

1 TOWN OF UNION

2  
3 ORDINANCE NO: 12-15-XX

4  
5 THE TOWN BOARD OF THE TOWN OF UNION DOES ORDAIN AS  
6 FOLLOWS:

7  
8 The following Article of the Municipal Code of the Town of Union is hereby  
9 created to read as follows:

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11  
12 CHAPTER 4 - BUSINESS REGULATION  
13 ARTICLE - BLASTING

14  
15  
16  
17 **4.1** This ordinance shall be cited as the Town of Union Blasting Ordinance  
18 and hereinafter referred to as this ordinance.

19  
20 **4.2 Authority.**

21 This ordinance is adopted to protect the public health, safety and welfare of  
22 residents of the Town of Union. This ordinance is authorized by the powers  
23 granted to the Town of Union by the Town's adoption of Village powers under  
24 Wis. Stats. §60.10, and is in accord with Wis. Stats. §61.34, and Wis. Admin.  
25 Code SPS 307.

26  
27 **4.3 Purpose and Intent.**

28 The purpose of this ordinance to limit the adverse effects of blasting on persons  
29 or property outside any controlled blasting site area.

30  
31 **4.4 Definitions.** When used in this ordinance, the terms below shall be  
32 defined and limited as follows:

- 33 A. Affected building or structure. A building or structure within a  
34 distance within 1320 feet from the outer perimeter of a  
35 controlled blasting site area.  
36 B. Airblast. An airborne shockwave resulting from the detonation of  
37 explosives.  
38 C. Blast area. The area of the blast as determined by the blaster in  
39 charge within the influence of flying rock missiles, the emission of  
40 gases, and concussion as determined by the blaster in charge.  
41 D. Blast site. The area where explosive materials are handled during  
42 the loading of blast holes, including 50 feet in all directions from  
43 the perimeter formed by the loaded blast holes. A minimum of 30  
44 feet may replace the 50 foot requirement, if the perimeter of loaded

45 blast holes is marked and separated from the non-blast area  
46 outside of the site by a protective barrier. The 50 feet or 30  
47 foot distance requirements apply in all directions along the full  
48 depth of the blast hole.

- 49 E. Blaster. Any individual holding a valid blaster's license issued by  
50 the Wis. Dept. of Safety and Professional Services.
- 51 F. Blaster in charge. The qualified person in charge of and  
52 responsible for loading and firing the blast.
- 53 G. Blasting. The use of explosives to loosen, penetrate, move or  
54 shatter masses of solid materials.
- 55 H. Blasting resultants. Effects caused by blasting including, but not  
56 limited to; projectile matter, vibrations and concussion that cause  
57 injury, damage or unreasonable annoyance to persons or property  
58 located outside the controlled blasting site area.
- 59 I. Chair. The Town Board Chairperson.
- 60
- 61 J. Clerk. The Town Clerk
- 62
- 63 K. Controlled blasting site area. An area that surrounds a blast site  
64 within which the operator has a legal right and duty to take all  
65 reasonable means to assure the safety of persons and property,  
66 either because the operator owns the area, or because the operator  
67 has leased or has some special agreement with the owner of that  
68 area.
- 69 L. Flyrock. Rock or karst that is propelled through the air from a  
70 blast.
- 71 M. Ground vibration. A shaking of the ground caused by the elastic  
72 wave emanating from a blast.
- 73 N. Karst. An area or surficial geological feature subject to bedrock  
74 dissolution so that it is likely to provide a conduit to groundwater,  
75 and may include areas with soils less than 60 inches thick over  
76 bedrock, caves, enlarged fractures, mine features, exposed bedrock  
77 surfaces, sinkholes, springs, seeps, swallets, and depressions with  
78 no surface drainage.
- 79 O. Particle velocity. A measure of ground vibration describing the  
80 velocity that a particle of ground vibrates when excited by a  
81 seismic wave.
- 82 P. Town. Town of Union, Eau Claire County, Wisconsin
- 83 Q. Board. Town Board of the Town of Union
- 84

#### 85 **4.5 Applicability.**

- 86 A. This ordinance shall apply to any person who conducts blasting in  
87 the Town.
- 88 B. Applications for a permit to blast shall only be submitted by and

89 issued to an individual who holds a valid blaster's license issued  
90 by the Wisconsin Department of Safety and Professional Services  
91 with the proper classification or who is supervised by a licensed  
92 blaster.

