

VIRGINIA SOIL AND WATER CONSERVATION BOARD
Dam Safety Low Hazard Regulatory Relief Amendments
Wednesday, November 30, 2011 version

4VAC50-20-30. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Acre-foot" means a unit of volume equal to 43,560 cubic feet or 325,853 gallons (equivalent to one foot of depth over one acre of area).

"Agricultural purpose" means the production of an agricultural commodity as defined in ~~§ 3.1-249.27~~ §3.2-3900 of the Code of Virginia that requires the use of impounded waters.

"Agricultural purpose dams" means impounding structures which are less than 25 feet in height or which create a maximum impoundment smaller than 100 acre-feet, and operated primarily for agricultural purposes.

"Alteration" means changes to an impounding structure that could alter or affect its structural integrity. Alterations include, but are not limited to, changing the height or otherwise enlarging the dam, increasing normal pool or principal spillway elevation or physical dimensions, changing the elevation or physical dimensions of the emergency spillway, conducting necessary structural repairs or structural maintenance, or removing the impounding structure. Structural maintenance does not include routine maintenance.

"Alteration permit" means a permit required for any alteration to an impounding structure.

"Annual average daily traffic" or "AADT" means the total volume of vehicle traffic of a highway or road for a year divided by 365 days and is a measure used in transportation planning and transportation engineering of how busy a road is.

"Board" means the Virginia Soil and Water Conservation Board.

"Conditional Operation and Maintenance Certificate" means a certificate required for impounding structures with deficiencies.

"Construction" means the construction of a new impounding structure.

"Construction permit" means a permit required for the construction of a new impounding structure.

"Dam break inundation zone" means the area downstream of a dam that would be inundated or otherwise directly affected by the failure of a dam.

"Department" means the Virginia Department of Conservation and Recreation.

"Design flood" means the calculated volume of runoff and the resulting peak discharge utilized in the evaluation, design, construction, operation and maintenance of the impounding structure.

"Director" means the Director of the Department of Conservation and Recreation or his designee.

"Drill" means a type of emergency action plan exercise that tests, develops, or maintains skills in an emergency response procedure. During a drill, participants perform an in-house exercise to verify telephone numbers and other means of communication along with the owner's response. A drill is considered a necessary part of ongoing training.

"Emergency Action Plan or EAP" means a formal document that recognizes potential impounding structure emergency conditions and specifies preplanned actions to be followed to minimize loss of life and property damage. The EAP specifies actions the owner must take to minimize or alleviate emergency conditions at the impounding structure. It contains procedures

47 and information to assist the owner in issuing early warning and notification messages to
48 responsible emergency management authorities. It shall also contain dam break inundation
49 zone maps as required to show emergency management authorities the critical areas for action
50 in case of emergency.

51 "Emergency Action Plan Exercise" means an activity designed to promote emergency
52 preparedness; test or evaluate EAPs, procedures, or facilities; train personnel in emergency
53 management duties; and demonstrate operational capability. In response to a simulated event,
54 exercises should consist of the performance of duties, tasks, or operations very similar to the
55 way they would be performed in a real emergency. An exercise may include but not be limited to
56 drills and tabletop exercises.

57 "Emergency Preparedness Plan" means a formal document prepared for Low Hazard
58 impounding structures that provides maps and procedures for notifying owners of downstream
59 property that may be impacted by an emergency situation at an impounding structure.

60 "Existing impounding structure" means any impounding structure in existence or under a
61 construction permit prior to July 1, 2010.

62 "Freeboard" means the vertical distance between the maximum water surface elevation
63 associated with the spillway design flood and the top of the impounding structure.

64 "Height" means the hydraulic height of an impounding structure. If the impounding structure
65 spans a stream or watercourse, height means the vertical distance from the natural bed of the
66 stream or watercourse measured at the downstream toe of the impounding structure to the top
67 of the impounding structure. If the impounding structure does not span a stream or watercourse,
68 height means the vertical distance from the lowest elevation of the downstream limit of the
69 barrier to the top of the impounding structure.

70 "Impounding structure" or "dam" means a man-made structure, whether a dam across a
71 watercourse or structure outside a watercourse, used or to be used to retain or store waters or
72 other materials. The term includes: (i) all dams that are 25 feet or greater in height and that
73 create an impoundment capacity of 15 acre-feet or greater, and (ii) all dams that are six feet or
74 greater in height and that create an impoundment capacity of 50 acre-feet or greater. The term
75 "impounding structure" shall not include: (a) dams licensed by the State Corporation
76 Commission that are subject to a safety inspection program; (b) dams owned or licensed by the
77 United States government; (c) dams operated primarily for agricultural purposes which are less
78 than 25 feet in height or which create a maximum impoundment capacity smaller than 100 acre-
79 feet; (d) water or silt retaining dams approved pursuant to § 45.1-222 or § 45.1-225.1 of the
80 Code of Virginia; or (e) obstructions in a canal used to raise or lower water.

