Modeling Results Supporting Chapter 5 – Fisheries and Aquatic Ecosystems

Upper San Joaquin River Basin Storage Investigation, California

Prepared by:

United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

U.S. Department of the Interior
Bureau of Reclamation

August 2014

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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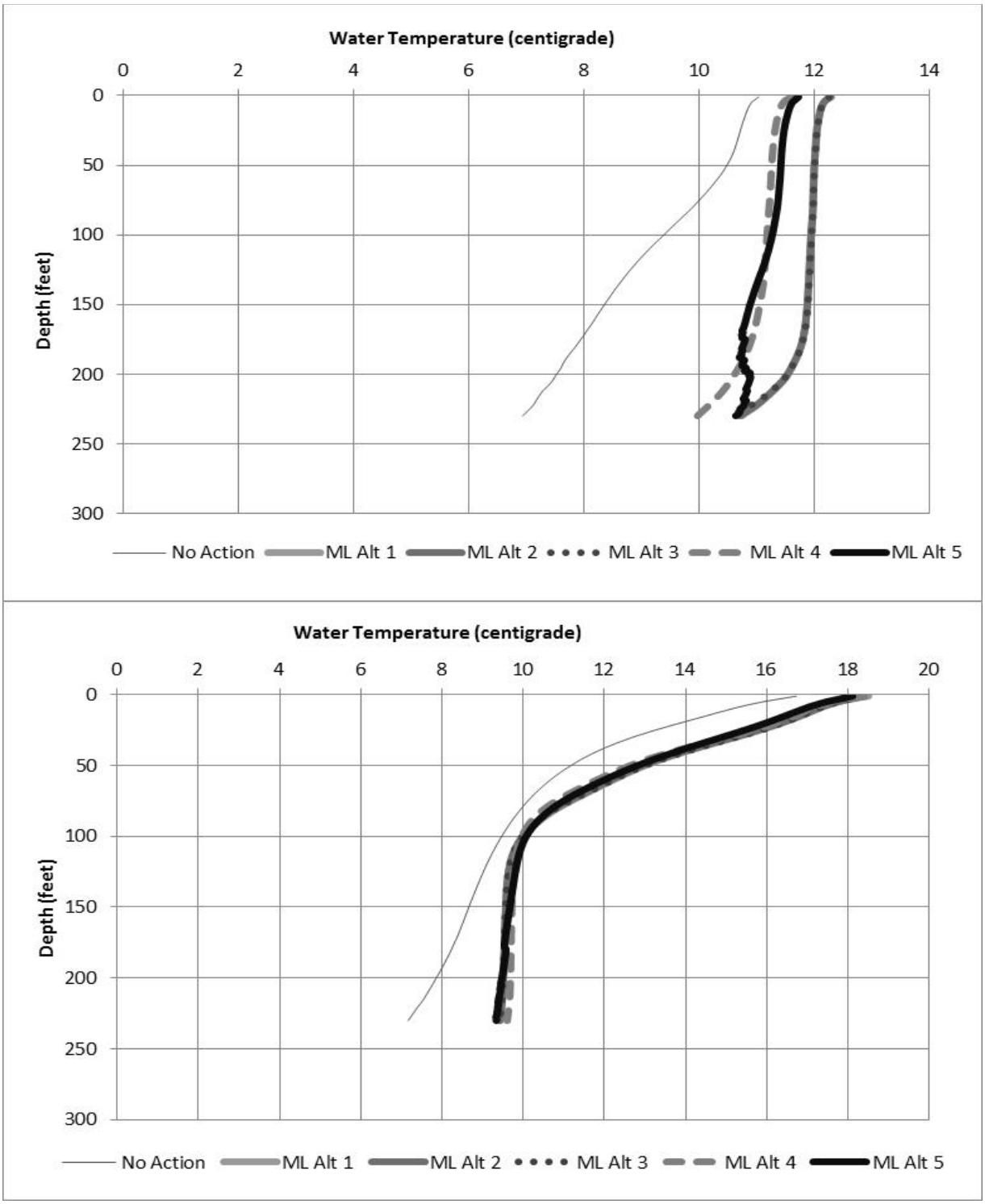
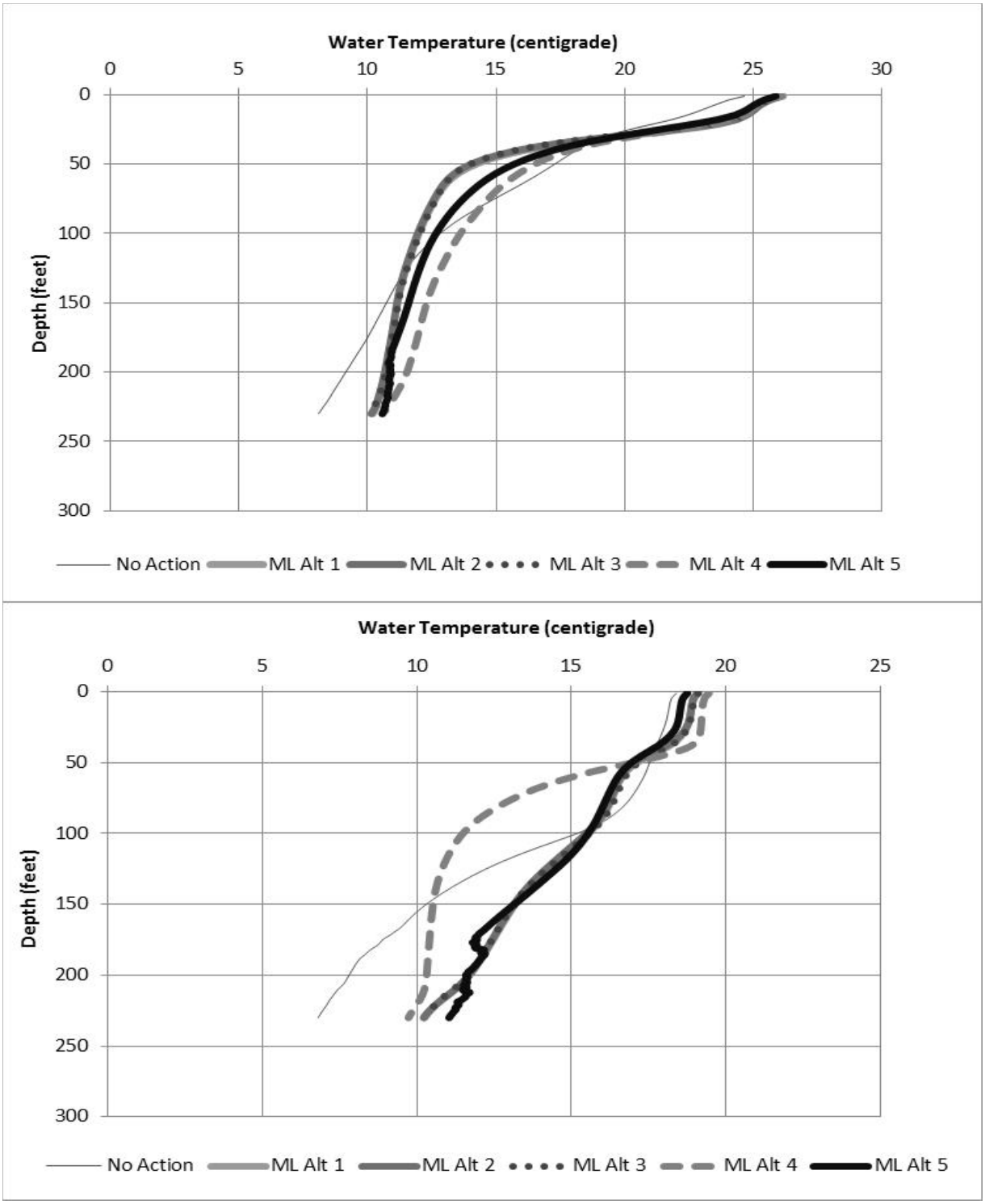