93 C. Applications for a permit to blast may be submitted by and issued  
94 to a blasting business, provided that the individual operating  
95 under the permit holds a valid blaster's license issued by the  
96 Wisconsin Department of Safety and Professional Services with the  
97 proper classification or is supervised by such a licensed blaster.

98 D. No blasting permit shall be issued to any person, unless the  
99 operation which blasting supports has all necessary state, county  
100 and town permits and is in compliance with all Town, County and  
101 State regulations, including but not limited to, the requirements of  
102 this chapter.

103  
104 **4.6 The Application**

105 A. An applicant shall obtain an application form for a blasting permit  
106 from the Clerk. The applicant shall submit the completed  
107 application form together with all additional documentation to the  
108 Clerk.

109 B. The application shall include the following information on the form  
110 itself or on documents attached to the form:

- 111 1. Name, license number, address, land and cell phone  
112 numbers, and email address of the applicant.
- 113 2. Name address, license number, land and cell phone  
114 numbers, and email address of the blaster in charge of the  
115 blast, if other than the applicant.
- 116 3. Name address, land and cell phone numbers, and email  
117 address of the person in charge of the operation that blasting  
118 will be used to support.
- 119 4. A map showing the location of the blasting site and a brief  
120 description of the operation at the site. Include on this map  
121 the location of all buildings located within 1320 feet of  
122 the blasting site, attaching the names, addresses and land  
123 phone numbers of owners of those buildings.
- 124 5. Copies of all County and State permits that have been  
125 granted to the operator for whose operation blasting is giving  
126 support.
- 127 6. Proof of insurance required by section 4.16 of this ordinance.
- 128 7. A Pre-blasting site inspection report.
- 129 8. Copies of pre-blast report.
- 130 9. Evidence that the applicant has the experience and financial  
131 ability to fully comply with this ordinance.

132 C. An application shall be regarded as complete only when the

133 information requested in section 4.6(B) 1-9 of this ordinance has  
134 been provided to the Clerk on the form or on  
135 attachments to the form.  
136

137 **4.7 Pre-blasting Surveys**

- 138 A. Pre-blasting surveys shall be conducted to determine the condition  
139 of all buildings or structures within 1320 feet of the blast site(s)  
140 and the quality of water in all wells in that area shall be tested  
141 prior to the onset of blasting. The pre-blasting surveys shall be  
142 completed at the applicant's expense. Each survey shall provide  
143 the name and address and telephone number (if known) of the  
144 resident or owner of said buildings, structures and wells, and shall  
145 document any pre-blasting presence or absence of damage or other  
146 physical factors that could reasonably be expected to be affected by  
147 the use of explosives. The testing of wells shall determine whether  
148 the water is safe for human consumption according to established  
149 drinking water quality standards, including standards applicable  
150 to children of all ages and pregnant women. If the blasting for  
151 which a permit application is being made is part of an operation  
152 that has been already permitted and that tested the wells within a  
153 time frame acceptable to the Town, information  
154 regarding those tests can be submitted instead of testing the wells  
155 again.
- 156 B. If any new building or structure is added or a new well drilled  
157 subsequent to the effective date of the permit, the owner may  
158 request a survey to be done of that building or well and the  
159 permittee shall conduct that survey, at the permittee's expense.  
160 In addition, if a building or structure is improved and the cost of  
161 the improvement exceeds 50% of its fair market value prior to the  
162 improvement, the owner of that building or structure may request  
163 that a pre-blasting survey be completed, at the permittee's  
164 expense.
- 165 C. Prior to obtaining a blasting permit, the applicant shall notify, in  
166 writing, all residents or owners of buildings or other structures  
167 (including, but not limited to, wells) located within 1320 feet from  
168 the blasting site that the applicant intends to apply for a blasting  
169 permit from the Town and will be completing a  
170 pre-blasting survey as part of the application and review process.  
171 The written notification shall include a statement indicating that  
172 the survey provides a baseline record of the pre-existing condition  
173 of building or a structure against which the effects of blasting can  
174 be assessed and it should include both the interior and exterior of  
175 the buildings. The written notification shall also include that a  
176 pre-blast water quality survey for existing wells on the property will

- 177 be completed.
- 178 D. If the resident or owner requests a copy of the survey, then, within  
179 48 hours of the request, the applicant shall provide the copy.
- 180 F. In cases where a blasting permit is renewed because it is part of a  
181 permitted continuing operation that lasts over a number of years,  
182 the applicant shall not be required to conduct a pre-blast survey of  
183 any dwelling or structure, or conduct a well water quality test more  
184 than once every five (5) years.
- 185 G. The pre-blast survey and water quality testing shall be conducted  
186 by an independent survey company and a laboratory approved by  
187 the State of Wisconsin or an organization selected by the applicant  
188 and acceptable to the owner or resident and the Town. Reasonable  
189 and reasonably related costs of such independent survey shall be  
190 the sole responsibility of the permittee.