81 "Impoundment" means a body of water or other materials the storage of which is caused by
82 any impounding structure.

83 "Life of the impounding structure" and "life of the project" mean that period of time for which
84 the impounding structure is designed and planned to perform effectively, including the time
85 required to remove the structure when it is no longer capable of functioning as planned and
86 designed.

87 "Maximum impounding capacity" means the volume of water or other materials in acre-feet
88 that is capable of being impounded at the top of the impounding structure.

89 "New construction" means any impounding structure issued a construction permit or
90 otherwise constructed on or after July 1, 2010.

91 "Normal or typical water surface elevation" means the water surface elevation at the crest of
92 the lowest ungated outlet from the impoundment or the elevation of the normal pool of the
93 impoundment if different than the water surface elevation at the crest of the lowest ungated
94 outlet. For calculating sunny day failures for flood control impounding structures, stormwater

95 detention impounding structures, and related facilities designed to hold back volumes of water
96 for slow release, the normal or typical water surface elevation shall be measured at the crest of
97 the auxiliary or emergency spillway.

98 "Operation and Maintenance Certificate" means a certificate required for the operation and
99 maintenance of all impounding structures.

100 "Owner" means the owner of the land on which an impounding structure is situated, the
101 holder of an easement permitting the construction of an impounding structure and any person or
102 entity agreeing to maintain an impounding structure. The term "owner" may include the
103 Commonwealth or any of its political subdivisions, including but not limited to sanitation district
104 commissions and authorities, any public or private institutions, corporations, associations, firms
105 or companies organized or existing under the laws of this Commonwealth or any other state or
106 country, as well as any person or group of persons acting individually or as a group.

107 "Planned land use" means land use that has been approved by a locality or included in a
108 master land use plan by a locality, such as in a locality's comprehensive land use plan.

109 "Spillway" means a structure to provide for the controlled release of flows from the
110 impounding structure into a downstream area.

111 "Stage I Condition" means a flood watch or heavy continuous rain or excessive flow of water
112 from ice or snow melt.

113 "Stage II Condition" means a flood watch or emergency spillway activation or impounding
114 structure overtopping where a failure may be possible.

115 "Stage III Condition" means an emergency spillway activation or impounding structure
116 overtopping where imminent failure is probable.

117 "Sunny day dam failure" means the failure of an impounding structure with the initial water
118 level at the normal reservoir level, usually at the lowest ungated principal spillway elevation or
119 the typical operating water level.

120 "Tabletop Exercise" means a type of emergency action plan exercise that involves a
121 meeting of the impounding structure owner and the state and local emergency management
122 officials in a conference room environment. The format is usually informal with minimum stress
123 involved. The exercise begins with the description of a simulated event and proceeds with
124 discussions by the participants to evaluate the EAP and response procedures and to resolve
125 concerns regarding coordination and responsibilities.

126 "Top of the impounding structure" means the lowest point of the nonoverflow section of the
127 impounding structure.

128 "Watercourse" means a natural channel having a well-defined bed and banks and in which
129 water normally flows.

130

131 **4VAC50-20-40. Hazard potential classifications of impounding structures.**

132 A. Impounding structures shall be classified in one of three hazard classifications as defined
133 in subsection B of this section and Table 1.

134 B. For the purpose of this chapter, hazards pertain to potential loss of human life or damage
135 to the property of others downstream from the impounding structure in event of failure or faulty
136 operation of the impounding structure or appurtenant facilities. Hazard potential classifications
137 of impounding structures are as follows:

138 1. High Hazard Potential is defined where an impounding structure failure will cause
139 probable loss of life or serious economic damage. "Probable loss of life" means that
140 impacts will occur that are likely to cause a loss of human life, including but not limited to
141 impacts to residences, businesses, other occupied structures, or major roadways.

142 Economic damage may occur to, but not be limited to, building(s), industrial or
143 commercial facilities, public utilities, major roadways, railroads, personal property, and
144 agricultural interests. "Major roadways" include, but are not limited to, interstates,
145 primary highways, high-volume urban streets, or other high-volume roadways, except
146 those having an AADT volume of 400 vehicles or less in accordance with 4VAC50-20-
147 45.