Key:
Alt = Alternative
ML = Millerton Lake

Average January and April Water Temperatures in Millerton Lake Under Existing Conditions (FSH-4)



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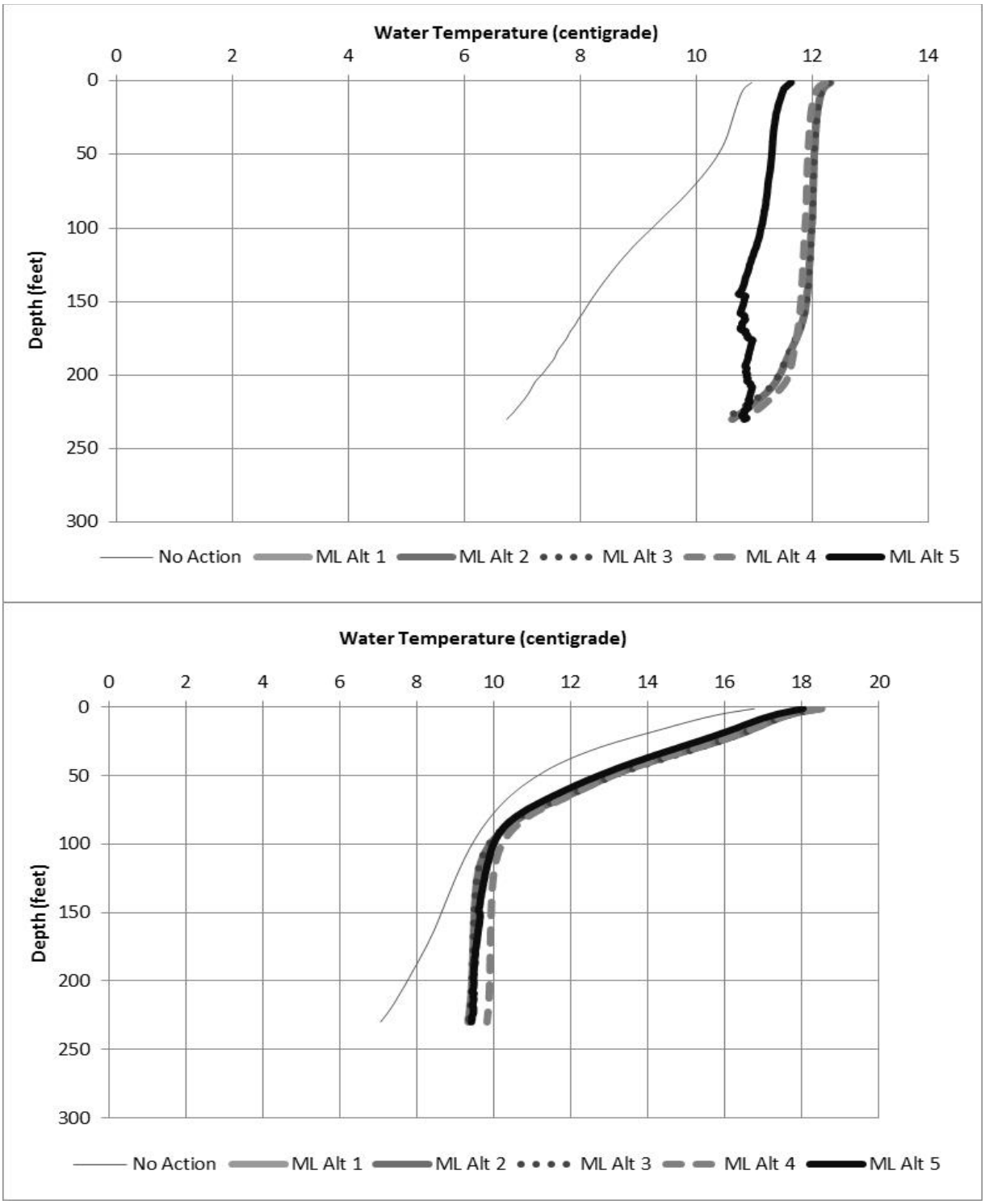