#### 191 **4.8 Procedures**

##### 192 (A.) Initial Review.

193 (1.) Preliminary Review. Upon receipt of complete application form and  
194 the permit fee(s), the Board shall conduct initial review to determine if  
195 the application for blasting complies with all the applicable provisions of  
196 this ordinance and of Wis. Administrative Code SPS 307.

197 (2.) Additional Information. If the Board determines that application is  
198 incomplete, or if additional information is necessary, the Board may  
199 request the applicant to submit additional information.

200 (3.) Additional fees. If the Board determines that additional  
201 expertise is required, the Board shall authorize retaining the services of an  
202 engineering firm or other qualified person or persons with appropriate  
203 expertise to advise the Board. The Board may determine that some or all  
204 of the retained expert's fees shall be charged to the applicant as an  
205 administrative fee. Retained expert fees for general advice or for  
206 education of the Board cannot be part of the administrative fee, but any  
207 services specific to an application can be charged to that applicant. The Clerk  
208 shall give written notice to the applicant of the additional administrative fee  
209 to be charged to cover the cost of the services of any such retained expert.  
210 The additional fee shall be paid before review of the additional information  
211 is undertaken.

212 (4.) Board Decision. The Board, upon review of complete application  
213 form, any additional requested information provided by the applicant as  
214 well as any requested expert advice and receipt of all fees, shall schedule  
215 the application to be placed on the agenda for action at the next regularly  
216 scheduled Board meeting. The Board may approve, approve with  
217 conditions, deny or request additional information, as appropriate.  
218

#### 219 **4.9 Pre-Blasting Site Inspection**

- 221 A. The blaster shall visually inspect the controlled blasting site area  
222 to determine if there is any evidence of a sinkhole, a cave or  
223 a subsurface void in the karst that could be part of a sinkhole  
224 or cave. If visual inspection reveals such, no blasting  
225 shall occur, nor shall any structure support be placed  
226 therein.
- 227 B. In addition to a visual inspection, especially if visual inspection is  
228 inconclusive and the general area is known to have  
229 sinkholes and caves, it is recommended that the blaster use  
230 probes (such as borings) or geophysical methods such as  
231 resistivity tomography, seismic refraction, microgravity or ground  
232 penetrating radar, to ascertain the presence of sinkholes or  
233 caves.
- 234 C. The blaster shall submit a pre-blasting site inspection report  
235 regarding his finding and methods used to the Chair  
236 at the time an application for a permit to blast is made.  
237

238 **4.10 Notification of Blasting.**

239 Notification must be given to the following persons and by the following means  
240 at least 72 hours prior to the initial blasting at a blast site as well as prior to all  
241 subsequent blasting events at the blast site:  
242

- 243 A. At least 72 hours prior to initial blasting at a blast site, the blaster  
244 in charge shall make a reasonable effort to notify all  
245 residents or owners of affected buildings, as defined in  
246 4.6(B)4 of this ordinance. The blaster shall make all  
247 reasonable efforts to ensure timely and effective notice that a  
248 blasting operation is to begin, using such means as a written  
249 notice, a phone call, email or verbally in person.
- 250 B. A resident call list shall be established for the purpose of notifying  
251 persons living in the vicinity of the blast site at least 72  
252 hours prior to a blasting event. A resident shall be placed on this call list  
253 only upon request to be so listed and called. The call list must be  
254 maintained and used prior to any blast.
- 255 C. Before any blasting operation or blasting event, the blaster in  
256 charge shall give notice thereof by the conspicuous display of  
257 a fluorescent flag and legible sign displayed within 100 feet of  
258 all public roads bordering the blasting site or at least the  
259 nearest public road bordering the blasting site. Said sign  
260 should also warn against the use of all mobile wireless  
261 communication equipment on all roads within 1000 feet of the blasting  
262 operations. The flag and sign shall be displayed prior to and  
263 during all blasting operations and events.
- 264 D. A distinctive warning signal shall be sounded prior to commencing