148 2. Significant Hazard Potential is defined where an impounding structure failure may
149 cause the loss of life or appreciable economic damage. "May cause loss of life" means
150 that impacts will occur that could cause a loss of human life, including but not limited to
151 impacts to facilities that are frequently utilized by humans other than residences,
152 businesses, or other occupied structures, or to secondary roadways. Economic damage
153 may occur to, but not be limited to, building(s), industrial or commercial facilities, public
154 utilities, secondary roadways, railroads, personal property, and agricultural interests.
155 "Secondary roadways" include, but are not limited to, secondary highways, low-volume
156 urban streets, service roads, or other low-volume roadways, except those having an
157 AADT volume of 400 vehicles or less in accordance with 4VAC50-20-45.

158 3. Low Hazard Potential is defined where an impounding structure failure would result in
159 no expected loss of life and would cause no more than minimal economic damage. "No
160 expected loss of life" means no loss of human life is anticipated.

161 C. The hazard potential classification shall be proposed by the owner and shall be subject to
162 approval by the board. To support the appropriate hazard potential classification, dam break
163 analysis shall be conducted by the owner's engineer or the department in accordance with one
164 of the following alternatives and utilizing procedures set out in 4VAC50-20-54. Present and
165 planned land use for which a development plan has been officially approved by the locality in
166 the dam break inundation zones downstream from the impounding structure shall be considered
167 in determining the classification.

168 1. The owner of an impounding structure that does not currently hold a regular or
169 conditional certificate from the board, or the owner of an impounding structure that is
170 already under certificate but the owner believes that a condition has changed
171 downstream of the impounding structure that may reduce its hazard potential
172 classification, may request in writing that the department conduct a simplified dam break
173 inundation zone analysis to determine whether the impounding structure has a low
174 hazard potential classification. The owner shall pay a fee to the department in
175 accordance with 4VAC50-20-395 for conducting each requested analysis. The
176 department shall address requests in the order received and shall strive to complete
177 analysis within 90 days; or

178 2. The owner may propose a hazard potential classification that shall be subject to
179 approval by the board. To support the proposed hazard potential classification, an
180 analysis shall be conducted by the owner's engineer and submitted to the department.
181 The hazard potential classification shall be certified by the owner.

182 D. Findings of the analysis conducted pursuant to subsection C, shall result in one of the
183 following actions:

184 1. For findings by the department resulting from analyses conducted in accordance with
185 subsection C, subdivision 1:

186 a. If the department finds that the impounding structure appears to have a low
187 hazard potential classification, the owner may be eligible for general permit coverage
188 in accordance with 4VAC50-20-103.

189 b. If the department finds that the impounding structure appears to have a high or
190 significant hazard potential classification, the owner's engineer shall provide further

191 analysis in accordance with the procedures set out in 4VAC50-20-54 and this article.
192 The owner may be eligible for grant assistance from the Dam Safety, Flood
193 Prevention and Protection Assistance Fund in accordance with §10.1-603.16 et seq.

194 2. For findings by the owner's engineer resulting from analyses conducted in accordance
195 with subsection C, subdivision 2:

196 a. If the engineer finds that the impounding structure has a low hazard potential
197 classification, the owner may be eligible for general permit coverage in accordance
198 with 4VAC50-20-103:

199 b. If the engineer finds that the impounding structure appears to have a high or
200 significant hazard potential classification, then the owner shall comply with the
201 applicable certification requirements set out in this article.

202 E. An incremental damage analysis in accordance with 4VAC50-20-52 may be utilized as
203 part of a hazard potential classification by the owner's engineer.

204 F. Impounding structures shall be subject to reclassification by the board as necessary.

205

206 **4VAC50-20-45. Hazard potential classifications based on low volume roadways.**

207 A. All impacted public and private roadways downstream or across an impounding structure
208 shall be considered in determining hazard potential classification. To determine whether a road
209 is impacted by a dam failure, one of the following methodologies shall be utilized:

210 1. Section IV, Part D of the United States Department of Interior, Bureau of
211 Reclamation's ACER Technical Memorandum No. 11; or

212 2. An approach to determining impacts to roadways found in any document that is on the
213 list of acceptable references set out in 4VAC50-20-320. The owner's engineer shall
214 reference the methodology utilized in their submittal to the department; or

215 3. An approach to determine any roadway that would be overtopped, at any depth, by a
216 dam failure under any flood or nonflood condition, including but not limited to probable
217 maximum flood, spillway design flood, or flood from sunny day dam failure, as
218 determined using analysis procedures set out in 4VAC50-20-54.

