

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
ADMINISTRATIVE ADJUDICATION DIVISION

RE: TILLINGHAST HOLDING COMPANY, LLC
DAM 572

AD NO. 11-016/DE

DECISION AND ORDER

A. Introduction and Jurisdiction

This appeal was filed on July 15, 2011 by Respondent Tillinghast Holding Company, LLC. from a Notification of Hazard Classification dated June 15, 2011 by the Rhode Island Department of Environmental Management, "(RIDEM)" Office of Compliance and Inspection ("OC&I"). OC&I classified Dam No. 572 ("Wilbur Pond Dam") as "High Hazard". The Respondent disputes this classification. An Administrative Hearing was held on September 13, 2012 and October 8, 2013 at the Department of Environmental Management, Administrative Adjudication Division. The Respondent was represented by its owner and Chief Engineer, Mr. John Tillinghast. OC&I was represented by Richard Bianculli, Esquire. Upon the conclusion of the Administrative Hearing the parties were allowed to file Post Hearing Memoranda. The Respondent filed a Motion for Summary Judgment and Dismissal on November 1, 2013. The OC&I filed its Post Hearing Memorandum and Objection to Respondent's Motion for Summary Judgment and Dismissal on November 14, 2013.

The Hearing was conducted in accordance with the statutes governing the Administrative Adjudication Division for Environmental Matters (R.I. General Laws §42-17.7-1 et seq.); the *Administrative Procedures Act* (R.I. General Laws §42-35-1 et seq.) and the *Administrative Rules of Practice and Procedure for the Department of Environmental Management, Administrative Adjudication Division for Environmental Matters* (AAD Rules).

B. Facts

The within matter was commenced on or about June 15, 2011, when the Department of Environmental Management (“RIDEM”), Office of Compliance & Inspection (“OC&I”) forwarded a Dam Registration/ Notice of Hazard Classification letter to the Tillinghast Holding Company, LLC (hereinafter, the “Respondent”) (Joint Exhibits 1 and 2). The following facts are uncontroverted and were stipulated to pursuant to the February 22, 2012 Prehearing Conference.

The subject dam is identified as the Wilbur Pond Dam, State I.D. 572. located in Burrillville, Rhode Island (the “Dam”). On November 7, 2002, consultants retained by the RIDEM performed field reconnaissance of the Dam and its associated downstream area (Joint Exhibit 3). The Dam was subsequently classified by the RIDEM as a High Hazard dam (Joint Exhibit 3). On June 15, 2011, the RIDEM issued a Dam Registration / Notice of Dam Hazard Classification to the Respondent (Joint Exhibit 2). Since that date, the Respondent has completed the Dam Registration Form and has admitted to ownership of the Dam. (Joint Exhibit 1). However, the Respondent has also contested the hazard classification of the Dam through the filing of the within appeal. The RIDEM has jurisdiction over the Respondent pursuant to Rhode Island General Laws §42-17.1-1, *et seq.* and §46-19-1, *et seq.*

C. Travel

At present, the pond that is impounded by the Dam is mainly utilized for recreation and the Dam serves as a recreational and environmental resource (Joint Exhibit 3). The Dam and the surrounding area were reviewed by GZA GeoEnvironmental, Inc. (“GZA”) on behalf of the RIDEM on November 7, 2002 (Joint Exhibit 3). Following its review, GZA produced a Hazard

Classification Report (the "Report") entitled "Wilbur Pond Dam, Burrillville (572)" (Joint Exhibit 3).

The report states that GZA engineers Peter H. Baril and David M. Leone, as well as the Department's engineer, Paul Guglielmino, P.E. visited the Dam on November 7, 2002. (TR. pg. 65 line 1), The Report also indicates that the GZA engineers compiled background information and GIS mapping data, in addition to performing field reconnaissance of the Dam and its associated downstream area (Joint Exhibit 3). The measurements of the Dam are also included within the Report and are noted as 150 feet and a maximum height of 12 feet (Joint Exhibit 3).

