



STATE OF RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
BUREAU OF ENVIRONMENTAL PROTECTION
235 Promenade Street, Suite 220
Providence, RI 02908-5767

April 20, 2021

Edward D. Warzycha
Operations Officer
Town of Coventry
1670 Flat River Road
Coventry, RI 02816

Soscia Holdings, LLC
c/o Douglas Soscia
6 Silver Maple Drive
Coventry, RI 02816

Re: Flat River Reservoir

Dear Mr. Warzycha and Mr. Soscia,

I am writing this letter as a follow up to my April 4, 2021 letter (April 4 Letter) (copy enclosed) and separate video conference calls the Department of Environmental Management (DEM) had with Soscia Holdings, LLC (through its attorney, Patrick Dougherty) and the Town of Coventry (through its officials and agents Edward Warzcha, Nicholas Gorham, David D'Agostino and Robert Fairbanks). These calls occurred on April 8, 2021 and April 12, 2021, respectively.

As a result of the calls, DEM thought it important to provide this letter to clarify several points raised during the calls.

Specifically,

- The genesis of the water levels and water releases specified in the Consent Agreement (Agreement) executed between DEM and Quidnick Reservoir Company (Quidnick) in 1995, which are also included in the current lease executed between Quidnick and the Town of Coventry (Town) in 2009, which has transferred to Soscia Holdings LLC (Soscia).
- The meaning of the term *spillway level* as used in the Agreement.
- The intention of the Agreement to balance the water levels within Flat River Reservoir and water releases from Flat River Reservoir to protect freshwater wetlands and recreational uses.
- How this balance can best be achieved during drought or dryer than normal rainfall conditions.

Genesis of Water Levels and Water Releases Specified in the Agreement

As stated in the April 4 Letter, DEM and Quidnick executed the Agreement to resolve a Notice of Violation issued by DEM to Quidnick in 1993 (NOV). The water levels and water releases described in Section 10 of the Agreement (and included in Section 7 of the current lease) were determined by DEM through a review of historical records of water levels of Flat River Reservoir (maintained by Quidnick) and stream flows of Pawtuxet River (maintained by the U. S. Geological Survey) (see opening paragraph of Section 10). These water levels and water releases were incorporated into the

lease executed between Quidnick and the Town in 1994 (1994 Lease). It took DEM and Quidnick additional time to resolve other issues in the NOV, which led to the execution of the 1994 Lease prior to the execution of the Agreement.

Meaning of the Term Spillway Level as Used in the Agreement

The term *spillway level* as used in the Agreement was understood by DEM and Quidnick to mean the water level at the top of the spillway of the dam, or the point at which water begins to flow over the spillway. Section 10 of the Agreement identifies a term *gatehouse spillway at the Flat River Reservoir Dam* and defines this to be *spillway level*. Quidnick had a location at the gatehouse that was used by the gatekeeper to measure the water level of Flat River Reservoir. The gatekeeper had a method of measuring that accounted for the difference in elevation at the point of measurement at the gatehouse and the top of the spillway of the dam. The language in the Agreement was intended to describe this location for and method of measurement of the water level in Flat River Reservoir.

Intention of the Agreement to Balance the Water Levels within Flat River Reservoir and Water Releases from Flat River Reservoir to Protect Freshwater Wetlands and Recreational Uses

It was understood by DEM and Quidnick that the Agreement was intended to balance the need to maintain sufficient water levels within Flat River Reservoir and the need to maintain sufficient water releases from Flat River Reservoir to protect freshwater wetlands and recreational uses above and below the dam.

That is why the Agreement specifies minimum water releases and water levels. For example, for April, the Agreement specifies a minimum water release from Flat River Reservoir of 100 cubic feet per second (cfs) and a minimum water level within Flat River Reservoir of 24 inches below spillway level. It also states that the water releases should be held at 215 cfs and that the water levels within Flat River Reservoir gradually be raised to 12 inches below spillway level by April 30. In years of average rainfall, maintaining water releases at 215 cfs in April should allow the Flat River Reservoir to gradually rise to 12 inches below the top of the spillway by April 30, as has been the case in recent years.