219 In all cases, an owner may use an incremental damage analysis conducted in accordance
220 with 4VAC50-20-52 to further refine what roads should be considered impacted.

221 B. In certain cases, an impounding structure may qualify for a low hazard potential
222 classification in spite of a potential impact to a downstream public or private roadway. If a
223 roadway is found to be impacted in accordance with subsection A, and other factors such as
224 downstream residences, businesses, or other concerns as set forth in this article that would
225 raise the hazard potential classification do not exist, such classification may be adjusted in
226 accordance with this section dependent on vehicle traffic volume, based on AADT.

227 C. For the purposes of determining AADT volume, one of the following techniques may be
228 utilized using data obtained within the last year except as otherwise set out in subdivision 1:

229 1. The AADT volumes available in the most recent published Daily Traffic Volume
230 Estimates from the Virginia Department of Transportation (VDOT) for the road segment
231 nearest the impounding structure may be utilized. This information is available from
232 VDOT at <http://www.virginiadot.org/info/ct-TrafficCounts.asp>;

233 2. Data developed by a local government may be utilized where the locality conducts its
234 own traffic counts;

235 3. Where AADT volumes are not available from VDOT or a locality, an Average Daily
236 Traffic trip rate that meets the standards set forth in the most recent Institute for Traffic

237 Engineers (ITE) Trip Generation information report (available for ordering online at
238 <http://www.ite.org/tripgen/trippubs.asp>) may be utilized if practicable; or

239 4. In all cases, average daily traffic volumes may also be established by a traffic count
240 that meets VDOT standards and is conducted or overseen by the owner's engineer or
241 otherwise approved by the department's regional engineer.

242 D. Where it can be demonstrated that a public or private roadway has limited usage, and
243 that the hazard potential classification is being determined based solely upon impacts to
244 roadways, the roadway may be considered to be "limited use" and the impounding structure
245 may be considered a low hazard potential impounding structure despite the presence of the
246 roadway. Such roadways, located either across or below an impounding structure, are those
247 that result in an AADT volume of 400 vehicles or less.

248 Where a downstream analysis finds that multiple limited use roadways may be impacted by
249 an impounding structure failure, the traffic volumes of those limited use roadways, determined in
250 accordance with subsection B, shall be combined for the purposes of determining the
251 impounding structure's hazard potential classification unless it can be demonstrated that the
252 traffic using each of the roadways is composed of substantially the same vehicle trips, such that
253 the combined number of individual vehicle trips utilizing all of the roadways would result in an
254 AADT of 400 or less.

255 E. Although a roadway may be considered to have a "limited use" in accordance with
256 subsection D, the Emergency Preparedness Plan for the low hazard impounding structure shall
257 clearly outline a reliable and timely approach for notification of the proper local emergency
258 services by the dam owner regarding the hazards of continued use of the road during an
259 emergency condition.

260

261 **4VAC50-20-52. Incremental damage analysis.**

262 A. ~~When appropriate, the spillway design flood requirement may be reduced by the board in~~
263 ~~accordance with this section. The proposed potential hazard classification for an impounding~~
264 ~~structure may be lowered based on the results of an incremental damage analysis utilizing one~~
265 ~~of the following methodologies:~~

266 1. Section III of the United States Department of Interior, Bureau of Reclamation's ACER
267 Technical Memorandum No. 11. An impact shall be deemed to occur where there are
268 one or more lives in jeopardy as a result of a dam failure; or

269 2. An approach to determining hazard classification found in any document that is on the
270 list of acceptable references set out in 4VAC50-20-320. The owner's engineer shall
271 reference the methodology utilized in the submittal to the department.

272 B. ~~The owner's engineer may proceed with an incremental damage analysis. The proposed~~
273 ~~spillway design flood for the impounding structure may be lowered based on the results of an~~
274 ~~incremental damage analysis. Once the owner's engineer has determined the required spillway~~
275 ~~design flood through application of Table 1, further analysis may be performed to evaluate the~~
276 ~~limiting flood condition for incremental damages. Site-specific conditions should be recognized~~
277 ~~and considered. This analysis may be used to lower the spillway design flood. In no situation~~
278 shall the allowable reduced level be less than the level at which the incremental increase in
279 water surface elevation downstream due to failure of an impounding structure is no longer
280 considered to present an additional downstream threat. This engineering analysis will need to
281 present water surface elevations at each structure that may be impacted downstream of the
282 dam. An additional downstream threat to persons or property is presumed to exist when water
283 depths exceed two feet or when the product of water depth (in feet) and flow velocity (in feet per
284 second) is greater than seven.

285 ~~C.~~ The spillway design flood shall also not be reduced below the minimum threshold values
286 as determined by Table 1.