The Report recommends that the Dam be classified as a "High Hazard" dam (Joint Exhibit 3). This recommendation is based on the analysis of downstream flooding, the potential effects of a dam break based on the characteristics of the Dam and the downstream area, site-specific GIS mapping information, and the professional judgment of the reporting engineers (Joint Exhibit 3). Most importantly, the Report states "[a] potential dam failure of the Dam would result in probable loss of human life, if failure were to occur during the summer or at another time when the camps/trailers are occupied." (Joint Exhibit 3). The Report also notes that the park's road bridge may be scoured or overtopped as a result of flooding. More importantly, the Report states that "if the seasonally-occupied trailers are relocated outside of the inundation hazard area shown on Figure 2 (at least 10 feet above the existing outlet channel) the hazard classification may be re-evaluated and potentially classified to Low Hazard." (Joint Exhibit 3).

The Respondent maintains the Simplified Dam Break Forecasting Model (Joint Exhibit 6) is admittedly an educational paper, however its authors possess a Ph.D in Civil Engineering, and it does in fact contain the actual formulas used in the forecasting model as to how the forecasting model works.

The Respondent maintains that the Simplified Dam Break Formula was intended to be used solely on earthen embankment type Dams different from the type of dam owned by the Respondent (TR, pg. 34 lines 9-16).

The Respondent maintains that the Simplified Dam Break Forecasting Model has two important features: First, it provides a formula to determine flood waters at the dam breach and secondly, it is designed to determine the floodwaters at pertinent points in the downstream channel (Joint Exhibit 6 pgs 1-12).

The Respondent maintains that the State failed to produce evidence of the potential impacts at pertinent points in the downstream channel during its case.

The Respondent maintains that without credible evidence at the pertinent points in the downstream channel it is impossible for the Respondent to refute the State's claim.

The Respondent maintains that Mr. Paul Guglielmino, the State's current Dam Inspector, gave contradictory testimony, stating in one instance that the dam was twelve feet high and impounded nine feet of water (TR, pg. 99 line 13, pg. 100 line 15, and pg. 101 lines 5-8) and then testified that he accepted, as accurate, the measurements of the former Dam Inspector Earl Prout that the Dam was eight and seven tenths feet high and impounded five and one-half feet of water (TR, pg. 97 line 10 and TR, pg. 99 lines 20-22).

The Respondent maintains that the State's claim that the Dam 572 is twelve feet high and impounds nine feet of water is erroneous and the subsequent calculations using the Simplified Dam Formula based on a dam height of twelve feet and impoundment of nine feet are also erroneous. Respondent therefore argues that since any calculations in the downstream channel are derived from calculations at the point of breach, these calculations also would prove erroneous.

The Respondent maintains that the State's claim that the Respondent's dam is an earthen dam

is not defined in regulations, (Respondent's Exhibit 1 Full) and is erroneous (TR. pg. 34 lines 15 and 16) describing the dam as solid rock and huge boulders that simply could not wash away.

D. Burden of Proof

The parties agreed that Respondent has the burden of proof by a preponderance of the evidence to demonstrate that the "High Hazard" classification of Dam 572 made by the Department was incorrect. "Preponderance of Evidence" is defined as follows:

"Evidence which is of greater weight or more convincing than the evidence which is offered in opposition to it; that is, evidence which as a whole shows that the fact sought to be proved is more probable than not." Blacks Law Dictionary, 5th Edition, (1979).