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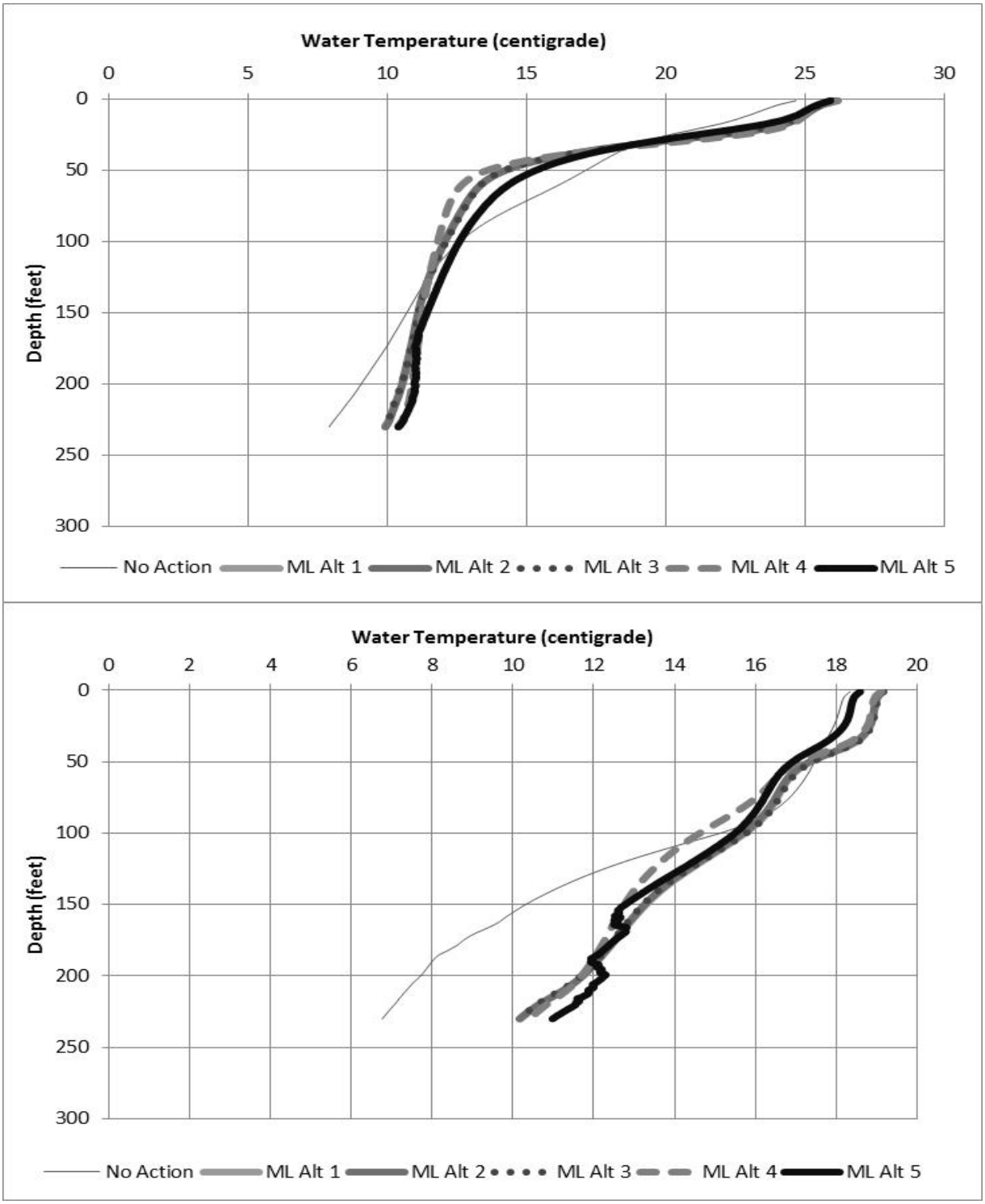

