

1 **Project 3054 - Fast-Track**
2 **VIRGINIA SOIL AND WATER CONSERVATION BOARD**
3 **Amendment to the Impounding Structure Regulations to provide economic and**
4 **regulatory relief.**
5

6 **4VAC50-20-30. Definitions.**

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

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

11 "Agricultural purpose" means the production of an agricultural commodity as defined in §
12 ~~3.1-249.27~~ §3.2-3900 of the Code of Virginia that requires the use of impounded waters.

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

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

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

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

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

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

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

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

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

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

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

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

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

44 "Emergency Action Plan or EAP" means a formal document that recognizes potential
45 impounding structure emergency conditions and specifies preplanned actions to be followed to

46 minimize loss of life and property damage. The EAP specifies actions the owner must take to
47 minimize or alleviate emergency conditions at the impounding structure. It contains procedures
48 and information to assist the owner in issuing early warning and notification messages to
49 responsible emergency management authorities. It shall also contain dam break inundation
50 zone maps as required to show emergency management authorities the critical areas for action
51 in case of emergency.

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

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

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

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

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

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

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

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

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

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

92 "Normal or typical water surface elevation" means the water surface elevation at the crest of
93 the lowest ungated outlet from the impoundment or the elevation of the normal pool of the

94 impoundment if different than the water surface elevation at the crest of the lowest ungated
95 outlet. For calculating sunny day failures for flood control impounding structures, stormwater
96 detention impounding structures, and related facilities designed to hold back volumes of water
97 for slow release, the normal or typical water surface elevation shall be measured at the crest of
98 the auxiliary or emergency spillway.

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

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

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

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

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

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

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

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

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

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

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

131

132 **4VAC50-20-40. Hazard potential classifications of impounding structures.**

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

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

139 1. High Hazard Potential is defined where an impounding structure failure will cause
140 probable loss of life or serious economic damage. "Probable loss of life" means that

141 impacts will occur that are likely to cause a loss of human life, including but not limited to
142 impacts to residences, businesses, other occupied structures, or major roadways.
143 Economic damage may occur to, but not be limited to, building(s), industrial or
144 commercial facilities, public utilities, major roadways, railroads, personal property, and
145 agricultural interests. "Major roadways" include, but are not limited to, interstates,
146 primary highways, high-volume urban streets, or other high-volume roadways, except
147 those having an AADT volume of 400 vehicles or less in accordance with 4VAC50-20-
148 45.

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

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

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

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

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

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

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

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

190 b. If the department finds that the impounding structure appears to have a high or
191 significant hazard potential classification, the owner's engineer shall provide further
192 analysis in accordance with the procedures set out in 4VAC50-20-54 and this article.
193 The owner may be eligible for grant assistance from the Dam Safety, Flood
194 Prevention and Protection Assistance Fund in accordance with §10.1-603.16 et seq.

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

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

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

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

205 F. Impounding structures shall be subject to reclassification by the board as necessary.
206

207 **4VAC50-20-45. Hazard potential classifications based on low volume roadways.**

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

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

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

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

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

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

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

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

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

236 3. Where AADT volumes are not available from VDOT or a locality, an Average Daily
237 Traffic trip rate that meets the standards set forth in the most recent Institute for Traffic
238 Engineers (ITE) Trip Generation information report (available for ordering online at
239 http://www.ite.org/tripgen/trippubs.asp) may be utilized if practicable; or

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

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

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

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

261

262 **4VAC50-20-52. Incremental damage analysis.**

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

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

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

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

284 depths exceed two feet or when the product of water depth (in feet) and flow velocity (in feet per
285 second) is greater than seven.