265                                   blasting. Automotive or truck horns shall not be used as a  
266                                   warning signal.  
267           E.       Whenever blasting is being conducted in the vicinity of gas,  
268                                   electric, water, fire alarm, telephone, telegraph or steam  
269 utilities,                   these utilities shall be notified no less than 72 hours  
270 prior to                   commencing blasting.  
271           F.       Oral (in person or by phone) or written (on hard copy or email)  
272                                   notice shall be given to, and acknowledged by, the Chair at  
273 least                   one full working day prior to the onset of any blasting event.  
274 If a                   schedule including dates and times of blasting events is  
275 known at                   the time of application, making that schedule part of  
276 the                   application can serve as written notice. If part of the  
277 application,                   further notice shall be required only if there is  
278 deviation from the                   schedule.  
279

280 **4.11 Blasting Schedule.**

281 All surface blasting shall be conducted between sunrise and sunset, but not  
282 earlier than 7:30 a.m. or later than 6:30 p.m unless one of the following  
283 conditions applies:

- 284           A.       A more restrictive time period is specified by the Town as a  
285                                   condition of use.
- 286           B.       The operator has shown that the public will not be adversely  
287                                   affected by noise and other impacts, and the Board has  
288                                   approved the deviation from normal blasting hours.

289 **4.12 Blasting Log.**

290 An accurate blasting log shall be prepared and maintained for each blast fired,  
291 and a true and complete copy of this log shall be kept by the permittee for a  
292 period of not less than 5 years and furnished to the Town within 3 working  
293 days of a request for a copy of said log by the Chair, or Board. The Town may  
294 require that the permittee furnish an analysis of any particular blasting log to  
295 be prepared by the permittee. Each blasting log shall include, but not be  
296 limited to, the following information:

- 297           A.       Name and License number of the blaster in charge of the blast.
- 298           B.       Blast location references on an aerial photograph
- 299           C.       Date and Time of blast.
- 300           D.       Weather conditions at the time of blast.
- 301           E.       Diagram and cross section of blast hole layout
- 302           F.       Number of blast holes
- 303           G.       Blast hole depth and diameter
- 304           H.       Spacing and burden of blast holes
- 305           I.       Maximum holes per delay
- 306           J.       Maximum pounds of explosives per delay
- 307           K.       Depth and type of stemming used.
- 308           L.       Total pounds and type of explosives used

- 309 M. Distance to nearest inhabited building not owned by the operator  
310 or blaster in charge  
311 N. Distance of blast hole to groundwater.  
312 O. Type of initiation used.  
313 P. Seismographic and air blast records which shall include all of the  
314 following:  
315 1. Type of instrument and last laboratory calibration date.  
316 2. Exact location of instrument and the date, time, and  
317 distance from the blast.  
318 3. Name of person and firm taking the reading  
319 4. Trigger levels from ground and air vibrations  
320 5. The vibration and air blast levels recorded.  
321

#### 322 **4.13 Monitoring**

- 323 A. The permittee shall monitor all blasts at the closest location to the  
324 controlled blast area of any affected building or structure  
325 beyond the controlled blast area, provided, however, that the  
326 permittee may monitor at another location approximately the  
327 same distance from the perimeter of the controlled blast area, if  
328 the permittee is to obtain permission to conduct the monitoring  
329 from the owner of the preferred location.  
330 B. The Chair, may, at his or her discretion, require the  
331 relocation of the monitoring equipment to a more suitable site.  
332

#### 333 **4.14 Storage of Explosives.**

334 No storage of explosive material on site by the holder of a short term permit is  
335 allowed. Storage of explosives by a long term permittee shall comply with Wis.  
336 Admin. Code SPS 307.21.  
337

