to a public road or right-of-way may be reduced if there is a public entity or entities with authority to grant permission and the applicant receives permission from each authority in writing.
 - e. A natural buffer strip at least 50 feet wide must be maintained between the working edge of an excavation and any private road or right-of-way. If a private road is contained within a wider right-of-way, the buffer is measured from the edge of the right-of-way. The width of the natural buffer strip adjacent to a private road may be reduced if the applicant receives written permission from the person or persons having a right-of-way over the private road.

A distance specified in this subsection is measured from the outside edge of the shoulder of the road or edge of the right-of-way unless otherwise specifically provided. A variance from paragraph 5.b is available from the Maine Department of Environmental Protection.

6. Property boundary.
 - a. Excavations for borrow, clay, topsoil or silt
A natural buffer strip at least 50 feet wide must be maintained between any excavation and any property boundary. A natural buffer strip at least 25 feet wide must be maintained between any topsoil excavation and a property boundary. These distances may be reduced to not less than 10 feet with the written permission of the affected property owner or owners, except that the distance may not be reduced to less than 25 feet from the boundary of a cemetery or burial ground. The buffer strip between excavations owned by abutting owners may be eliminated with the abutter's written permission, provided the elimination of this buffer strip does not increase the runoff from either excavation across the property boundary. Any written permission to reduce a buffer must provide that it remains in effect until mining ceases and must

be recorded in the registry of deeds. All property boundaries must be identified in the field by markings such as metal posts, stakes, flagging or blazed trees.

b. Quarries

A natural buffer strip at least 100 feet wide must be maintained between any excavation and any property boundary. These distances may be reduced to not less than 10 feet with the written permission of the affected property owner or owners, except that the distance may not be reduced to less than 25 feet from the boundary of a cemetery or burial ground. The buffer strip between excavations owned by abutting owners may be eliminated with the abutter's written permission, provided the elimination of this buffer strip does not increase the runoff from either excavation across the property boundary. Any written permission to reduce a buffer must provide that it remains in effect until mining ceases and must be recorded in the registry of deeds. All property boundaries must be identified in the field by markings such as metal posts, stakes, flagging or blazed trees.

7. Excavation, except for drainage ways, shall be at least two hundred (200) feet from any existing residence.
8. Erosion and sedimentation control. A working pit must be naturally internally drained at all times unless a variance is obtained from the Maine Department of Environmental Protection. In addition to Section 812.F the following standards apply:
 - a. The area of a working pit shall not exceed 10 acres
 - b. Stockpiles consisting of topsoil to be used for reclamation must be seeded, mulched or otherwise temporarily stabilized.
 - c. Sediment may not leave the parcel or enter a protected natural resource.
 - d. Grubbed areas not internally drained must be stabilized.
 - e. Erosion and sedimentation control for access roads must be conducted in accordance with the department's best management practices for erosion and sedimentation control.
 - f. All areas other than a working pit area that are not naturally internally drained must meet the erosion and sedimentation control standards of section 420-C.
9. Water quality protection and storm water management. Surface water discharges from areas not required to be naturally internally drained may not be increased as a result of water runoff and shall comply with Section 812.E.
10. Traffic.
 - a. Any excavation activity that generates 100 or more passenger car equivalents at peak hour must comply with the applicable permit requirements under Title 23, section 704-A.b.
 - b. Existing streets expected to carry traffic generated by the development shall have a paved surface and have the capacity or be suitably improved to accommodate the traffic generated by the development.

- c. No new mineral extraction operations shall be permitted to access a private road or private way that provides access to a public street to more than 100 dwelling units.