E. Hearing

Respondent began by calling Mr. Edmond E. Menard, who is employed and does maintenance work at a mill in Woonsocket. He also works for Respondent at the campground ("Bowdish Lake") where the Dam is located and he has performed maintenance there since 1976 when he started camping there. He did not testify as an expert witness. (TR. pg. 30 lines 1-17). He said he installed a waterline in the center of the dam in 1982 or 1983 and stated there was a lot of ledge in that area. (TR. pg. 34 and pg. 35). He also said Wilbur Pond is no more than six feet deep. (TR. pg. 35 line 23). He then pointed out several facts that Respondent claims the Department has incorrectly made. He said the outlet control structure pipe is 10-12 inches, not 8 inches. (TR. pg. 36 line 6). He said the dam is a ledge dam, not an earthen dam. (TR. pg. 36 line 21). He said that he and Mr. Tillinghast measured the dam at 79 feet wide not 200 feet. (TR. pg. 36 line 22) and that the flood plain below the campsites at the Wilbur dam is 400 feet wide not

200 feet wide. (TR. pg. 37 lines 2-6). Mr. Menard did not measure the depth with a ruler and never produced a report of his measurements regarding the dam, flood plain etc. as they were for internal purposes only. (TR. pg. 38).

Respondent then called Mr. Harold K. Ellis to testify. Mr. Ellis is a supervising environmental scientist at the RIDEM. (TR. pg. 40). He started working in the Office of Compliance and Inspection ("OC&I") in 1996. (TR. pg. 41). Mr. Ellis then reviewed Respondent's Exhibit 1- Full at the request of Respondent. Respondent's Exhibit 1 is a Consent Agreement dated and entered on July 31, 1998 in the Superior Court case of *W. Michael Sullivan in his capacity as Director of the Rhode Island Department of Environmental Management vs. John H. Tillinghast, Alfred E. Tillinghast, and Anna Tillinghast C.A.* No. PC97-0592.

Mr. Ellis testified that Respondent had committed violations of the Wetlands Act at the property where a lot of fill was placed without any approval associated with the dam construction. (TR. pg. 48 lines 6-13). Mr. Ellis admitted that that issue was resolved by the Consent Agreement (Respondent's Exhibit 1 and TR. pg. 48 lines 14-24 and pg. 49 lines 1-4). The main point Respondent attempted to demonstrate with this Exhibit is that its engineer (Mr. Russell Geiser) concluded the overall structure of the Dam was in very good condition and regulated the discharge of water in a satisfactory manner (TR. pg. 49 lines 11-14). Respondent attempted to get Mr. Ellis to admit that the RIDEM "accepted" all of the alterations that were made to Wilbur Pond Dam at the time of the Consent Agreement, but Mr. Ellis said they were not "accepted". (TR. pgs. 54 and 55). He said the dam still needed additional engineering and was referred to engineers at RIDEM (TR. pg. 55).

Mr. Ellis did note that in addition to the issues with the dam, there were other problems at the property, some of which remain unresolved and are still being litigated in the Courts. (TR. pg.

53).

The Respondent rested and the RIDEM then called Mr. Paul Guglielmino to testify. Mr. Guglielmino was qualified, over the objection of the Respondent, as a dam safety expert. (TR. pg. 71). He said the RIDEM used the report GZA GeoEnvironmental, Inc. prepared to classify the Dam. The Report recommended the Wilbur Pond Dam be classified "High Hazard". (TR. pg. 72). He then reviewed the detailed criteria GZA GeoEnvironmental used to rate the dam. (TR. pg. 73). He highlighted the fact that GZA GeoEnvironmental stated that the Dam might have been classified as a "Low Hazard" dam if the Respondent moved three seasonally occupied campsites or trailers out of the inundation or flood hazard area as referenced in it report. (TR. pg. 74). He said he spoke with Mr. John Tillinghast about moving these trailers, but he was not interested in doing so. (TR. pg. 75).

Mr. Guglielmino also discussed the earlier dam inspection report prepared by Mr. Earl Prout (Joint Exhibit 7 Full). He said Mr. Prout classified the Dam as "significant" in 1989. (TR. pg. 77) The RIDEM did not have regulations regarding dam safety at that time, but Mr. Guglielmino stated the RIDEM used the Army Corps of Engineers definition, but failed to read or provide a copy of it.