287 ~~D. C.~~ The proposed potential hazard classification for the impounding structure and the
288 required spillway design flood shall be subject to reclassification by the board as necessary to
289 reflect the incremental damage assessment, changed conditions at the impounding structure,
290 and changed conditions in the dam break inundation zone.

291

292 **4VAC50-20-54. Dam break inundation zone mapping.**

293 A. Dam break inundation zone maps and analyses shall be provided to the department,
294 except as provided for in 4VAC50-20-51, to meet the requirements set out in Hazard Potential
295 Classifications of Impounding Structures (4VAC50-20-40) 4VAC50-20-40, Emergency Action
296 Plan for High and Significant Potential Hazard Impounding Structures (4VAC50-20-175)
297 4VAC50-20-175, and Emergency Preparedness for Low Hazard Potential Impounding
298 Structures (4VAC50-20-177) 4VAC50-20-177, as applicable. In accordance with subsection H,
299 a simplified dam break inundation zone map and analysis may be completed by the department
300 and shall be provided to the impounding structure's owner to assist such owner in complying
301 with the requirements of this article. All analyses shall be completed in accordance with
302 4VAC50-20-20D.

303 B. The location of the end of the inundation mapping should be indicated where the water
304 surface elevation of the dam break inundation zone and the water surface elevation of the
305 spillway design flood during an impounding structure nonfailure event converge to within one
306 foot of each other. The inundation maps shall be supplemented with water surface profiles
307 showing the peak water surface elevation prior to failure and the peak water surface elevation
308 after failure.

309 C. All inundation zone map(s), ~~except those utilized in meeting the requirements of~~
310 ~~Emergency Preparedness for Low Hazard Potential Impounding Structures (4VAC50-20-177),~~
311 shall be signed and sealed by a licensed professional engineer.

312 D. Present and planned land-use for which a development plan has been officially approved
313 by the locality in the dam break inundation zones downstream from the impounding structure
314 shall be considered in determining the classification.

315 E. For determining the hazard potential classification, an analysis including but not limited to
316 those hazards created by flood and nonflood dam failures shall be considered. At a minimum, of
317 the following shall be provided to the department:

- 318 1. A sunny day dam break analysis utilizing the volume retained at the normal or typical
319 water surface elevation of the impounding structure;
- 320 2. A dam break analysis utilizing the spillway design flood with a dam failure;
- 321 3. An analysis utilizing the spillway design flood without a dam failure; and
- 322 4. ~~For the purposes of future growth planning, a~~ A dam break analysis utilizing the
323 probable maximum flood with a dam failure.

324 ~~E. To meet the requirements of Emergency Preparedness set out in 4VAC50-20-177, all~~
325 ~~Low Hazard Potential impounding structures shall provide a simple map, acceptable to the~~
326 ~~department, demonstrating the general inundation that would result from a dam failure. Such~~
327 ~~maps do not require preparation by a professional licensed engineer, however, it is preferred~~
328 ~~that the maps be prepared by a licensed professional engineer.~~

329 F. To meet the Emergency Action Plan requirements set out in 4VAC50-20-175 and the
330 Emergency Preparedness Plan requirements set out in 4VAC50-20-177, all owners of High and
331 Significant Hazard Potential impounding structures shall provide dam break inundation zone

332 map(s) representing the impacts that would occur with both a sunny day dam failure and a
333 spillway design flood probable maximum flood with a dam failure.

334 1. The map(s) shall be developed at a scale sufficient to graphically display downstream
335 inhabited areas and structures, roads, public utilities that may be affected, and other
336 pertinent structures within the identified inundation area. In coordination with the local
337 organization for emergency management, a list of downstream inundation zone property
338 owners and occupants, including telephone numbers may be plotted on the map or may
339 be provided with the map for reference during an emergency.

340 2. Each map shall include the following statement: "The information contained in this
341 map is prepared for use in notification of downstream property owners by emergency
342 management personnel."

343 Should the department prepare a dam break inundation zone map and analysis in response
344 to a request received pursuant to 4VAC50-20-40 C, the owner shall utilize this map to prepare a
345 plan in accordance with this subsection.

346 G. Upon receipt of a written request in accordance with 4VAC50-20-40 C and receipt of a
347 payment in accordance with 4VAC50-20-395, the department shall conduct a simplified dam
348 break inundation zone analysis. In conducting the analysis, a model acceptable to the
349 department shall be utilized. The analysis shall result in maps produced as Geographic
350 Information System shape files for viewing and analyzing and shall meet the other analysis
351 criteria of this section.