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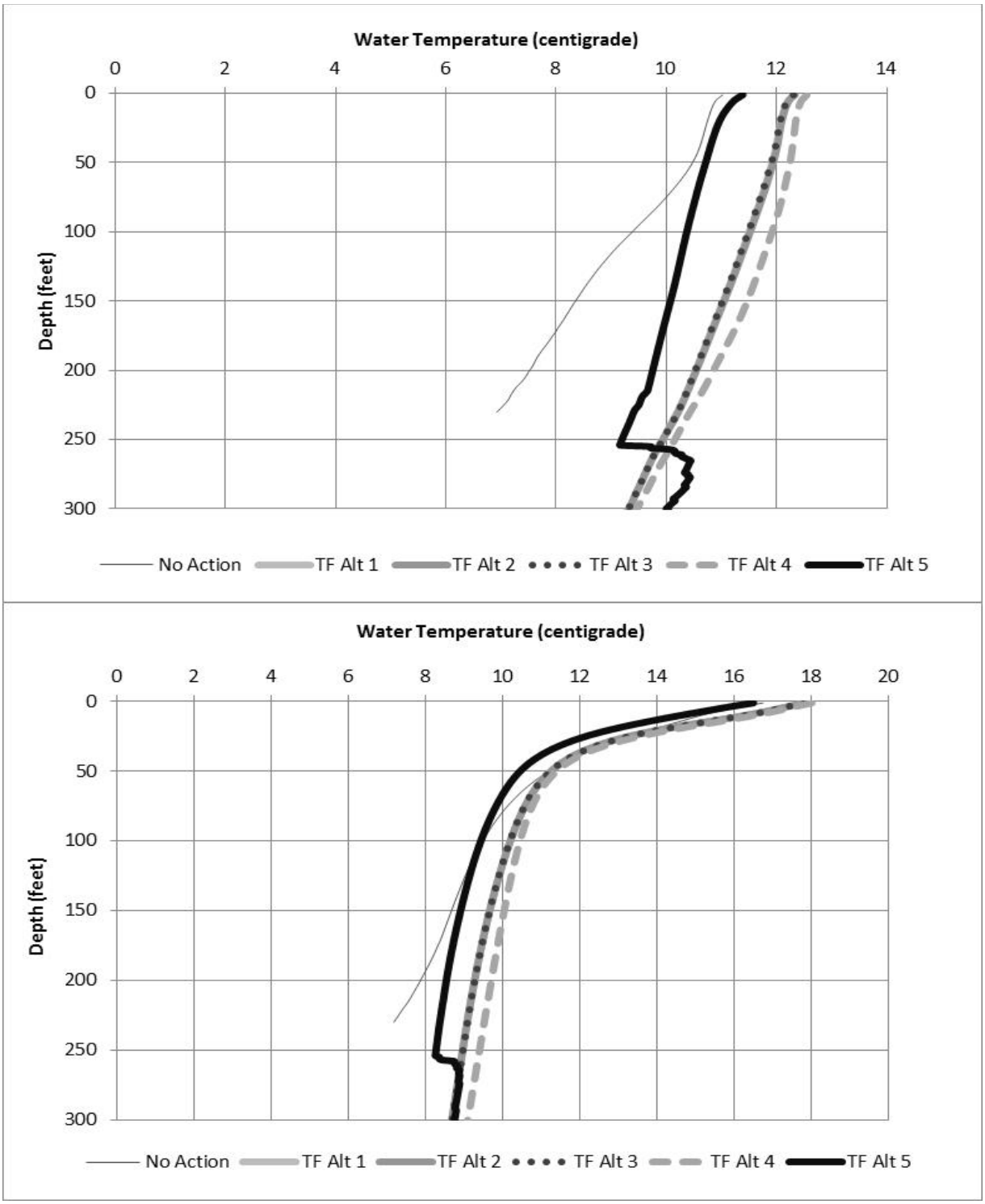