How This Balance Can Best Be Achieved During Drought or Dryer Than Normal Rainfall Conditions

It is important to understand that the water levels and water releases described in the Agreement (and the current lease) are average values derived from DEM's review of 30+ years of historic records. DEM and Quidnick recognized that conditions of nature may preclude attaining these water levels and water releases. Accordingly, language was added to the Agreement to acknowledge that Quidnick's ability to comply was subject to conditions of nature outside the control of Quidnick, such as drought. During these conditions, the parties agreed that Quidnick's obligation to comply with the water levels and water releases would be forgiven or delayed until the conditions abated (see Section 13 of the Agreement).

It is also important to understand that the historic records used by DEM are upwards of 50 years old. Precipitation patterns are changing rapidly because of climate change, with periods of more intense droughts and more intense rainfall.

At present, Rhode Island is experiencing lower than normal rainfall for April. A similar situation occurred last summer and into fall. If these conditions continue for the remainder of April and through May, the water release rates described in the Agreement (and the current lease) may not be sufficient to allow Flat River Reservoir to rise to spillway level by May 31.

Described below are two approaches that Soscia can follow to manage the water levels within Flat River Reservoir and water releases from Flat River Reservoir during this dry period.

The first approach is to maintain the water release rate as close to 215 cfs as possible while Flat River Reservoir gradually rises to 12 inches by April 30. This is in part based on the gatekeeper's experience and observations, in that the gatekeeper needs to track the expected rainfall and be knowledgeable about how quickly the water level in the reservoir responds to changes in water releases and rainfall.

The second approach is to look at the current conditions in the region and adjust the water releases to match these conditions.

If you look at the current conditions in the region (data reported as of April 14, 2021), the average of the percent normal median flows calculated by U.S. Geological Survey (USGS) for other rivers within the area and within South County (excluding large rivers and heavily manipulated rivers) is about 70%.

River (as identified by USGS station number)	Drainage Area (in square miles)	Median Flow (in cfs)	Current Flow (in cfs)	Percent Median Normal Flow
01117000	23.0	66.0	52.0	78.7
01115630	8.0	26.0	20.8	80.0
01117800	35.0	114.0	69.3	60.7
01118000	72.0	223.0	157.0	70.4
01117500	100.0	311.0	222.0	71.4
01117468	9.0	32.0	20.3	63.4
01117420	36.0	115.0	77.5	67.3
Average	40.4	126.7	88.4	70.3

Using the water release level of 215 cfs for Flat River Reservoir for April, 70% of flow calculates out to 150 cfs [(215 cfs) x 70%=150 cfs].

That means that under the current dry conditions, the water release could be reduced from 215 cfs to 150 cfs for April. If the dry conditions continue through May, the water release could be reduced by the percent normal median flows for the rivers shown above from the specified level of 150 cfs in the Agreement (and the current lease).

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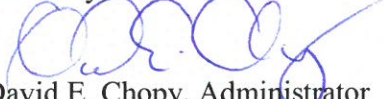
Town of Coventry and Soscia Holdings LLC
April 20, 2021

If Soscia complies with the water levels and water releases described in the Agreement (and the current lease) that have been followed for many years (and as may be occasionally adjusted to address conditions of nature beyond Soscia's control), no permit from DEM is required. If conditions of nature require adjustments more often than not, or if Soscia wishes to manage the dam in a different manner than set out in the Agreement (and the current lease) to better address current climate trends, then a permit from DEM is required to implement such changes.

Lastly, as we discussed, DEM has been monitoring the water levels in Flat River Reservoir weekly since the last week of March to determine if the water is gradually rising. Our most recent reading was taken on Monday, April 19. The water level rose 9 inches between the first and second reading, dropped 1 inch between the second and third reading and rose 7 inches between the third reading and the one taken on April 19.

I hope you find this information helpful.

Sincerely,



David E. Chopy, Administrator
DEM Office of Compliance and Inspection

enc.: April 4, 2021 letter from DEM to the Town and Soscia

cc. Janet Coit, Director, DEM
Terry Gray, Deputy Director, DEM
Mary Kay, Assistant Director and Chief Legal Counsel, DEM
Susan Forcier, Esquire, Deputy Chief Legal Counsel, DEM
Ryan Mulcahey, Legislative Liaison/Policy Advisor, DEM
Senator Lou Raptakis
Senator Gordon Rogers
Representative George Nardone
Representative Mike Chippendale
Representative Thomas Noret
Representative Sherry Roberts
Ben Marchant, Town Manager, Town of Coventry
David D'Agostino, Esquire
Nicholas Gorham, Esquire, Town of Coventry Solicitor
Patrick J. Dougherty, Esquire
Marc Lemoi, President, Johnson's Pond Civic Association