



Date of Council Work Session: September 21, 2015

**TOWN OF LEESBURG
TOWN COUNCIL WORK SESSION**

Subject: Exeter Stormwater Management Pond

Staff Contact: Thomas A. Mason, P.E., Assistant Town Manager
Renée M. LaFollette, P.E., Director, Public Works & Capital Projects
Charles A. Mumaw, P.E., Public Works Manager

Council Action Requested: Direction on how to proceed with processing the Exeter Homeowner Association's request for the Town to take over ownership including operation and maintenance of the Exeter Stormwater Management Pond.

Staff Recommendation: Staff does not recommend that the Town assume responsibility for the Exeter Stormwater Management Pond.

Commission Recommendation: Not applicable.

Fiscal Impact: The fiscal impact of assuming the responsibility for the Exeter Pond is estimated as follows:

- To achieve state compliance: \$935,850
 - \$15,000 for Tree and shrub removal
 - \$20,000 to complete engineering study currently underway
 - \$850 for state fees – Operation and Maintenance Certificate
 - \$100,000 for design and engineering cost for construction drawings
 - \$800,000 for construction
- Annual maintenance: \$21,000
- Prepare studies for State renewal every 6 years: \$60,000

An additional appropriation will be needed by Council to accept this responsibility as no funds are identified in the approved Fiscal Year 2016 budget. In addition, future budgets will also need to be increased accordingly.

Work Plan Impact: The acceptance of this responsibility has a significant impact to the Town's resources. A capital project would need to be designed and constructed which impacts the engineering staff and the facility would need to be maintained by the street maintenance staff.

Executive Summary: The Town received a letter dated August 5, 2015 (see Attachment #1) from the Law Firm representing the Exeter Homeowner's Association (HOA), and a petition signed by residents of the Exeter community during the August 11, 2015 Town Council Meeting. These documents requested the Council to acknowledge the Town's ownership of the structures and facilities of the stormwater management pond located within Parcel "W" of the Exeter Planned Development and requested Town staff to maintain and operate such structures and facilities (including the dam) in

accordance with such ownership. The Town Attorney has performed a legal review of the deed of easement, and provided a legal opinion and recommendation to the Town Council under separate cover from this memo.

Background: The Exeter Stormwater Management Pond was constructed along Cattail Branch in the 1990 timeframe as part of the Exeter Planned Residential Development. The drainage shed that flows to this pond is 534 acres. This wet pond has a primary spillway designed to discharge the post-development 10-year stormwater flow at the pre-development 10-year discharge rate. The embankment dam was designed to contain the 100-year rainfall event, and has an emergency spillway to pass any overflow while being sized for the 100-year peak flow rate.

The pond was completed and released from bond by the Town in the mid 1990’s. At that time, the Town accepted ownership and the responsibility to maintain the storm drainage pipes and channels that convey stormwater into the pond and the principal spillway which controls the flow of water out of the pond. The land, pond, and dam have been maintained by the Exeter Homeowner’s Association. The Exeter Pond including its dam was in compliance with all local and state regulations in effect at the time it was completed.

In 2001, Virginia’s legislature broadened the definitions of “impounding structure” to bring more dams under regulatory oversight. On February 1, 2008, the Virginia Soil and Water Conservation Board approved major revisions to the Impounding Structure Regulations in the Virginia Administrative Code. These revisions changed the dam hazard potential classification system, modified spillway requirements, required dam break inundation zone modeling, expanded emergency action plan requirements, and made a variety of other regulatory changes.

Dams are classified with a hazard potential depending on the downstream losses estimated in event of failure. Regulatory revisions brought Virginia’s classification system into alignment with the system already used in the National Inventory of Dams maintained by the U.S. Army Corps of Engineers. Hazard potential is not related to the structural integrity of a dam, but strictly to the potential for adverse downstream effects if the dam were to fail. Regulatory requirements such as the frequency of dam inspections, the standards of spillway design, and the extent of emergency operations plans are dependent upon the dam classification. The following table provides additional information on these classes, and the possible effects on downstream areas if dam failure were to occur.

Hazard Potential	Description	Inspection
High	Failure will cause probable loss of life or serious economic damage (to buildings, facilities, major roadways, etc.)	Annual with inspection by a professional engineer every 2 years. Engineering studies updated every 6 years.
Significant	Failure may cause loss of human life or appreciable economic damage (to buildings, secondary roadways, etc.)	Annual with inspection by a professional engineer every 3 years. Engineering studies updated every 6 years.
Low	Failure would result in no expected loss of human life, and cause no more than minimal economic damage.	Annual with inspection by a professional engineer every 6 years. Engineering studies updated every 6 years.