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

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

292

293 **4VAC50-20-54. Dam break inundation zone mapping.**

294 A. Dam break inundation zone maps and analyses shall be provided to the department,
295 except as provided for in 4VAC50-20-51, to meet the requirements set out in Hazard Potential
296 Classifications of Impounding Structures (4VAC50-20-40) 4VAC50-20-40, Emergency Action
297 Plan for High and Significant Potential Hazard Impounding Structures (4VAC50-20-175)
298 4VAC50-20-175, and Emergency Preparedness for Low Hazard Potential Impounding
299 Structures (4VAC50-20-177) 4VAC50-20-177, as applicable. In accordance with subsection G,
300 a simplified dam break inundation zone map and analysis may be completed by the department
301 and shall be provided to the impounding structure's owner to assist such owner in complying
302 with the requirements of this article. All analyses shall be completed in accordance with
303 4VAC50-20-20D.

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

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

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

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

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

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

330 F. To meet the Emergency Action Plan requirements set out in 4VAC50-20-175 and the
331 Emergency Preparedness Plan requirements set out in 4VAC50-20-177, all owners of High and
332 Significant Hazard Potential impounding structures shall provide dam break inundation zone
333 map(s) representing the impacts that would occur with both a sunny day dam failure and a
334 spillway design flood probable maximum flood with a dam failure.

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

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

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

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

353 Upon completion of the analysis, the department shall issue a letter to the owner
354 communicating the results of the analysis including the dam break inundation zone map,
355 stipulating the department's finding regarding hazard potential classification based on the
356 information available to the department, and explaining what the owner needs to do
357 procedurally with this information to be compliant with the requirements of the Dam Safety Act
358 (§ 10.1-604 et seq.) and this article.

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

362 Any impounding structure owner whose registration statement is approved by the Board will
363 receive the following permit and shall comply with the requirements in it. If the failure of a low
364 hazard potential impounding structure is not expected to cause loss of human life or economic
365 damage to any property except property owned by the owner, the owner may follow the special
366 criteria established for certain low hazard impounding structures in accordance with 4VAC50-
367 20-51 in lieu of coverage under the general permit.

368
369 General Permit No.: Dam Safety 1
370 Effective Date: (Date of Issuance of Coverage)
371 Expiration Date: (6 years following Date of Issuance of Coverage)
372 **GENERAL PERMIT FOR OPERATION OF A LOW HAZARD POTENTIAL IMPOUNDING**
373 **STRUCTURE**

374
375 In compliance with the provisions of the Dam Safety Act and attendant regulations, owners
376 of an impounding structure covered by this permit are authorized to operate and maintain a low

377 hazard potential impounding structure. The owner shall be subject to the following requirements
378 as set forth herein.

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

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

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

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

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

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

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

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

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

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

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

416

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

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

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

- 427 1. The name and address of the owner;
- 428 2. The location of the impounding structure;
- 429 3. The height of the impounding structure;
- 430 4. The volume of water impounded;
- 431 5. An emergency preparedness plan prepared in accordance with 4VAC50-20-101;
- 432 6. The applicable fee for the processing of registration statements as set out in 4VAC50-
433 20-375;
- 434 7. A dam break inundation zone map completed in accordance with 4VAC50-20- 54 and
435 evidence that such map has been filed with the offices with plat and plan approval
436 authority or zoning responsibilities as designated by the locality for each locality in which
437 the dam break inundation zone resides; and
- 438 8. A certification from the owner that the impounding structure (i) is classified as low
439 hazard pursuant to a determination by the department or the owner's professional
440 engineer in accordance with § 10.1-604.1 and this article; (ii) is, to the best of his
441 knowledge, properly and safely constructed and currently has no observable
442 deficiencies; and (iii) shall be maintained and operated in accordance with the provisions
443 of the general permit.

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

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

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

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

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

464
465 **4VAC50-20-177. Emergency Preparedness Plan for Low Hazard impounding structures.**

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

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

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

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

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

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

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

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

488 5. ~~Contact information for alternate operator and alternate rainfall and staff gage~~
489 ~~observer, if applicable; A dam break inundation zone map completed in accordance with~~
490 4VAC50-20-54 and evidence that:

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

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

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

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

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

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

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

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

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

531

532 **4VAC50-20-195. Judicial review.**

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

536

537 **4VAC50-20-200. Enforcement.**

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

543

544 Part VI
545 Fees

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.