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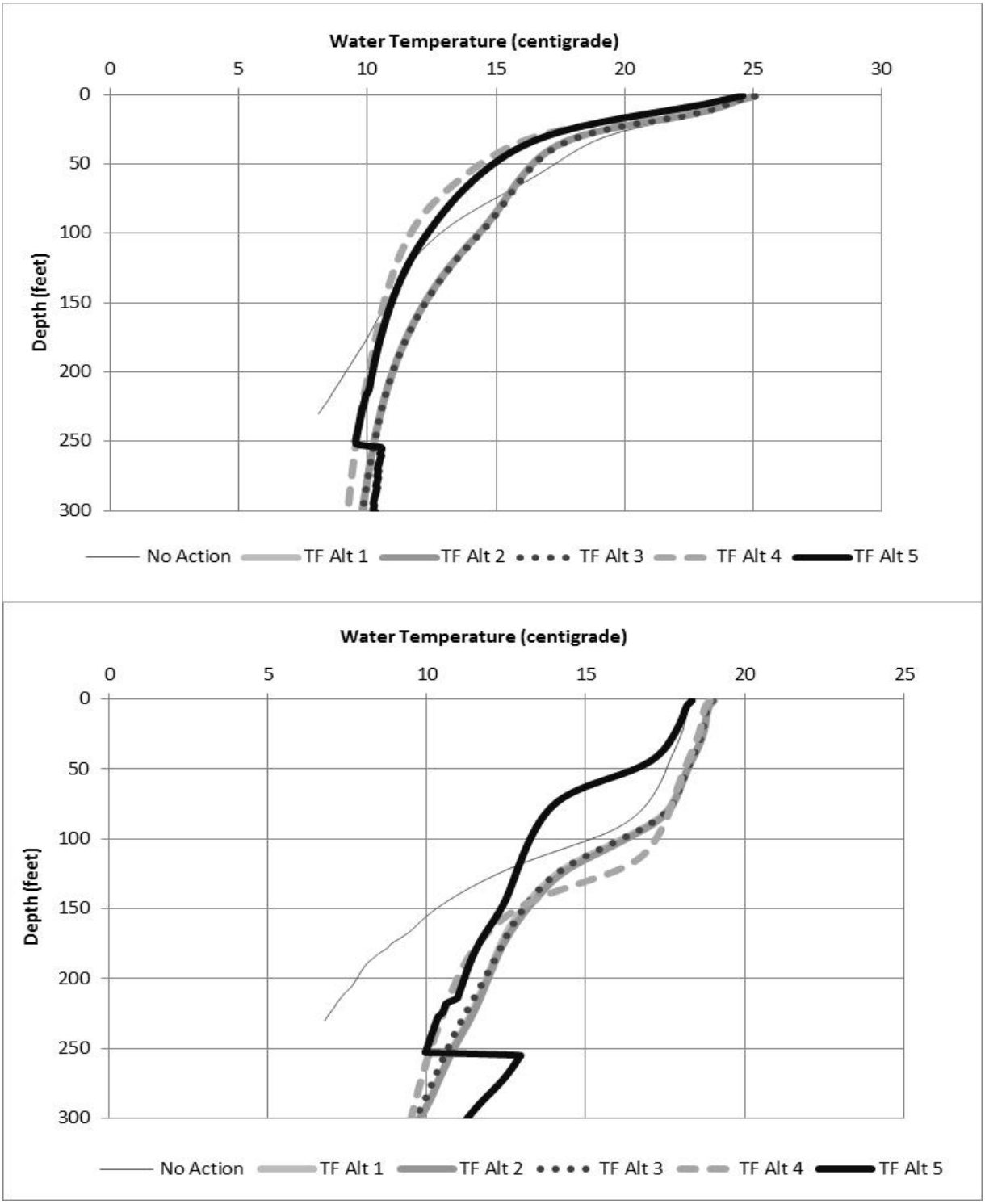

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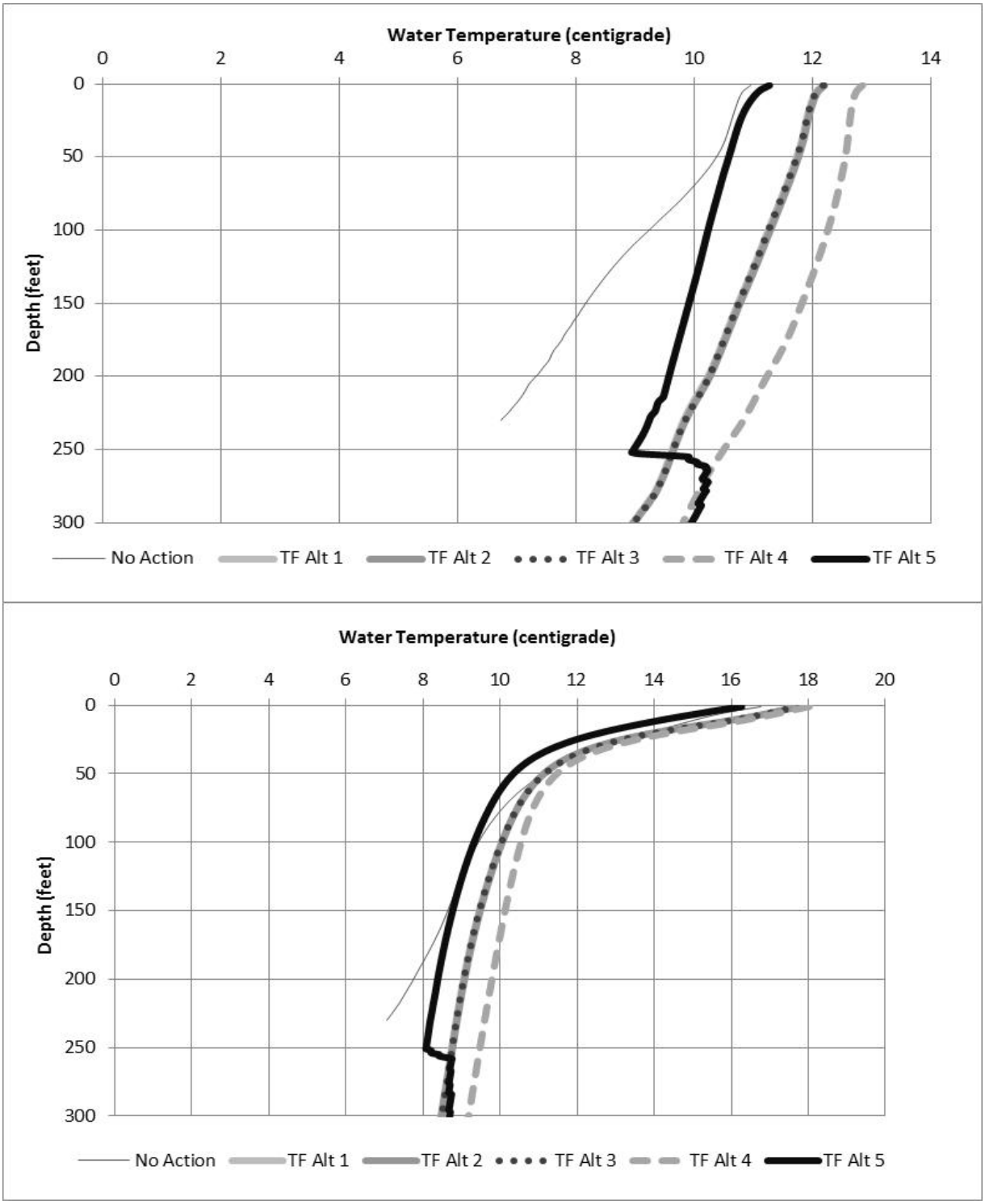