The owner of each regulated *high, significant, or low* hazard dam is required to apply to the board for an *Operation and Maintenance Certificate*. The application must include an assessment of the dam by a licensed professional, an *Emergency Action Plan*, and the appropriate *Emergency Preparedness Plan* must be filed with the appropriate local emergency official and the Virginia Department of Emergency Management.

The Virginia Soil and Water Conservation Board (VSWCB) issues *Regular Operation and Maintenance Certificates* to the dam owner for a period of six years. If a dam has a deficiency, but does not pose imminent danger, the Board may issue a *Conditional Operation and Maintenance Certificate* during which time the dam owner is to correct the deficiency. After a dam is certified by the Board, annual inspections are required either by a professional engineer or the dam owner, and the *Annual Inspection Report* is submitted to the regional dam safety engineer.

The inventory of dams across Virginia regulated by the Department of Conservation and Recreation (DCR) totals 2,406 facilities with 339 listed as high hazard dams. The Exeter HOA received a letter from DCR dated September 18, 2014 (see Attachment #2) notifying them that the Exeter Pond dam has been identified as a high hazard dam, and needed to be brought into compliance with State Regulations.

In January 2015, the Exeter HOA hired the Professional Engineering Firm of Gordon Engineers to prepare the required information as listed in the Virginia Dam Safety Act Regulations. The initial analysis by Gordon concluded the dam is classified as a HIGH hazard embankment. This type of facility must have the capacity to safely pass a very large rain storm called the Probable Maximum Flood (PMF). The dam was designed to pass a 100-year storm which is equal to 7-1/2 inches of rain in 24 hours. The PMF rainfall is 35-1/2 inches in 24 hours. The Exeter Pond does not safely pass this large flood flow as currently constructed. The dam will be overtopped and is at risk of being breached. Improvements to the emergency spillway will be required for the structure to become compliant with the State Regulations. Preliminary engineering has identified that the entire top of the existing dam would need to be protected similar to the existing emergency spillway (see Attachment #3, Emergency Spillway).

The Chesapeake Bay TMDL Program required by Federal and State regulations is imposed on Leesburg by the Municipal Separate Storm Sewer System (MS4) discharge permit issued by the State of Virginia. This program requires the Town to reduce the amount of Phosphorus, Nitrogen and Sediment (P, N & S) currently being discharged into waterways that flow to the Chesapeake Bay. It is not the responsibility of landowners to comply with the TMDL regulations.

Leesburg has adopted a plan to obtain compliance with the TMDL requirements. The plan includes construction of stormwater treatment facilities to remove P, N and S at existing stormwater detention ponds and a stream restoration project on Tuscarora Creek. These projects are in the current Capital Improvements Program and are funded by Town Capital Funds and State Stormwater Grant Funds.

The Exeter Pond is one of the sites selected for construction of TMDL storm water treatment facilities. The design, easement acquisition, construction, facility ownership, operation and maintenance all will

be undertaken and fully funded by the Town and paid for by the Town. This program will not place any financial burden on any landowner of a selected site and will not impact the dam of the Exeter Stormwater Management pond in any way.

In closing, dam safety regulations are not connected to the Total Maximum Daily Load (TMDL) Program.

- Attachments:**
1. Letter dated August 5, 2015 from Exeter HOA to Town of Leesburg
 2. Letter dated September 18, 2014 from DCR to Exeter HOA
 3. Photos of Exeter Pond and Dam

Kenneth E. Chadwick (VA, MD)
Wilbert Washington II (VA, MD, DC)
Stephen H. Moriarty (VA)
Andrew G. Elmore (VA)
Brendan P. Bunn (VA, DC)
Daniel B. Streich (VA, DC)
Allen B. Warren (VA, DC)
Sara J. Ross (VA)
Jerry M. Wright, Jr (VA)



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August 5, 2015

VIA OVERNIGHT DELIVERY

Town of Leesburg Town Council
c/o Kaj H. Dentler, Town Manager
25 West Market Street
Leesburg, Virginia 20176

RE: Exeter Homeowners Association Petition

Dear Council Members and Staff:

We respectfully write to the Council on behalf of the Exeter Homeowners Association (“the Association”) regarding certain pending issues related to the stormwater management facilities and dam located on a parcel within the Association. Specifically, we are writing to request that the Council, on behalf of the Town of Leesburg (“Town”), acknowledge its ownership rights in the structures and facilities set forth in that certain Deed of Easement dated March 30, 1990 between the Association and the Town (the “Deed of Easement”), along with its accompanying plat (the “Plat”). We have enclosed a copy of the Deed of Easement and the Plat with this correspondence.

We note that the Town Attorney’s office is aware that this correspondence is being circulated to the Council, and that it reflects certain views and arguments contrary to the position of the Town Attorney. At the outset, the Association would like to express its gratitude to the Council, Mayor and Town Staff, who have repeatedly assisted the Association over the years. While the matter at hand is somewhat adversarial in nature, the members of the Association remain deeply appreciative of the efforts and the support of the Town.