11. Noise. Noise levels may not exceed applicable noise limits in Section 812.S.

12. Dust.

- a. Dust generated by activities at the excavation site, including dust associated with traffic to and from the excavation site, must be controlled by sweeping, paving, watering or other best management practices for control of fugitive emissions. Except within the direct watershed of a lake most at risk from new development as designated in the Maine Department of Environmental Protection Chapter 502: Direct Watersheds of Lakes Most At Risk From New Development And Urban Impaired Streams, dust control methods may include the application of calcium chloride, providing the manufacturer's labeling guidelines are followed.
- b. Access driveways shall be paved a minimum of 100 feet from the intersection with the public or private street.
- c. Loaded vehicles shall be suitably covered to prevent dust and contents from spilling or blowing from the load.

13. Blasting. The operator must ensure that blasting is conducted in accordance with Maine Statutes as set forth in Title 25, Chapter 318 and Title 38 Subsection 490-Z Performance Standards for Quarries.

- a. Production blasting may not occur in the period between 4:00 pm and 11:00 am. Production blasting is not allowed in the daytime on Sunday.
- b. On the day of the scheduled blast, or at a greater time requested by a person listed below, in advance of a scheduled blast the operator must notify:
 - i. The Office of Code Enforcement,
 - ii. The Fire Department,
 - iii. Property owners within a ½ mile from the blast site, and
 - iv. Any other property owners that have requested to be notified.
- c. A preblast survey is required for all production blasting and must extend a minimum radius of ½ mile from the blast site. The preblast survey must document any preexisting damage to structures and buildings and any other physical features within the survey radius that could reasonably be affected by blasting. Assessment of features such as pipes, cables, transmission lines and wells and other water supply systems must be limited to surface conditions and other readily available data, such as well yield and water quality. The list of test parameters will be consistent with typical water quality tests and include: Metals (Cu, Fe, Mn, As, U, Na, Pb), Chloride, Color, Fluoride, Hardness, Nitrate/Nitrite, pH, Dissolved Solids, Turbidity, Radon, Total Coliform/E. coli, Bacteria. The preblast survey must be conducted prior to the initiation of blasting at the operation. The owner or operator shall retain a copy of all preblast surveys for at least one year from the date of the last blast on the development site.
 - i. The owner or operator is not required to conduct a preblast survey if the Planning Board determines that no protected natural resource within the limits of the otherwise required survey is likely to be affected by blasting

and production blasting will not occur within 2,000 feet of any building not owned or under the control of the developer.

- ii. The owner or operator is not required to conduct a preblast survey on properties for which the owner or operator documents the rejection of an offer by registered letter, return receipt requested, to conduct a preblast survey. Any person owning a building within a preblast survey radius may voluntarily waive the right to a survey.
- d. Detonation of misfires may occur outside of these times but must be reported to the Code Enforcement Office within 5 business days of the misfire detonation. Blasting may not occur more frequently than 2 times per day.
- e. Underground production blasting is prohibited unless the applicant receives a waiver from the Maine Department of Environmental Protection.

607 Rehabilitation Requirements

- A. Any operation shall be deemed closed ninety (90) days after its permit expires or the operations cease for two (2) years. The site shall be rehabilitated in accordance with this section and MaineDEP regulations (i.e. keep active operating area under 10 acres by progressive reclamation of the pit). The rehabilitation plan shall be completed within two (2) years of closing. Rehabilitation of continuing operations shall be conducted in phases. Upon completion or abandonment of an existing mineral extraction operation in existence on the effective date of this chapter, except for existing exempted slopes and setbacks, the area shall meet the following requirements:
 - 1. Specific plans shall be established to avoid hazards from excessive slopes. Where an embankment remains after the completion of operations, it shall be graded at a slope not steeper than one (1) foot vertical to two and one-half (2.5) feet horizontal.
 - 2. Seeding, planting and loaming, as approved in the rehabilitation plan, shall be accomplished so that exposed areas are stabilized and erosion is minimized. Seeding shall achieve a minimum of 90 percent establishment of vegetation. Retained topsoil shall be used as loam. These areas shall be guaranteed for eighteen (18) months during which time the performance guarantee, where required, shall remain in full force and effect.
 - 3. The Board may require that trees be planted for a visual and acoustical buffer between the project and adjacent properties if a natural buffer does not exist.
 - 4. Tree stumps and grubblings from the site may be used to stabilize the banks. The areas of pits with solid or broken ledge rock shall be trimmed of loose rock and the bottom of the pit graded to be compatible with the surroundings.
 - 5. The pit shall be contoured so that sediment is not directed into streams or drainage ways.

