



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Mid-Atlantic Fish and Wildlife Conservation Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401



May 17, 2018

Kathleen Lester  
Compliance Manager  
Brookfield Renewable  
126 Lamberton Lane  
Hawley, PA 18428

Subject: 2018 Safe Harbor and Holtwood Fishway Inspections

Ms. Lester,

A seasonal inspection of the fish passage facilities at the Safe Harbor Hydroelectric Project and the Holtwood Hydroelectric Project were performed on Thursday, 04/26/2018. The review team consisted of Sheila Eyler (USFWS), Bjorn Lake (NOAA), and Mike Cox, Joe Kemtz, and Steve Schreiner (MD).

### Safe Harbor

We were encouraged by the continued maintenance efforts for this facility which results in reliable fishway operation during the fish passage season. Bars that were spanning the fishway entrance gates that were identified in previous inspections were removed prior to the 2018 fish passage season. No other issues were identified with the fishway structure or operation during the site visit.

### Holtwood

The fishlifts at Holtwood have had several mechanical issues in recent years, resulting in periods where a fishlift was not operational for critical periods during the fish passage season. Brookfield has been implementing a new maintenance program at this project, modeled after the Safe Harbor maintenance program, which should result in less mechanical failures of the system in the future.

During operation, it was noted that hoisting of the tailrace hopper resulted in a vibration of the fish passage structure. Vibrations may deter fish from entering or remaining in the fishway, ultimately impacting passage efficiency. Staff from Brookfield indicated that a repair to the tailrace lift would be completed after the spring fish passage season to

reduce the vibration. A similar repair was made to the spillway hopper in 2017, resulting in much reduced vibration of that lift during operation.

Brookfield staff indicated they had changed the automatic tracking of the entrance gate height so that the gates would now track tailrace elevations within six inches (versus previously set at two inches). This change results in the entrance gates moving less frequently which should reduce gate movement and resulting noise at the fishway entrances and improve entrance efficiency. Although this new method reduces the frequency of gate movement, Brookfield may want to consider setting up a method to average water depths over a period of time (i.e. 10, 15 or 30 minute intervals) and actuate the gates accordingly. This would remove the variation of point measurements that may be driven by wave action, sloshing and instrument precision that could ultimately further reduce the frequency of gate movement as well as reduce wear and tear on the mechanical components of the gate.

Thank you for facilitating the inspections at the sites. If you have any questions about this review, feel free to contact me at [Sheila\\_Eyler@fws.gov](mailto:Sheila_Eyler@fws.gov) or 410-573-4554.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sheila Eyler', with a stylized flourish at the end.

Sheila Eyler

Project Leader  
Mid-Atlantic Fish & Wildlife Conservation Office  
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