Background

In 2014, the Association was notified by the Virginia Department of Conservation and Recreation (“DCR”) with regard to the Richmond Square Dam (“Dam”) (located just west of Route 15, situated between Ball’s Bluff and Leesburg Elementary schools). The Dam was only recently discovered by DCR during a “dam dragnet” program designed to locate dams in Virginia which have not been inspected or do not maintain an operational certificate. According to DCR, at least three hundred previously uninspected dams have been located.

DCR has asserted that the Association is the owner of the Dam and is demanding that the Association meet multiple requirements, including (i) a Dam break inundation study, (ii) an

25 Library Square
Salem, Virginia 24153
(540) 857-0600

201 Concourse Boulevard, Suite 101
Glen Allen, Virginia 23059-5642
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Fredericksburg, Virginia
(540) 834-0003

Emergency action plan, (iii) an inspection report, and (iv) an operation and maintenance plan. The costs to complete these studies and ongoing requirements are expected to be in the tens of thousands of dollars. The Association has denied ownership of the Dam based on the Deed of Easement and Plat.

Legal Considerations

The Association asserts that the Town is the owner of the Dam, along with all other facilities and structures located within the easements set forth in the Deed of Easement. Note 4 of the Plat provides that "The entire parcel of 27.8242 acres is a storm drainage easement." The Dam is located within the boundaries of Parcel "W" as set forth on the Plat containing 27.8242 acres.

Paragraph A.1 of the Deed of Easement provides that "All lines, channels, inlets, structures, and appurtenant facilities which are installed in the easements and rights-of-way shall be and remain the property of the Town." Further, and more importantly, the last page of the Deed of Easement provides in pertinent part that "the Owner grants and conveys in fee simple, all appurtenance and facilities located within the above sanitary sewer, storm drainage and water easements to the Town."

We have reviewed several surrounding communities' deeds of easement dated after 1990 regarding stormwater facilities and have found no other communities in Leesburg that share this affirmative language expressly granting all facilities to the town in "fee simple."

As the Dam, stormwater management pond and all accompanying inlets and structures are all installed within the Parcel "W" stormwater easement, the Association's position remains that the Town is the owner of such structures and facilities. The Association also believes that, as the owner of the Dam, the Town is the entity responsible for meeting the DCR requirements, and for maintaining and operating the stormwater management facilities.

Petition

It is the Association's intent to petition the Council at the Council's upcoming August 11, 2015 meeting. Specifically, the Association will petition the Council to acknowledge the Town's ownership of the structures and facilities located within Parcel "W" and to direct Town Staff to maintain and operate such structures and facilities (including the Dam) in accordance with such ownership. We have enclosed a draft resolution for the Council's review to aid in this process. We will request that the resolution be placed on the agenda at the Council's first meeting in September and that the Council pass the resolution at such meeting.

Summary

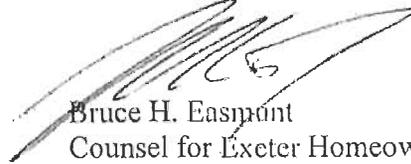
It was not the intent of the Association to become unduly embroiled in technical legal issues, particularly when the details of those legal issues pit the Town and the Association in an adversarial position; however, the Association's Board of Directors owes its members a fiduciary duty to ensure that Association funds are expended only for Association purposes. As the Association does

Town of Leesburg Town Council
August 5, 2015
Page 3

not believe that it owns the Dam or structures and facilities located within Parcel "W", the Board cannot in good faith expend Association funds on the maintenance and operation of such facilities.

We welcome any comments or questions that the Council or Staff may have about this issue and look forward to presenting the Association's petition on August 11.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Bruce H. Easmont", written over a horizontal line.

Bruce H. Easmont
Counsel for Exeter Homeowners Association

cc: Board of Directors

DEED OF EASEMENT

THIS DEED OF EASEMENT is made as of this 30th day of MARCH, 1990, by and between EXETER ESCROW, INC., a Virginia corporation, its successors and assigns ("Owner"), party of the first part; and THE TOWN OF LEESBURG, VIRGINIA, a municipal corporation, its successors and assigns (the "Town"), party of the second part.

WITNESSETH:

WHEREAS, the Owner is the owner of certain land, as shown on the attached plat, which is located in the Town of Leesburg, Virginia, having acquired said land by deed recorded in Deed Book 1047 at Page 1773 among the land records of Loudoun County, Virginia (the "Property"); and

WHEREAS, the Owner desires and intends to identify the parcel as Parcel "W"; and

WHEREAS, the Owner desires to grant and convey unto the Town the easements and all appurtenances and facilities located therein in the locations shown on the attached plat.