6. Grading and restoration shall be completed in such a manner that it will ensure natural drainage, prevent standing water and minimize erosion and sedimentation.
7. Existing pits may expand over five (5) acres without Planning Board approval if the area being worked remains no larger than five (5) acres and all the prior existing area has been rehabilitated in conformance with this section and has been inspected and verified by the Planning Department prior to any expansion.

608 Permits & Inspections

- A. The Code Enforcement Officer shall conduct an Annual Compliance Inspection of all excavations and review and approve all blasting documentation required by the MaineDEP Title 38 Section 490 on an annual basis including, but not limited to, water quality monitoring and groundwater measurements, individual blast summary reports, annual instrument calibration, and third-party seismograph results. The applicant shall annually perform third-party calibration of all instruments used to document compliance with MaineDEP Title 38 Section 490 (i.e., air blast levels and peak particle velocities). The applicant shall also hire a third party to record seismograph readings during one blast event on an annual basis, to collaborate the seismograph results of the applicant.
- B. After initial permit approval by the Planning Board, the applicant shall submit a report to the Planning Department every fifth year, two (2) months prior to the expiration of the permit. The applicant shall demonstrate that the operation is in conformance with the standards found in this section. Aerial photography may be required to demonstrate conformance with these standards. If the expansion is proposed beyond the original plan, the applicant must obtain a new permit from the Planning Board.
- C. Change of operator or owner requires application for a new permit from the Planning Department. The new owner or operator shall be required to demonstrate financial and technical capabilities required to operate a mineral extraction operation equal to those required of the original owner.

609 Performance Guarantee Requirements

- A. A surety bond issued by a commercial surety company authorized to do business within the State of Maine, or an interest bearing trust account made payable to the Town of Windham, or a letter of credit, cash, or a certified check payable to the Town of Windham, shall be posted by the owner(s) or operator(s) in an amount recommended by the Town Manager or his/her authorized agent, with the advice of the Soil Conservation Service and/or a Registered Maine Civil Engineer, as sufficient to guarantee conformity with the provisions of the permit approval for the rehabilitation of existing mineral extraction operations, new mineral extraction operations, and/or loam stripping operations. The performance guarantee shall also include the cost to replace any private drinking water supply within three hundred (300) feet of the property boundary of the mineral extraction operation or any supply well within an area in which

the elevation of the water table will be impacted by the development (i.e., where safe yield and water quality may be impacted).

- B. The amount of performance guarantee shall be sufficient to fund the costs of that rehabilitation which remains to be completed. The performance guarantee must remain in force until the Planning Department or designee certifies that the site has been rehabilitated according to the approved plan.

610 Loam Stripping Conditions

- A. The removal of loam, topsoil, or sod from the ground surface may be permitted in any zone and such material may be hauled away to other locations, either in or outside the Town of Windham. If the gross area of such removal exceeds one fourth (1/4) acre, the stripping may be done only after public hearing and approval by the Planning Board, subject to appropriate conditions and safeguards, such as, but not limited to the following:
 - B. Operations shall not adversely affect the health and general welfare of the Town.
 - C. The Planning Board shall require the filing of a development plan and the posting of a performance guarantee in an amount set by the Town but not less than five hundred dollars (\$500) per acre.

Section 600 Amendments

Order 10-023; Date 02-09-2010	Change to review procedure
Order 10-061; Date 04-13-2010	Clarifications
Order 19-053; Date 04-09-2019	Changes to Performance Standards, Inspections, and Performance Guarantees