352 Upon completion of the analysis, the department shall issue a letter to the owner
353 communicating the results of the analysis including the dam break inundation zone map,
354 stipulating the department's finding regarding hazard potential classification based on the
355 information available to the department, and explaining what the owner needs to do
356 procedurally with this information to be compliant with the requirements of the Dam Safety Act
357 (§ 10.1-604 et seq.) and this article.

358
359 **4VAC50-20-101. General permit requirements for low hazard potential impounding**
360 **structures.**

361 Any impounding structure owner whose registration statement is approved by the Board will
362 receive the following permit and shall comply with the requirements in it. If the failure of a low
363 hazard potential impounding structure is not expected to cause loss of human life or economic
364 damage to any property except property owned by the owner, the owner may follow the special
365 criteria established for certain low hazard impounding structures in accordance with 4VAC50-
366 20-51 in lieu of coverage under the general permit.

367
368 General Permit No.: Dam Safety 1
369 Effective Date: (Date of Issuance of Coverage)
370 Expiration Date: (6 years following Date of Issuance of Coverage)

371 **GENERAL PERMIT FOR OPERATION OF A LOW HAZARD POTENTIAL IMPOUNDING**
372 **STRUCTURE**

373
374 In compliance with the provisions of the Dam Safety Act and attendant regulations, owners
375 of an impounding structure covered by this permit are authorized to operate and maintain a low
376 hazard potential impounding structure. The owner shall be subject to the following requirements
377 as set forth herein.

378 A. The spillway design of the owner's impounding structure shall be able to safely pass a
379 100-year flood. When appropriate, the spillway design flood requirement may be further reduced
380 to the 50-year flood in accordance with an incremental damage analysis conducted by the
381 owner's engineer.

382 B. The owner shall develop and maintain an emergency preparedness plan in accordance
383 with 4VAC50-20-177.

384 The owner shall update and resubmit the emergency preparedness plan immediately upon
385 becoming aware of necessary changes to keep the plan workable.

386 C. The owner shall perform an annual inspection of the impounding structure. The owner
387 shall maintain such records and make them available to the department upon request. The
388 department also shall conduct inspections as necessary in accordance with 4VAC50-20-180.

389 D. The owner shall ensure that the impounding structure is properly and safely maintained
390 and operated and shall have the following documents available for inspection upon request of
391 the department:

392 1. An operating plan and schedule including narrative on the operation of control gates
393 and spillways and the impoundment drain;

394 2. For earthen embankment impounding structures, a maintenance plan and schedule
395 for the embankment, principal spillway, emergency spillway, low-level outlet,
396 impoundment area, downstream channel, and staff gages; and

397 3. For concrete impounding structures, a maintenance plan and schedule for the
398 upstream face, downstream face, crest of dam, galleries, tunnels, abutments, spillways,
399 gates and outlets, and staff gages.

400 Impounding structure owners shall not permit growth of trees and other woody vegetation
401 and shall remove any such vegetation from the slopes and crest of embankments and the
402 emergency spillway area, and within a distance of 25 feet from the toe of the embankment and
403 abutments of the dam.

404 E. The owner shall file a dam break inundation zone map developed in accordance with
405 4VAC50-20-54 with the department and with the offices with plat and plan approval authority or
406 zoning responsibilities as designated by the locality for each locality in which the dam break
407 inundation zone resides.

408 F. The owner shall notify the department immediately of any change in circumstances that
409 would cause the impounding structure to no longer qualify for coverage under the general
410 permit. In the event of a failure or an imminent failure of the impounding structure, the owner
411 shall immediately notify the local emergency services coordinator, the Virginia Department of
412 Emergency Management, and the department. The department shall take actions in accordance
413 with § 10.1-608 or 10.1-609, depending on the degree of hazard and the imminence of failure
414 caused by the unsafe condition.

415
416 **4VAC50-20-102. Registering for coverage under the general permit for low hazard**
417 **potential impounding structures.**

418 A. Pursuant to § 10.1-605.3, an impounding structure owner may seek general permit
419 coverage from the Board for a low hazard potential impounding structure in lieu of obtaining a
420 Low Hazard Potential Regular Operation and Maintenance Certificate in accordance with
421 4VAC50-20-105 or a Conditional Operation and Maintenance Certificate for Low Hazard
422 Potential impounding structures in accordance with 4VAC50-20-150.