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) and other valuable consideration, the receipt and sufficiency of which are acknowledged, the Owner identifies all of that certain tract or parcel of land in the Town of Leesburg, Virginia, containing 27.8242 acres as shown on the attached plat entitled "PARCEL PLAT AND VARIOUS EASEMENTS THRU A PORTION OF THE PROPERTY OF EXETER ESCROW, INC." (RPA-072-LC) dated August 7, 1989 and revised November 20, 1989, February 20, 1990, March 15, 1990 and April 4, 1990, prepared by Dewberry & Davis, which is incorporated herein by reference, such parcel to be known as Parcel "W", EXETER.

THIS DEED FURTHER WITNESSETH, that in consideration of the premises and the sum of One Dollar (\$1.00), the receipt of which is acknowledged, the Owner grants and conveys unto the Town, the following easements and rights-of-way upon, in, through, across

Plot Cabinet A Slot 101 Page 3

HAIGHT, TRAMONTE & SICILIANO
Lawyers
8221 Old Courthouse Rd.
Vienna, Virginia 22182-3839

A. Easements and rights-of-way for the purpose of installing, constructing, operating, maintaining, adding to or altering present or future storm drainage ditches, lines, or other storm drainage structures and facilities, plus necessary inlet structures, storm water management facilities, and any other appurtenances necessary for the collection of storm water (storm drainage) and for its transmission through, upon and across the property of the Owner, said easements and rights-of-way being more particularly described on Exhibit "A" and subject to the following conditions:

1. All lines, channels, inlets, structures, and appurtenant facilities which are installed in the easements and rights-of-way shall be and remain the property of the Town.

2. The Town and its agents shall have full and free use of said easements and rights-of-way for the purposes named, and shall have all rights and privileges reasonably necessary to the exercise of the easements and rights-of-way, including the right of access over other lands of the Owner to and from the easements and rights-of-way. The right to use adjoining land shall be exercised only during periods of actual construction or maintenance, and then only to the minimum extent necessary for such construction and maintenance. Further, this right shall not be construed to allow the Town to erect any building or structure of a permanent nature on such adjoining land.

3. The Town shall have the right to trim, cut, and remove trees, shrubbery, fences, structures, or other obstructions or facilities in or near the easements and rights-of-way, deemed by it to interfere with the proper and efficient construction, operation and maintenance of said storm drain; provided, however, that the Town shall, at its own expense, restore, as nearly as possible, the premises to their original condition. Such restoration shall include the backfilling of trenches, the replacement of fences, reseeding of lawns or pasture areas, and the replacement of shrubbery, but not the replacement of structures, trees, or other obstructions located within the easements.

4. The Owner may construct and maintain roadways and parking areas over said easements with the prior written approval of the Town, and may make any use of the land on which the easement herein granted is located which may not be inconsistent with the rights herein conveyed, or interfere with the use of said easements by the Town for the purposes named; provided, however, that the Owner shall not erect any building or other structure, excepting a fence, on the easements without obtaining the prior written approval of the Town.

5. These easements shall be perpetual and shall run with the land, and shall be binding upon the Owner, its heirs, successors and/or assigns and shall inure to the benefit of the Town.

B. Easements and rights-of-way for the purpose of installing, constructing, operating, maintaining, adding to or altering and replacing present or future sanitary sewer lines, including house connection lines, manholes, and any other appurtenant facilities necessary for the collection of sanitary sewage and for its transmission through and across the property of the Owner, said easements being more particularly described on Exhibit "A", and subject to the following conditions:

1. All sewers, manholes, and appurtenant facilities which are installed in the easements and rights-of-way shall be and remain the property of the Town.

2. The Town and its agents shall have full and free use of said easements and rights-of-way for the purposes named, and shall have all rights and privileges reasonably necessary to the exercise of the easements and rights-of-way including the right of access to and from the rights-of-way and right to use adjoining land where necessary; provided, however, that this right to use adjoining land shall be exercised only during periods of actual construction or maintenance, and then only to the minimum extent necessary for such construction and maintenance, and further, this right shall not be construed to allow the Town to erect any building or structure of a permanent nature on such adjoining land.

3. The Town shall have the right to trim, cut, and remove trees, shrubbery, fences, structures, or other natural obstructions or facilities in or near the easements being conveyed, deemed by it to interfere with the proper and efficient construction, operation and maintenance of said easements and appurtenant facilities; provided, however, that the Town, shall, at its own expense, restore, as nearly as possible, the premises to their original condition. Such restoration shall include the backfilling of trenches, repaving, the replacement of fences and shrubbery, and the reseeded of lawns or pasture areas, but not the replacement of structures, trees, or other obstructions located within the easements.

4. The Owner may construct and maintain roadways and parking areas over said easements with the prior written approval of the Town, and may make any use of the land on which the easements herein granted are located which may not be inconsistent with the rights herein conveyed, or interfere with the use of said easements by the Town for the purposes named; provided, however, that the Owner shall not erect any building or other structure, excepting a fence, on the easements without obtaining the prior written approval of the

5. These easements shall be perpetual, shall run with the land, and shall be binding upon the Owner, its heirs, successors and/or assigns and shall inure to the benefit of the Town.