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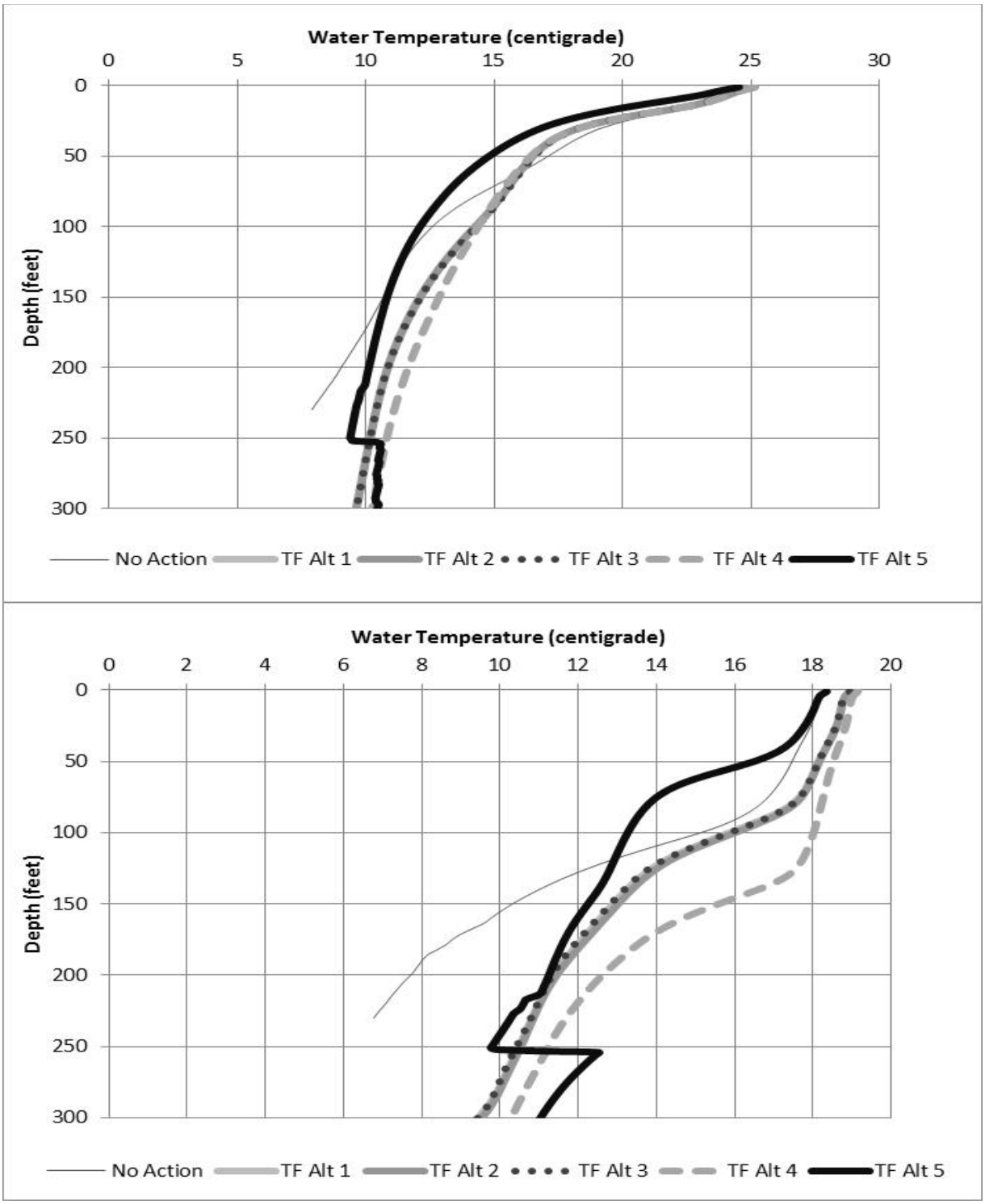