Mr. Tillinghast then cross examined Mr. Guglielmino about the applicability of the Dam Regulations of 2007 (Department Exhibit 1 Full). He explained that these Regulations did incorporate the Simplified Dam Break Formula Respondent referred to earlier and the RIDEM and GZA GeoEnvironmental used that Formula in part, to determine the classification of this and all the dams in the state. (TR. pgs. 87-88). Respondent also tried to demonstrate that the height of the dam as recorded in the RIDEM records was inconsistent with its own measurements as well as those that may have been recorded by GZA GeoEnvironmental (TR. pgs. 99-101). Mr.

Guglielmino clarified these discrepancies when examined by Counsel for the RIDEM (TR. pgs. 102 and 105). A key point he made is that the Hazard classification has no relation to the condition of the dam. The dam could be in perfect condition and still be classified High Hazard (TR. pg. 110). Additionally, the Hazard classification inspection does not lead to a Notice of Violation or an Order to make repairs by RIDEM. Rather, the visual inspection and more detailed inspection could. (TR. pg. 110).

Mr. Guglielmino stated that there are approximately ninety-six (96) High Hazard Dams in Rhode Island. (TR. pg. 68). He said dam classifications change from time to time as downstream conditions could change, etc. (TR. pg. 69). A "High Hazard" classification refers to the fact that if a failure or misoperation of the dam occurred, it would cause a probable loss of human life. (TR. pg. 69). See Rule 6, subsection (k) of the *Rules and Regulations for Dam Safety*, December 2007. (Respondent's Exhibit 1 and Department's Exhibit 1 Full).

The RIDEM used the report that was prepared by GZA GeoEnvironmental, Inc. ("GZA") dated November 7, 2002 (Department's Exhibit 3 Full) when classifying Dam No. 572. GZA GeoEnvironmental did a very detailed analysis concerning the site, the dam and downstream features before classifying the dam as "High Hazard". For example they measured the dam as 150 feet wide and a maximum height of approximately 12 feet; earthen embankment with a vertical stone masonry downstream face. (Department's Exhibit 3). GZA also analyzed factors such as downstream dams, bridges and development as well as estimated peak overflow from dam break and flood impact area before concluding that it should be classified as "High Hazard". (Department's Exhibit 3). The following excerpt is from the Report:

"GZA recommends that Wilbur Pond Dam be classified as **High Hazard** based on the aforementioned analyses, site / downstream valley reconnaissance, site-specific GIS

mapping and other existing data, and professional judgment. A potential dam failure of Wilbur Pond Dam would result in probable loss of human life, if failure were to occur during the summer or at another time when the camps / trailers are occupied. The private park road bridge may also be damaged (i.e. scour) or overtopped. It should be noted that if the seasonally-occupied trailers are relocated outside of the inundation hazard area shown on Figure 2 (at least 10 feet above the existing outlet channel) the hazard classification may be re-evaluated and potentially reclassified to Low Hazard”.

Respondent then challenged the applicability of the 2007 Dam Safety Regulations, the public hearing process, and the reasons the regulations were promulgated (TR. pg. 87).

Respondent argued that the RIDEM does not have authority to use the Simplified Dam Break Formula because it was not incorporated into the Dam Safety Regulations (TR. pg. 88) and made an Oral Motion to Dismiss on that basis (TR. pg. 91). The Oral Motion to Dismiss was denied. The Respondent then filed a Motion for Summary Judgment and Dismissal on November 1, 2013. The RIDEM objected.

Finally, Respondent attempted to demonstrate through cross examination of Mr. Guglielmino, that certain calculations made by the RIDEM years ago by Mr. Earl Prout, as well as the more recent calculations made by GZA GeoEnvironmental were wrong (TR. pg. 102). Once again, Mr. Guglielmino clearly explained how the RIDEM in concert with GeoEnvironmental employees used data to complete their analysis and determine the classification of the Dam (TR. pg. 103).