C. Easements and rights-of-way for the purpose of installing, constructing, operating, maintaining, adding to, altering and/or replacing present or future water mains, including fire hydrants, valves, meters, building service connections and other appurtenant facilities for the transmission and distribution of water through, under, upon and across the property of the Owner, said easements being more particularly described on Exhibit "A", and subject to the following conditions:

1. All water mains and appurtenant facilities which are installed in the easements and rights-of-way shall be and remain the property of the Town.

2. The Town and its agents shall have full and free use of the easements and rights-of-way for the purposes named and shall have all rights and privileges reasonably necessary to the exercise of the easements and rights-of-way, including the right of access to and from the rights-of-way and the right to use abutting and adjoining land when necessary; provided, however, that this right to use abutting and adjoining land shall be exercised only during periods of actual construction or maintenance and then only to the minimum extent necessary for such construction and maintenance, and further, this right shall not be construed to allow the Town to erect any building or structure of a permanent nature on such abutting and adjoining land.

3. The Town shall have the right to trim, cut and remove trees, shrubbery, fences, structures or other facilities in or near the easements being conveyed, deemed by it to interfere with the proper and efficient construction, operation and maintenance of said easement, water mains and appurtenant facilities; provided, however, that the Town at its own expense shall restore, as nearly as possible, the premises to their original condition. Such restoration shall include the backfilling of trenches, repaving, the replacement of fences, and the reseeding of lawns or pasture areas, but shall not include the replacement of structures, trees, or other obstructions located within the easements.

4. The Owner may construct and maintain roadways and parking areas over said easements with the prior written approval of the Town, and may make any use of the land upon which the easements herein granted are located which may not be inconsistent with the rights herein conveyed or interfere with the use of said easements by the Town for the purposes named; provided, however, that the Owner shall not erect any building or

5. These easements shall be perpetual and shall run with the land. It shall be binding upon the Owner, its heirs, successors and/or assigns and shall inure to the benefit of the Town.

THIS DEED FURTHER WITNESSETH, that for and in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Owner grants and conveys in fee simple, all appurtenances and facilities located within the above sanitary sewer, storm drainage and water easements to the Town.

The Owner covenants that it is the owner of the interests hereby conveyed and that it has the right to make this conveyance, and covenants that the Town shall quietly enjoy the premises for the uses herein stated.

WITNESS the following signatures and seals:

EXETER ESCROW, INC.
A Virginia Corporation

By: [Signature] (SEAL)
Vincent A. Tramonte, II
President

THE TOWN OF LEESBURG, VIRGINIA
A Municipal Corporation

By: [Signature] (SEAL)
[Signature]

COMMONWEALTH OF VIRGINIA
COUNTY OF FAIRFAX, to-wit:

The foregoing instrument was acknowledged before me this 30th day of March, 1990, by Vincent A. Tramonte, II, as President of Exeter Escrow, Inc.