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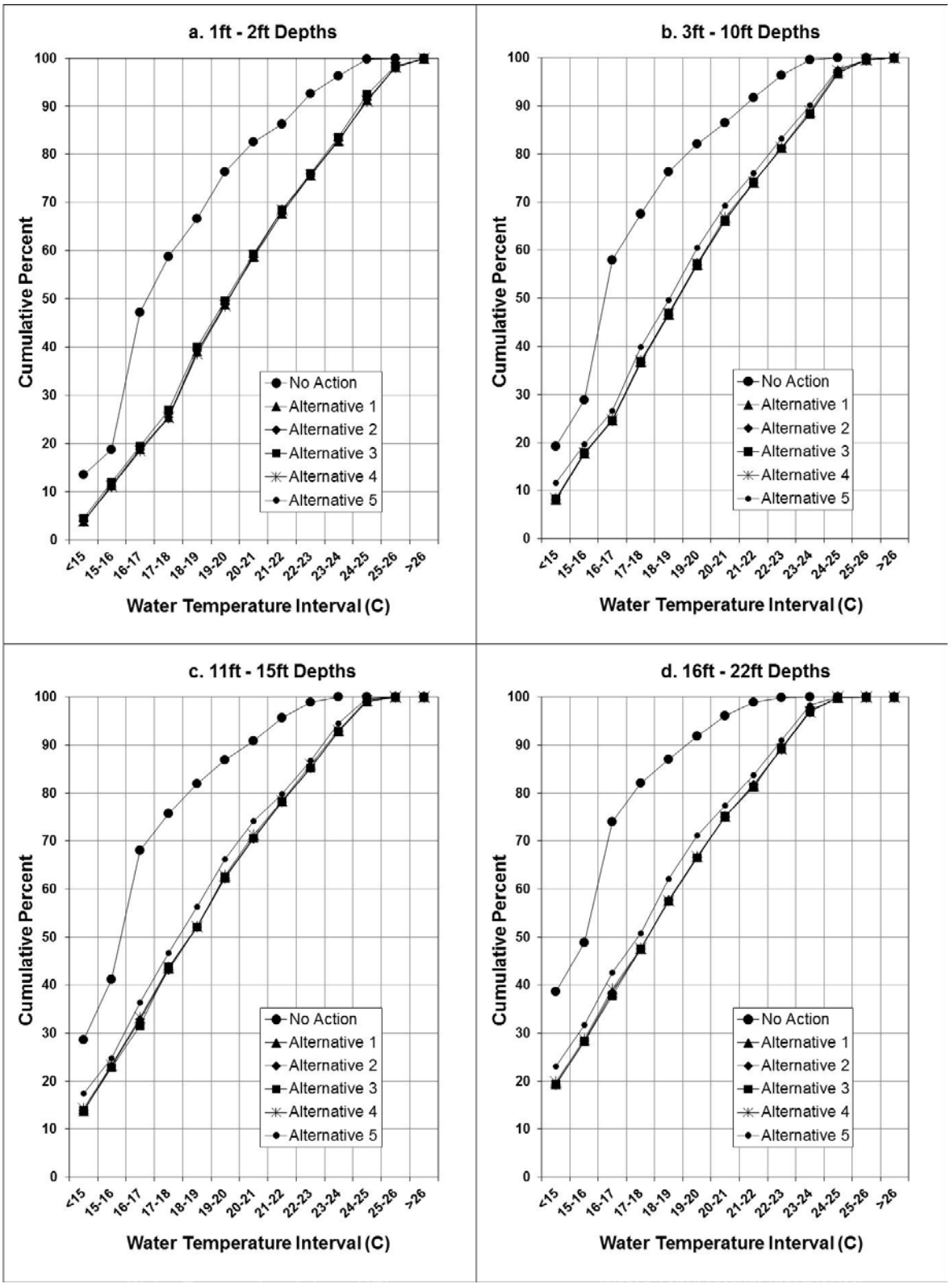
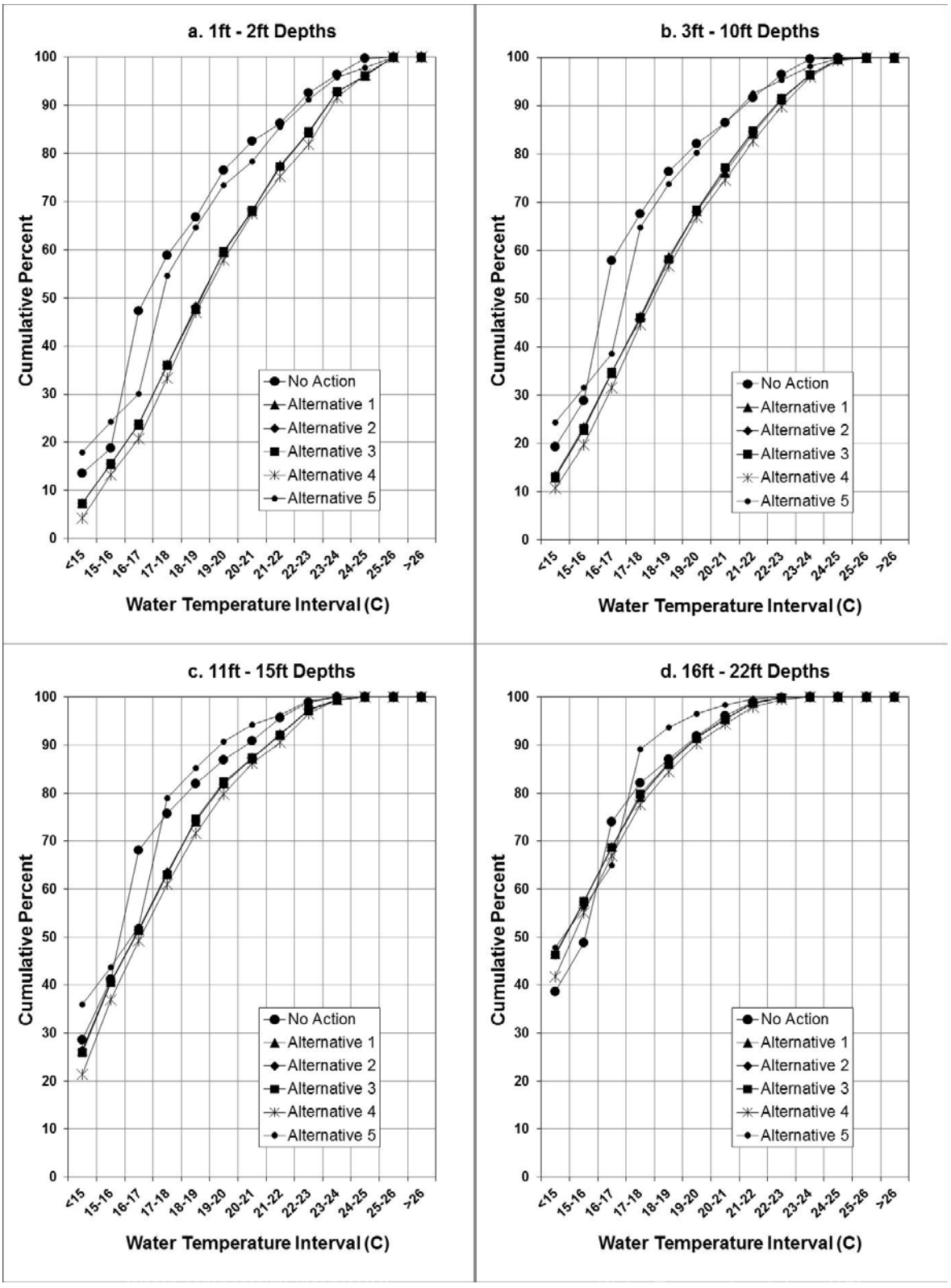