423 B. An owner shall submit a complete and accurate registration statement in accordance with
424 the requirements of this section prior to the issuance of coverage under the general permit. A
425 complete registration statement shall include the following:

426 1. The name and address of the owner;

427 2. The location of the impounding structure;

428 3. The height of the impounding structure;

429 4. The volume of water impounded;

430 5. An emergency preparedness plan prepared in accordance with 4VAC50-20-101;

431 6. The applicable fee for the processing of registration statements as set out in 4VAC50-
432 20-375;

433 7. A dam break inundation zone map completed in accordance with 4VAC50-20- 54 and
434 evidence that such map has been filed with the offices with plat and plan approval
435 authority or zoning responsibilities as designated by the locality for each locality in which
436 the dam break inundation zone resides; and

437 8. A certification from the owner that the impounding structure (i) is classified as low
438 hazard pursuant to a determination by the department or the owner's professional
439 engineer in accordance with § 10.1-604.1 and this article; (ii) is, to the best of his
440 knowledge, properly and safely constructed and currently has no observable
441 deficiencies; and (iii) shall be maintained and operated in accordance with the provisions
442 of the general permit.

443
444 **4VAC50-20-103. Transitioning from regular or conditional certificates to general permit**
445 **coverage for low hazard potential impounding structures.**

446 A. Holders of a regular certificate to operate a low hazard potential impounding structure
447 shall be eligible for general permit coverage upon the expiration of their regular certificate. In
448 lieu of a regular certificate renewal, registration coverage materials pursuant to 4VAC50-20-102
449 shall be submitted to the department 90 days prior to the expiration of the regular certificate.

450 B. Holders of a conditional certificate to operate a low hazard potential impounding structure
451 shall be eligible for general permit coverage upon satisfying the registration requirements for a
452 general permit pursuant to 4VAC50-20-102.

453
454 **4VAC50-20-104. Maintaining general permit coverage for low hazard potential**
455 **impounding structures.**

456 Provided that an impounding structure's hazard potential classification does not change, an
457 owner's coverage under the general permit shall be for a six-year term after which time the
458 owner shall reapply for coverage by filing a new registration statement and paying the
459 necessary fee. No inspection of the impounding structure by a licensed professional engineer
460 shall be required if the owner certifies at the time of general permit coverage renewal that
461 conditions at the impounding structure and downstream are unchanged. If such certification is
462 made, the owner is not required to submit an updated dam break inundation zone map.

463
464 **4VAC50-20-177. Emergency Preparedness Plan for Low Hazard impounding structures.**

465 Low Hazard impounding structures shall provide information for emergency preparedness to
466 the department, the local organization for emergency management and the Virginia Department
467 of Emergency Management. A form for the submission is available from the department

468 (Emergency Preparedness Plan for Low Hazard Virginia Regulated Impounding Structures).
469 The information shall include, but not be limited, to the following:

470 1. ~~Name of and location information for~~ the impounding structure, ~~inventory number,~~
471 ~~including~~ city or county, ~~and~~ latitude, and longitude;

472 2. ~~Owner's name, mailing address, Name of owner and operator and associated contact~~
473 ~~information including~~ residential and business telephone numbers, and other means of
474 communication. ~~Contact information shall provide for 24-hour telephone contact~~
475 ~~capability;~~

476 3. ~~Impounding structure operator's name, mailing address, residential and business~~
477 ~~telephone numbers, and other means of communication. Contact information shall~~
478 ~~provide for 24-hour telephone contact capability~~ Contact information for relevant
479 emergency responders including the following:

480 a. Local dispatch center(s) governing the impounding structure's dam break
481 inundation zone; and

482 b. City or county emergency services coordinator's name(s);

483 4. ~~Rainfall and staff gage observer's name, mailing address, residential and business~~
484 ~~telephone numbers, and other means of communication. Contact information shall~~
485 ~~provide for 24-hour telephone contact capability~~ Procedures for notifying downstream
486 property owners or occupants potentially impacted by the impounding structure's failure;

487 5. ~~Contact information for alternate operator and alternate rainfall and staff gage~~
488 ~~observer, if applicable; A dam break inundation zone map completed in accordance with~~
489 4VAC50-20-54 and evidence that:

490 a. Such map has been filed with the offices with plat and plan approval authority or
491 zoning responsibilities as designated by the locality for each locality in which the dam
492 break inundation zone resides; and

493 b. Required copies of such plan have been submitted to the local organization for
494 emergency management and the Virginia Department of Emergency Management;
495 and

496 6. ~~Contact information for the local dispatch center nearest impounding structure~~
497 ~~including address and 24-hour telephone number;~~

498 7. ~~City or county emergency services coordinator's name, mailing address, residential~~
499 ~~and business telephone numbers, and other means of communication;~~