[Signature]
NOTARY PUBLIC

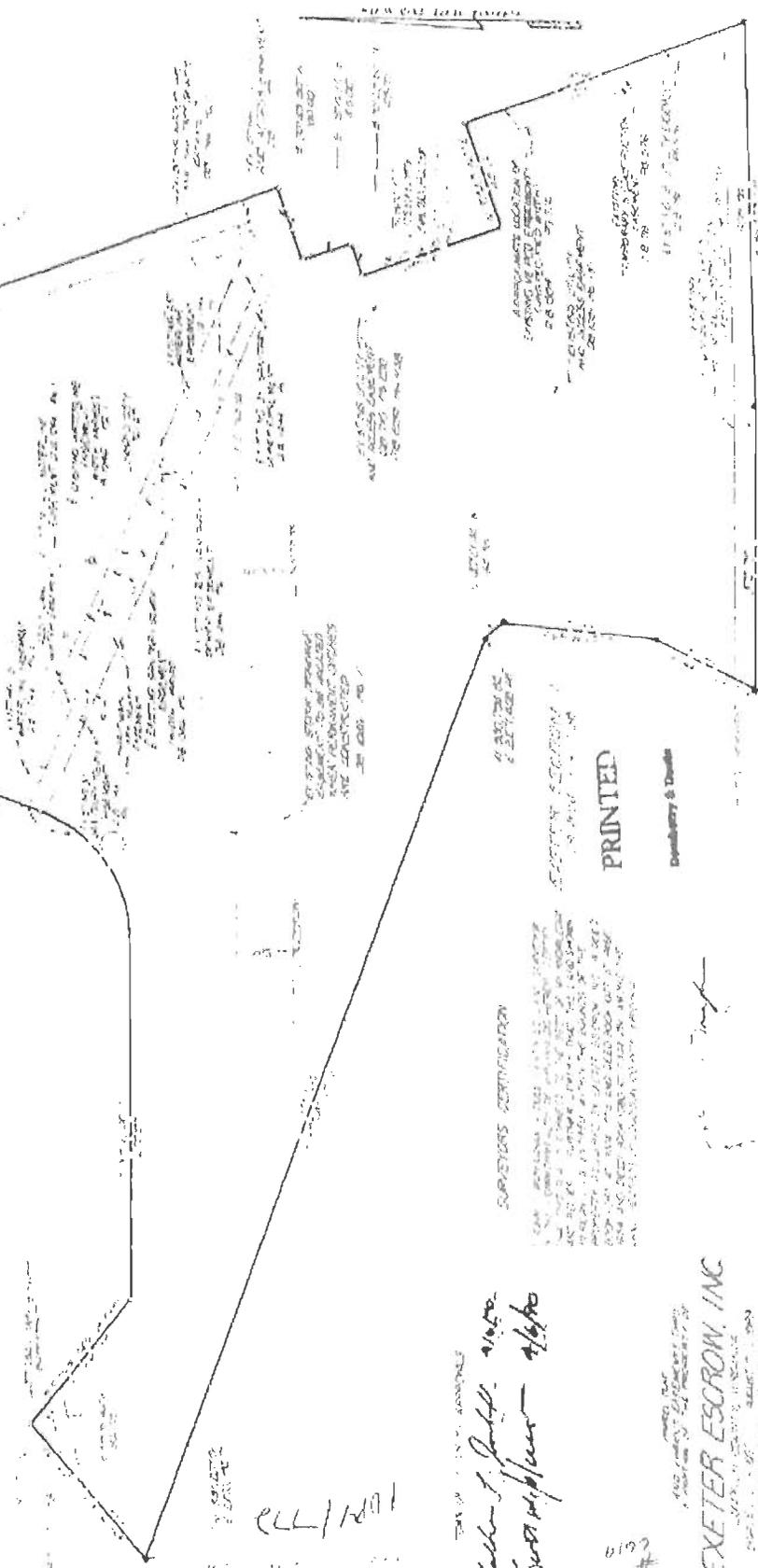
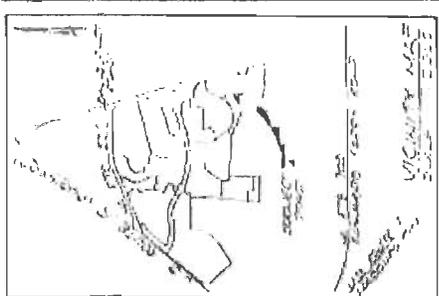
My Commission expires: November 5, 1990.

COMMONWEALTH OF VIRGINIA
County OF Stafford, to-wit:

The foregoing instrument was acknowledged before me this 16th day of April, 1990, by [Signature], vice Mayor for The Town of Leesburg, Virginia.

[Signature]
NOTARY PUBLIC

My Commission expires: April 13, 1991.



7. ENGINEERS SHALL BE NEAR FREE AND CLEAR OF OBSTRUCTIONS SUCH AS BRICKWORK, CONCRETE, METAL, OR OTHER MATERIALS IN EXISTENCE BY THE OWNER OR OTHER PARTY WHOSE INTERESTS ARE AFFECTED BY THE WORK OF THIS COMPANY. RESPONSIBLE FOR RETURNING THE PARCELS TO THEIR ORIGINAL STATE UP TO OWNER'S

8. OWNER'S ADDRESS: EXETER ESCROW INC. 1000 W. 10TH ST. S. SPOKANE, IDAHO 83402

9. THIS PLAN WAS REVISED ON NOVEMBER 20, 1990 AS THE PLAN WAS REVISED ON APRIL 13, 1990 AS THE PLAN WAS REVISED ON APRIL 4, 1990



NOTES:

1. THE PROPERTY DELINEATED ON THIS PLAN IS LOCATED ON THE ASSIGNMENT MAP AS ABOVE.
2. THIS PLAN HAS BEEN PREPARED WITHOUT THE GUARANTEE OF A TITLE SURVEY AND DOES NOT PURPORT TO ADDRESS ALL ENCUMBRANCES, EXCLUSIONS, OR OTHER CIRCUMSTANCES AFFECTING THE SUBJECT PROPERTY.
3. THE AREA SHOWN TO BE SET.
4. THE ENTIRE PARCEL OF SUBJECT ACRES IS A BURNED WILDFIRE ENCUMBRANCE.
5. THE AREA SHOWN TO BE SET.
6. THE PROPERTY IS OWNED BY EXETER ESCROW INC. A CORPORATION INCORPORATED IN THE STATE OF IDAHO. THE PROPERTY IS BEING DEVELOPED FOR A MULTIFAMILY MANAGEMENT HOUSING PROJECT.