F. Discussion

The central question in this case is whether the RIDEM’s classification of the Wilbur Pond Dam (No. 572) as “High Hazard” was correct. The Respondent’s appeal to this Tribunal disputes the classification. The Respondent’s case in chief pointed out many technical points

concerning the Dam itself, such as possible inconsistencies regarding measurements of the Dam, how it was constructed, and repairs that were made to the Dam all in an effort to demonstrate its safe condition. But, Respondent's case failed to recognize that the RIDEM did not allege that the Dam was in need of repair or was faulty in any way. Rather, the RIDEM classified the Dam based on the recommendation of GZA GeoEnvironmental's analysis using certain, specific and uniform criteria for all dams in the State of Rhode Island. The integral part of the classification, besides the technical data used, is whether or not a potential failure of the Wilbur Pond Dam would result in probable loss of human life. GZA GeoEnvironmental concluded and the Department agreed that it would. GZA GeoEnvironmental also noted that if certain seasonally occupied trailers at the Bowdish Lake Campground were relocated outside of the inundation hazard area, the hazard classification may be re-evaluated and potentially reclassified to "Low Hazard" (Joint Exhibit 3).

Respondent did not prove an error in GZA GeoEnvironmental's calculations or offer an alternative model or calculation that would result in a different hazard classification. Mr. Menard's testimony was not helpful and did not help sustain Respondent's burden of demonstrating that the "High Hazard" classification was incorrect. Respondent's commentary and cross examination of Mr. Guglielmino regarding the RIDEM's draft Rules and Regulations for Dam Safety was also irrelevant because the Hazard Classification is based on the Approved Regulations and not the draft regulations.

In sum, the Respondent did not submit any documentation or expert testimony that directly challenged the "High Hazard" classification or demonstrated that a potential failure of the dam would result in a probably loss of life. Respondent did not adequately refute the fact that some trailers/campsites were in the inundation area and their removal or relocated could

affect the classification. Instead, Respondent chose to address collateral issues, such as improvements it made to the Dam and whether it was in compliance with a Consent Agreement in a Superior Court case.

Thus, I find that the Respondent failed to carry its burden of proving, by a preponderance of the evidence, that High Hazard Dam Classification of Dam No. 572 (Wilbur Pond Dam) was incorrect.

I therefore deny the Respondent's Motion for Summary Judgment and Dismissal and sustain the Department's Objection thereto as I find there are genuine issues of material fact in this case so that it cannot be dismissed as a matter of Law.

G. Finding of Facts

1. On June 15, 2011 the Department of Environmental Management ("RIDEM"), Office of Compliance and Inspection ("OC&I") forwarded a Dam Registration Notice/ Notice of Hazard Classification letter to Tillinghast Holding Company, LLC. (Joint Exhibits 1 and 2).
2. Tillinghast Holding Company, LLC. Filed the Dam Registration Form with RIDEM on July 13, 2011 and admitted it is the owner of Dam No. 572 ("Wilbur Pond Dam") located in Burrillville, Rhode Island (Joint Exhibit 1).
3. RIDEM classified Dam 572 on June 15, 2011 as "High Hazard" (Joint Exhibit 3).
4. Respondent contested the High Hazard classification and filed a timely appeal of the "High Hazard" classification with the Administrative Adjudication Division.
5. RIDEM has subject matter and personal jurisdiction over this matter pursuant to Rhode Island General Laws §42-17.1-1, et seq. and §42-19-1, et seq.
6. The pond that is impounded by the Dam is mainly utilized for recreation, primarily a campground (Bowdish Lake Campground).
7. Respondent, through its employee, Edmund E. Menard, stated that Wilbur Ponds is no more than six feet deep; the dam is 79 feet wide; the dam is a ledge dam; the outlet control structure pipe is 10-12 inches; the floodplain below the campsites at Wilbur

Dam is 400 feet wide. These facts were used for internal purposes by Respondent and no written proof was offered to support these assertions.