#### 338 **4.15 Control of Adverse Effects.**

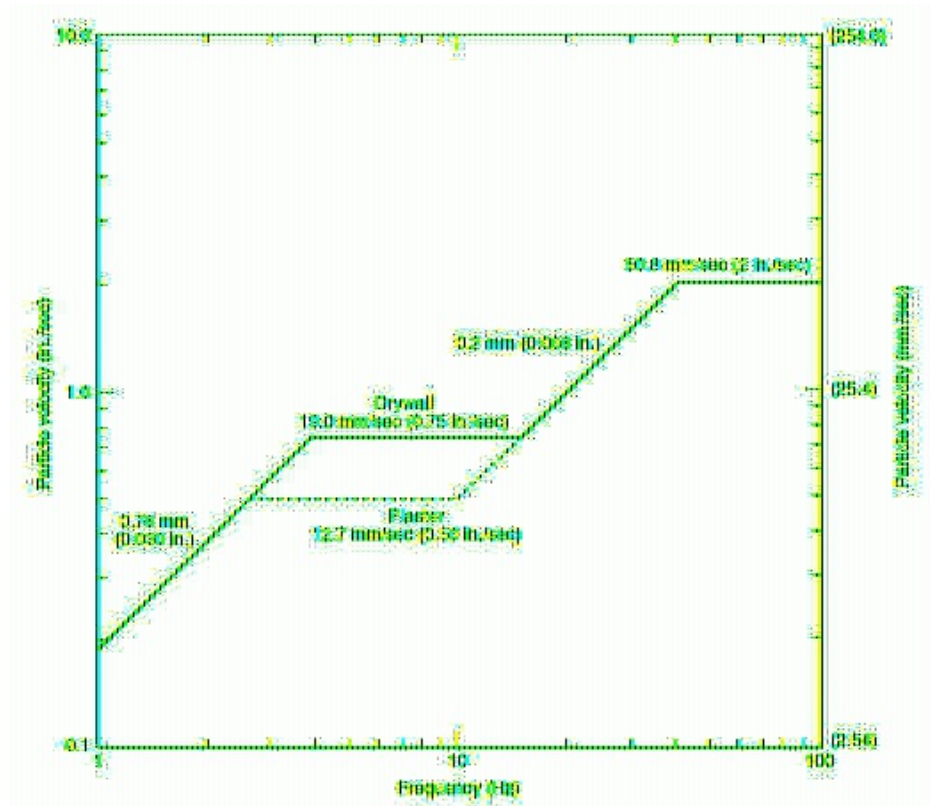
339 The permittee and the operation requiring blasting shall be responsible for  
340 taking all reasonable actions necessary to control the adverse effects described  
341 herein.

- 342 A. General requirements. Blasting shall be conducted by the  
343 permittee and the operation requiring such blasting so as to  
344 prevent injury and unreasonable annoyance to  
345 persons and damage to public or private property  
346 outside the controlled blasting site area.

- 347 B. Flyrock. The permittee and the operation requiring blasting shall  
348 take all reasonable actions to assure that flyrock traveling in  
349 the air or along the ground meets all of the following conditions:  
350 1. Remain within the controlled blasting site area.  
351 2. Not be cast more than one-half the distance to the nearest  
352 inhabited building within or outside of the controlled



353 blasting site area.  
354 C. Airblast.  
355 1. An air blast may not exceed 133 peak dB at the location of  
356 any dwelling, public building or place of employment  
357 outside the controlled blasting site area.  
358 2. The blaster shall conduct monitoring of every blast to  
359 determine compliance with the air blast limit. The  
360 measuring system used shall have a lower end flat frequency  
361 response of not more than 2 Hz and an upper end flat  
362 frequency response of at least 200 Hz.  
363 D. Ground vibration.  
364 1. The maximum ground vibration at the location of any  
365 dwelling, public building or place of employment  
366 outside the controlled blasting site area shall be established  
367 in accordance with the blasting level chart  
368 paragraph 3.  
369 2. All structures in the vicinity of the controlled blasting site  
370 area, not previously listed in this ordinance, such as  
371 water towers, pipelines and other utilities, tunnels,  
372 dams, impoundments and underground mines,  
373 shall be protected from damage by establishment by  
374 the blaster of a maximum allowable limit on the ground  
375 vibration. The blaster shall establish the limit after  
376 consulting with the owner of the structure.  
377 3. The blaster shall use the ground vibration limits specified in  
378 Figure 7.44 WI Admin. Code SPS 307 (below) to  
379 determine the maximum allowable ground vibration.  
380 Ground vibration shall be measured as the particle velocity.  
381 Particle velocity shall be recorded in 3 mutually  
382 perpendicular directions.  
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4. The blaster shall make and keep a seismograph record including both particle velocity and vibration frequency levels for each blast. The method of analysis shall be subject to discretionary review by the Board.
5. For quarry operations, the blaster shall report any ground vibration levels to the Board that are above 0.75 inch per second with frequencies less than 40 Hz.