CLUTTER TABLE

NO.	REVISION	DATE	BY	REASON
1.	AS SHOWN	07/01/90	RJS	AS SHOWN
2.	AS SHOWN	07/01/90	RJS	AS SHOWN

Robert J. Smith, 1000 W. 10th St. SPOKANE, IDAHO 83402

PRINTED
Densberry & Davis

EXETER ESCROW, INC.
1000 W. 10TH ST. SPOKANE, IDAHO 83402
DENSBERRY & DAVIS
ENGINEERS PLANNERS SURVEYORS
1000 W. 10TH ST. SPOKANE, IDAHO 83402



RECEIVED
SEP 19 2014

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

600 East Main Street, 24th Floor
Richmond, Virginia 23219
(804) 786-6124

September 18, 2014

Exeter Homeowners Association
741 Miller Drive
Suite K-1
Leesburg, VA 20175

Re: Richmond Square Dam, VA Inventory No. 10763

Dear Dam Owner:

You are shown as the dam owner of **Richmond Square Dam** located at the coordinate of 39.121383° North and 77.5416° West in our Dam Safety Database. Please see *Code of Virginia, § 10.1-604. Definitions* (<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+10.1-604>) for the definition of dam owner:

"Owner" means the owner of the land on which a dam is situated, the holder of an easement permitting the construction of a dam and any person or entity agreeing to maintain a dam.

Currently, Richmond Square Dam is shown as high hazard dams in our Dam Safety Database but has no operation and maintenance certificates (O & M certificate). It is unacceptable for a high hazard dam to be operated and maintained without an O & M certificate.

Your Engineer will need to inspect Richmond Square Dam, provide the required information as listed in the Virginia Impounding Structure Regulations with appropriate documentation, and mail them to my attention at the address below my name (in Warrenton Virginia) within one hundred and eighty (180) days from the date of this letter:

1. Operation and Maintenance Certificate Application for Virginia Regulated Impounding Structures, (DCR 199- 099, <http://www.dcr.virginia.gov/forms/DCR199-099.pdf>)
2. Record Report for Virginia Regulated Impounding Structures (DCR 199-100, <http://www.dcr.virginia.gov/forms/DCR199-100.pdf>)

3. Dam break inundation study according to 4VAC50-20-54 *Dam break inundation zone mapping*, with required dam break inundation maps, a hazard classification study, and a study showing the available spillway capacity
4. Emergency Action Plan (see 4VAC-50-20-175J of the Regulations for the documentation required)
5. Inspection Report (<http://www.dcr.virginia.gov/forms/DCR199-098.pdf>), signed by your engineer and the dam owners
6. An operation and maintenance plan.

You may need to apply for a Conditional Operation and Maintenance Certificate to me first. The required administrative fee for an Operation and Maintenance Certificate, paid by check, draft, or postal money order, payable to the Treasurer of Virginia along with the DCR Certificate and Permit Application Fee Form (DCR 199-192, <http://www.dcr.virginia.gov/forms/DCR199-192.pdf>), should be mailed to Virginia Department of Conservation and Recreation, Division of Finance, Accounts Payable, Richmond, Virginia. Please do not send the Fee Form and Check to this Office, since would delay the review of the submitted documents.

Inundation maps must be included with the Emergency Action Plan. These maps include a sunny-day break, the required spillway design flood (SDF) without a dam break, the required SDF with a dam break, and the probable maximum flood (PMF) with a dam break. Computer models and results used to develop these inundation zone maps must be included in the submittal. The requested inundation zones in GIS shapefile format should also be submitted. The Hazard Classification must be verified by your Professional Engineer through the development of the inundation mapping required for the dam. When performing dam break inundation study, please refer to *Virginia Soil and Water Conservation Board Guidance Document on Dam Break Inundation Zone and Incremental Damage Analysis and Mapping Procedures* (called Board's Guidance in this letter, website http://www.dcr.virginia.gov/dam_safety_and_floodplains/documents/dsdammappingpolicy01-14-10.pdf). According to Board's Guidance, the following shall be clearly marked at each potential damage location on each map:

- a. Cross Section number and distance downstream from the dam to the nearest tenth of a mile
- b. Relative time of travel, in minutes, of the first flood waters associated with a dam failure to reach the impact location
- c. Relative time of travel, in minutes, of the peak flood level associated with a dam failure to reach the impact location
- d. Maximum depth of water with a dam failure at each impact location in feet (depth of water on the structure)

"In accordance with § 10.1-609.2 of the Code of Virginia, impounding structure owners shall not permit the growth of trees and other woody vegetation and shall remove any such vegetation from the slopes and crest of embankments and the emergency spillway area, and within a distance of 25 feet from the toe of the embankment and abutments of the dam." Please remove all trees and woody vegetations on the slopes, at the crest, at the emergency spillway areas, and within a distance of 25 feet from the toe of the embankment and abutments, under the direction of a professional engineer registered in Virginia.