8. GZA GeoEnvironmental was engaged by RIDEM to review the Dam and produce a Hazard Classification Report of Dam 572 (Joint Exhibit 3).
9. Officials from RIDEM and GZA GeoEnvironmental viewed Dam 572 on November 7, 2002 (Joint Exhibit 3).
10. GZA GeoEnvironmental's report classifying the Dam as High Hazard was based on the analysis of downstream flooding, the potential effects of a dam break based on the characteristics of the Dam and the downstream area, site specific GIS mapping information, and the professional judgment of the reporting engineers (Joint Exhibit 3).
11. GZA GeoEnvironmental also concluded that a potential dam failure of the Dam would result in probable loss of human life, if failure were to occur during the summer or at another time when the camps/ trailers are occupied.
12. The GZA GeoEnvironmental also stated that the park's road bridge may be scoured or overtopped as a result of the flooding.
13. The flood modeling and engineering analysis provided in the GZA GeoEnvironmental Report indicates that three (3) campsites located directly downstream of the DAM would be significantly impaired by a breach of the DAM.
14. Respondent did not refute the flood modeling and engineering analysis by GZA regarding the three campsites in its case
15. The Report also indicates that the hazard potential could be significantly lowered if the impaired campsites were relocated to an area outside of the flood inundation zone.
16. Respondent did not refute the hazard potential analysis by GZA as part of its case.
17. Testimony provided by Mr. Guglielmino indicated that the Respondent was provided with this information but refused to relocate the three (3) impacted campsites.
18. Respondent did not address the issue of relocating the three campsites as part of its case.

Conclusions of Law

1. The Administrative Adjudication Division has subject matter jurisdiction over this action and personal jurisdiction over Respondent.
2. RIDEM has subject matter and personal jurisdiction over this matter pursuant to Rhode Island General Laws § 42-17.1-1, et seq. at § 46-19-1 et seq.
3. A review of the evidence and testimony submitted during the Hearing indicates that the Respondent failed to prove, by a preponderance of the evidence, that the "High Hazard" classification was made improperly by the Rhode Island Department of Environmental Management.
4. There were genuine issues of material fact in this matter which preclude dismissal of this case as a matter of law.

Wherefore it is hereby Ordered that:

1. The Respondent's Post Hearing Motion for Summary Judgment and Dismissal is **DENIED.**
2. Respondent's Appeal in this matter is **DENIED and DISMISSED.**
3. The Rhode Island Department of Environmental Management's classification of the Wilbur Pond Dam (Dam #572) as a "High Hazard" dam is hereby **AFFIRMED and SUSTAINED.**

Entered as an Administrative Order this 28th day of January, 2014.



David M. Spinella
Hearing Officer
Administrative Adjudication Division
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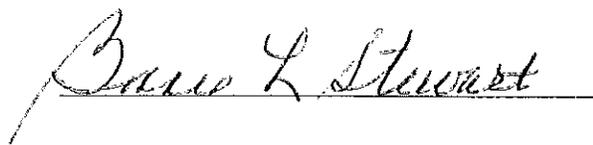
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CERTIFICATION

I hereby certify that I caused a true copy of the within Order to be forwarded by first-class mail, postage prepaid to John H. Tillinghast, P.O. Box 25, Chepachet, RI 02814; via interoffice mail to Richard Bianculli, Esquire, DEM Office of Legal Services and David Chopy, Office of Compliance and Inspection 235 Promenade Street, Providence, RI 02908 on this 28th day of January, 2014.



NOTICE OF APPELLATE RIGHTS

This Final Order constitutes a final order of the Department of Environmental Management pursuant to RI general Laws § 42-35-12. Pursuant to R.I. Gen. Laws § 42-35-15, a final order may be appealed to the Superior Court sitting in and for the County of Providence within thirty (30) days of the mailing date of this decision. Such appeal, if taken, must be completed by filing a petition for review in Superior Court. The filing of the complaint does not itself stay enforcement of this order. The agency may grant, or the reviewing court may order, a stay upon the appropriate terms.