**4.16 Proof of Insurance.**

Each application for a blasting permit as herein stated, or a renewal thereof, shall be accompanied by a certificate of Insurance for a Commercial General Liability Policy and said Policy of Insurance shall have limits of coverage of not less than two million (\$5,000,000.00) dollars in the aggregate and one million (\$2,000,000.00) dollars per occurrence and the Town shall be named as an additional insured on said Policy of Liability Insurance.

**4.17 Permit Durations, Renewals and Fees**

- A. A short-term permit may be issued for a single blasting event and

407 shall be valid for 14 days from the effective date of the  
408 permit. Only one subsequent short term permit may be granted for  
409 the same property.  
410 B. A long term permit shall be granted for period of no more than 180  
411 days.  
412 C. An application for a renewal of an existing permit shall be made 60  
413 days prior to the expiration date of the existing permit.  
414 D. The fees for such permits are set forth in the  
415 Town's Municipal Code entitled Fees for Permits, Licenses,  
416 and Other charges.  
417

#### 418 **4.18 Revocation and Suspension**

419 A. The Board, on its own motion or following due review and  
420 investigation of a written complaint, may suspend or revoke the  
421 blasting permit for any violation of provisions or  
422 requirements of this ordinance or of other applicable State and  
423 Federal law. The following persons may file a written complaint  
424 and request suspension or revocation:  
425 1. A resident, lessee or owner of an affected building, structure  
426 or well  
427 2. A building inspector.  
428 3. The Chair  
429 4. A Town Supervisor  
430 B. Where warranted, as determined in the reasonable discretion of the  
431 Board, a blasting permit may be temporarily suspended without  
432 prior notice or hearing to the permittee. Written or verbal notice of a  
433 temporary suspension, and of conditions that must be met to  
434 reinstate the permit, shall be promptly given to the permittee at the  
435 address contained in the application.  
436 C. Except as provided in paragraph B next above, the Board shall  
437 provide the permittee with no less than seven days notice of a meeting  
438 where action to suspend the blasting permit is on the agenda. Permittee's  
439 failure to appear at such meeting shall be deemed a waiver of the  
440 opportunity to be heard prior to final action of the Board. Written  
441 notice of the suspension, and of conditions that must be met to  
442 reinstate the permit, shall be promptly given to the permittee at the  
443 address contained in the application.  
444 D. Prior to revocation of a blasting permit, the Board shall give  
445 the permittee no less than seven days notice of a meeting where  
446 action to revoke is on the agenda. The permittee shall be  
447 given a reasonable opportunity to be heard prior to final action  
448 by the Board. Permittee's failure to appear at such meeting  
449 shall be deemed a waiver of the opportunity to be heard prior  
450 to final action of the Board. Written or verbal notice of the revocation

451 shall be promptly given to the permittee at the address contained  
452 in the application.  
453

454 **4.19 Penalties.**

455 In addition to the denial, suspension or revocation of a permit issued under  
456 this ordinance, any person who violates any provision of this ordinance shall  
457 be subject to forfeiture in an amount not less than \$100.00 nor more than  
458 \$1,000.00 plus costs of prosecution. Each day of violation shall constitute a  
459 separate offense.  
460

461 **4.20 Severability and Interpretation**

462 A. Should any section, clause, provision or portion of this ordinance  
463 be adjudged unconstitutional or invalid, unlawful or unenforceable  
464 by a final order of a court of competent jurisdiction, including all  
465 applicable appeals, the remainder of this ordinance shall  
466 remain in full force and effect.

467 B. The provisions of this ordinance shall be liberally construed in  
468 favor of the Town shall not be construed to be a limitation or repeal of  
469 any other power now possessed or granted to the Town.  
470

471 **4.21 No Liability for Damages.** This ordinance shall not be construed as an  
472 assumption of liability by the Town for damages because of injuries sustained  
473 or property destroyed because of any person's failure to comply with the  
474 requirements set forth herein or any failure to enforce any part of this  
475 ordinance.  
476

477 **4.22 Effective date.**

478 This ordinance shall take effect upon passage and publication by law.  
479

480 Dated this \_\_\_\_ day of \_\_\_\_\_, 2015.  
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\_\_\_\_\_  
485 Fred Belay  
486 Town Board Chairperson  
487  
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489

490 \_\_\_\_\_  
491 Katie Garrett, Town Clerk  
492