Within sixty (60) days from the date of this letter, please respond to me with a written statement that you intend to bring Richmond Square Dam in compliance with Virginia Impounding Structure Regulations.

Your cooperation in this matter is greatly appreciated. Should you have any questions or comments, you may contact me by telephone at (540) 351-1587 or by email at zhengang.wang@dcr.virginia.gov.

Sincerely,



Zhengang Wang, *Ph.D., P.E., CFM*
Regional Dam Safety Engineer (Region 1)
Division of Dam Safety and Floodplain Management
98 Alexandria Pike, Suite 33
Warrenton, VA 20186
(540) 351-1587

cc. Robert Bennett, P.E., RA, CFM, Director of Division of Dam Safety and Floodplain Management

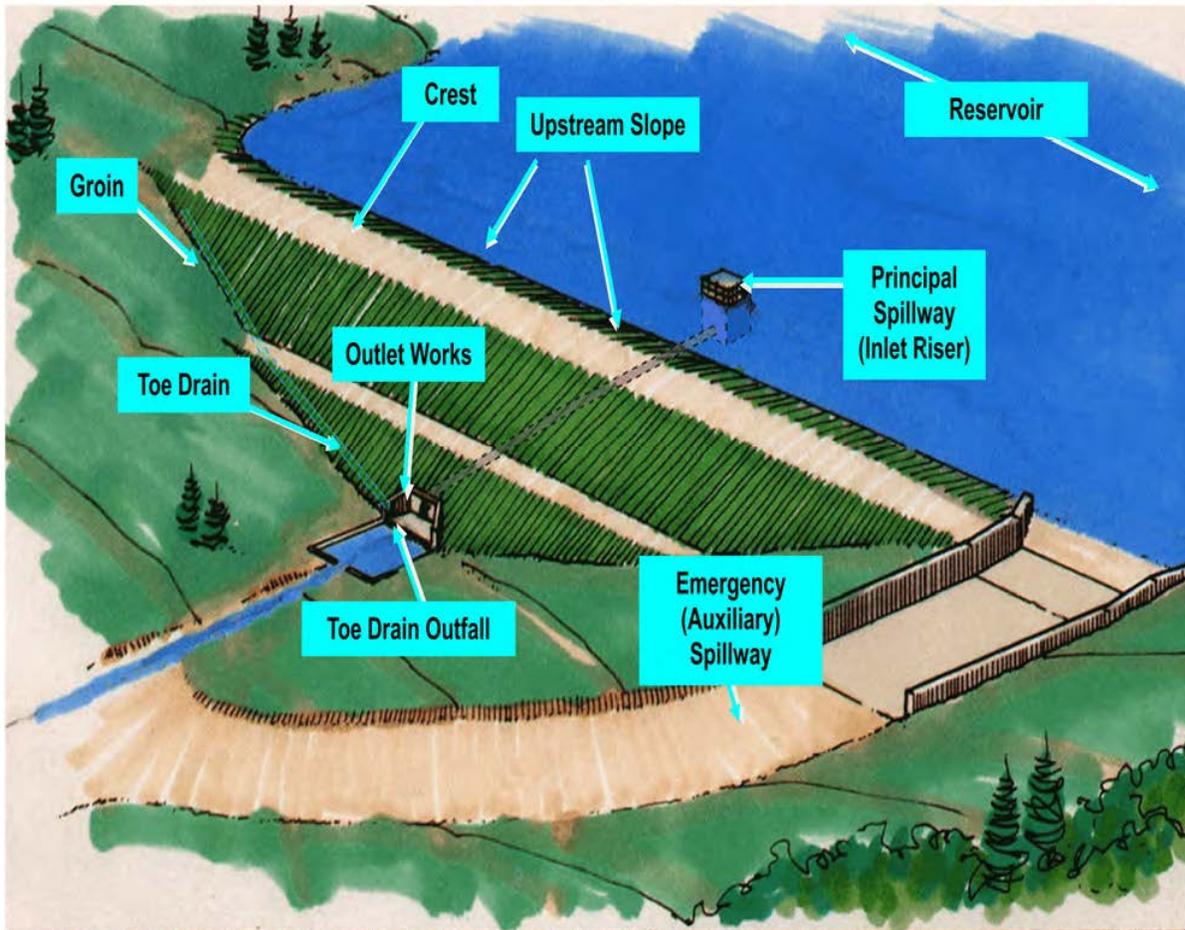


Aerial View of Existing Stormwater Management Facility



Existing Pond

Parts of an Embankment Dam





Principal Spillway



Emergency Spillway