9. PROJECT-WIDE IMPACT ASSESSMENT: PUBLIC HEALTH

This section describes the potential for the Proposed Action to result in changes to public health from contributing factors, such as air quality, water quality, hazardous materials, and noise. A public health analysis is typically not necessary for projects where no significant unmitigated adverse impact(s) is(are) found in other analysis areas, such as air quality, water quality, hazardous materials, or noise. If an unmitigated significant adverse impact is identified in one or more of these analysis areas, a more detailed public health assessment is warranted for that specific technical area(s).

As described in the applicable sections of the EIS, the Proposed Action would not result in significant adverse impacts in any of the aforementioned technical areas related to public health. Refer to the following sections for more detail: Sections 7.1 and 8.3.1, "Water Resources and Water Quality," Sections 7.10 and 8.3.10, "Hazardous Materials," Section, 8.3.13, "Air Quality," and Section 8.3.14, "Noise." However, as the Proposed Action involves a public water supply, further discussion of the Proposed Action is presented below with a focus on water quality.

Operation of Ashokan Reservoir in accordance with the IRP was modeled and allows DEP to reliably provide water of sufficient quality to meet customer water demands under various hydrologic conditions, without compromising DEP's water supply reliability. In the future with the Proposed Action, there would be no change to the system probability of refill and the percent of days that would exceed drought metrics would be comparable to those days in the future without the Proposed Action over the OST simulation period. System balancing, as measured by average diversions for each of the Catskill, Croton, and Delaware systems, would also be comparable.

In addition, as discussed in Section 4, "Analytical Framework," DEP has recently or will be completing planned infrastructure projects that will increase the operational flexibility of DEP's water supply system and reduce the potential need for future alum application to water in the Catskill Aqueduct upstream of Kensico Reservoir.[1] OST modeling indicates there would be a sizable reduction in the number of alum days during episodic turbidity events in the future without and with the Proposed Action as compared to historical conditions as a result of these infrastructure projects being online, resulting in 0.3 percent alum days over the OST simulation period. While the percent alum days would not differ between the future without and with the Proposed Action, OST modeling showed that operation of Ashokan Reservoir in accordance with the IRP in the future with the Proposed Action would reduce the number of days per year that turbidity exceeds 8 NTU, from 48 days under the future without the Proposed Action to 39 days in the future with the Proposed Action.

The historical application of alum and the presence of alum floc within Kensico Reservoir, has not resulted in any long-term adverse impact to the use of Kensico Reservoir water as a drinking water supply consistent with its designated use as a Class AA water or for primary and secondary recreation. The delay in dredging would not impact these uses or public health. Any potential changes to the existing quality of Kensico Reservoir water used for drinking water supply would need to be analyzed in the future as dredging designs are developed.

As discussed in Section 7, "Potential Impacts and Benefits of the Proposed Action on Lower Esopus Creek," no significant adverse impacts to water quality would occur from the operation of Ashokan

[1] Recently completed infrastructure projects include the Catskill and Delaware Interconnection at Shaft 4, Catskill Aqueduct Stop Shutter improvements, and the Croton Water filtration Plant. Planned repairs to DEP's Rondout West Branch Tunnel are underway.

Reservoir in accordance with the IRP that would affect public health. The Proposed Action would not result in significant changes to any of the technical areas (e.g., air quality, water quality, hazardous materials or noise) related to public health. The Proposed Action would allow DEP to continue to provide reliable, clean, and safe drinking water, while reducing future reliance on alum application during episodic turbidity events. Therefore, the Proposed Action is not anticipated to cause significant adverse impacts to public health.

10. CUMULATIVE IMPACTS

Cumulative impacts are two or more individual effects on the environment that, when taken together, are significant or that compound or increase other environmental effects. Cumulative impacts can result from a single action or multiple actions, including individually minor but collectively significant actions that take place over time. They may include indirect or secondary impacts, long-term impacts, and synergistic effects.

As discussed in Section 7, "Potential Impacts and Benefits of the Proposed Action on Lower Esopus Creek," no significant adverse impacts would occur from operation of Ashokan Reservoir in accordance with the IRP. Additionally, DEP has consulted the municipalities within the study area and Ulster County, and has not been informed of upcoming new projects within the study area that would affect the in-creek conditions of lower Esopus Creek; therefore, no cumulative impacts are anticipated.

As described in Section 8, "Proposed Action in the Kensico Reservoir Study Area," DEP will be implementing its Kensico-Eastview Connection (KEC) Project at Kensico Reservoir in the future. The KEC Project will construct a new tunnel between Kensico Reservoir and the Catskill-Delaware Ultraviolet (UV) Disinfection Facility. Completion of the KEC Project is included as a required predecessor project in a separate May 2019 Hillview Reservoir Consent Decree and Judgment among the City, United States, and New York State, which requires DEP to cover Hillview Reservoir in compliance with the Long Term 2 Enhanced Surface Water Treatment Rule. The KEC Project would involve multiple elements, including work within and adjacent to Kensico Reservoir. These activities would all occur south and west of the proposed dewatering site and alum floc deposition area associated with dredging in the future with the Proposed Action. KEC Project efforts could potentially overlap with the potential dredging in the CATIC Cove in Kensico Reservoir in the future with the Proposed Action. KEC Project efforts would be the subject of a separate environmental review.

The Proposed Action involves the delay of dredging alum floc associated with the application of alum since 2005 and in accordance with the Water for the Future Alum Treatment Plan, as well as an assessment of potential environmental considerations associated with this dredging. As the dredging design would be further refined in the future, DEP would consider the need for additional environmental review. This review would include further evaluation of potential cumulative impacts, as needed.

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11. MITIGATION AND UNAVOIDABLE ADVERSE IMPACTS

Based on the assessments conducted in this EIS, the Proposed Action would not result in potential significant adverse impacts. Therefore, no mitigation is being proposed and there are no unavoidable impacts.

12. GROWTH INDUCEMENT

Growth inducement refers to secondary impacts, such as increases in population or business activity that would result from a proposed project.

The Proposed Action is not anticipated to result in any secondary impacts; therefore, no growth inducement is anticipated.

13. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Action would not require the construction of any new facilities. Natural resources, including water resources and habitats, would be preserved. Therefore, the Proposed Action would not result in irreversible or irretrievable impacts to resources.

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