500 8. ~~A procedure and the responsible parties for notifying to the extent possible any known~~
501 ~~local occupants, owners, or lessees of downstream properties potentially impacted by~~
502 ~~the impounding structure's failure;~~

503 9. ~~A discussion of the procedures for timely and reliable detection, evaluation, and~~
504 ~~classification of emergency situations considered to be relevant to the project setting and~~
505 ~~impounding features. Each relevant emergency situation is to be documented to provide~~
506 ~~an appropriate course of action based on the urgency of the situation;~~

507 10. ~~A simple dam break inundation map acceptable to the director, demonstrating the~~
508 ~~general inundation that would result from an impounding structure failure. Such maps~~
509 ~~required pursuant to this section do not require preparation by a professional licensed~~
510 ~~engineer; however, maps prepared by a licensed professional engineer are preferred;~~

511 11. ~~Identification of public roads downstream noting the highway number and distance~~
512 ~~below the impounding structure. If roads exist, contact information for the resident~~
513 ~~Virginia Department of Transportation engineer or city or county engineer including~~
514 ~~address and 24-hour telephone numbers;~~

- 515 ~~12. Amount of rainfall that will initiate a Stage II Condition in inches per six hours, inches~~
516 ~~per 12 hours, and inches per 24 hours and a Stage III Condition in inches per six hours,~~
517 ~~inches per 12 hours, and inches per 24 hours;~~
- 518 ~~13. Amount of flow in the emergency spillway that will initiate a Stage II Condition in feet~~
519 ~~(depth of flow) and a Stage III Condition in feet (depth of flow);~~
- 520 ~~14. Staff gage location and description; the frequency of observations by the rainfall or~~
521 ~~staff gage observer under a Stage I Condition, and Stage II Condition, and a Stage III~~
522 ~~Condition; and a clear description of an access route and means of travel during flood~~
523 ~~conditions to the impounding structure;~~
- 524 ~~15. Evacuation procedures including notification, monitoring, evacuation, and reporting~~
525 ~~processes and responsibilities;~~
- 526 ~~16. Evidence that the required copies of such plan have been submitted to the local~~
527 ~~organization for emergency management and the Virginia Department of Emergency~~
528 ~~Management; and~~
- 529 ~~17. Certification of the accuracy of the plan by the owner.~~

530

531 **4VAC50-20-195. Judicial review.**

532 Any owner aggrieved by a decision of the director, department, or board regarding the
533 owner's impounding structure shall have the right to judicial review of the final decision pursuant
534 to provisions of the Administrative Process Act (§ 2.2-4000 et seq.).

535

536 **4VAC50-20-200. Enforcement.**

537 The provisions of this chapter may be enforced by the board, the director, or both in any
538 manner consistent with the provisions of the Dam Safety Act (§ 10.1-604 et seq. of the Code of
539 Virginia). Failure to comply with the provisions of the general permit issued in accordance with
540 4VAC50-20-103 may result in enforcement actions, including penalties assessed in accordance
541 with §§10.1-613.1 and 10.1-613.2.

542

543 Part VI
544 Fees

545

546 **4VAC50-20-340. Authority to establish fees.**

547 Under § 10.1-613.5 of the Code of Virginia, the board is authorized to establish and collect
548 application fees to be used for the administration of the dam safety program, administrative
549 review, certifications, and the repair and maintenance of impounding structures including
550 actions taken in accordance with §§10.1-608, 10.1-609, and 10.1-613. The fees will be
551 deposited into the Dam Safety, Flood Prevention and Protection Assistance Administrative
552 Fund.

553

554 **4VAC50-20-375. Fee for coverage under the general permit for low hazard impounding**
555 **structures.**

556 The fee for processing registration statements from impounding structure owners seeking to
557 obtain coverage under the general permit for low hazard impounding structures shall be \$300.

558

559 **4VAC50-20-395. Simplified dam break inundation zone analysis fee.**

560 Pursuant to authority provided in §10.1-604.1 A, 1 and in accordance with 4VAC50-20-40 C,
561 when the department receives a request from the owner of a dam to conduct a simplified dam
562 break inundation zone analysis, the owner shall submit a fee of \$2,000 prior to the department
563 conducting such analysis. The fee shall be submitted in accordance with 4VAC50-20-350 B and
564 C as applicable. The fee shall be deposited into the Dam Safety Administrative Fund to be used
565 to cover the partial cost of such analysis. Once the analysis has commenced, no analysis fee
566 remitted to the department shall be subject to refund.

567 If the department attains additional efficiencies in its analysis process, the department is
568 authorized to reduce this fee to a level commensurate with the costs.