Cumulative Frequency of March Through June Water Temperatures in Millerton Lake Under Future Conditions (FSH-4)



Cumulative Frequency of March Through June Water Temperatures in Millerton Lake and Temperance Flat Reservoir Under Future Conditions (FSH-4)

Reservoir Elevations Figures

Upper San Joaquin River Basin Storage Investigation, California

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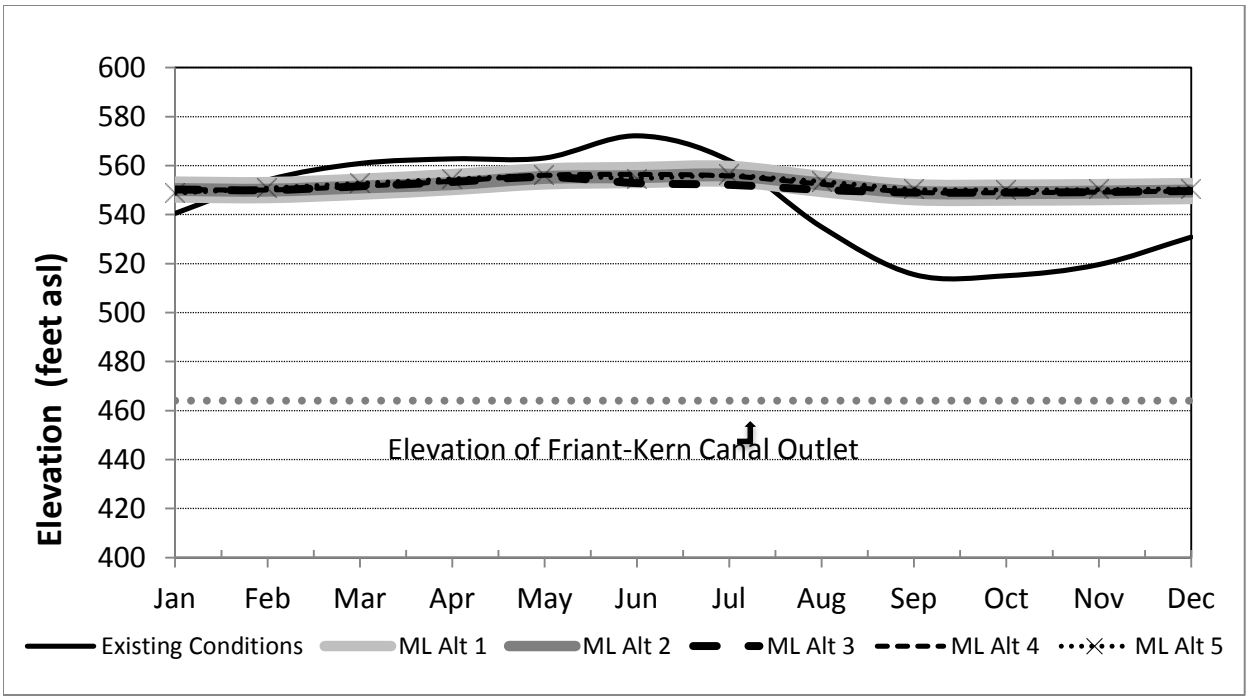
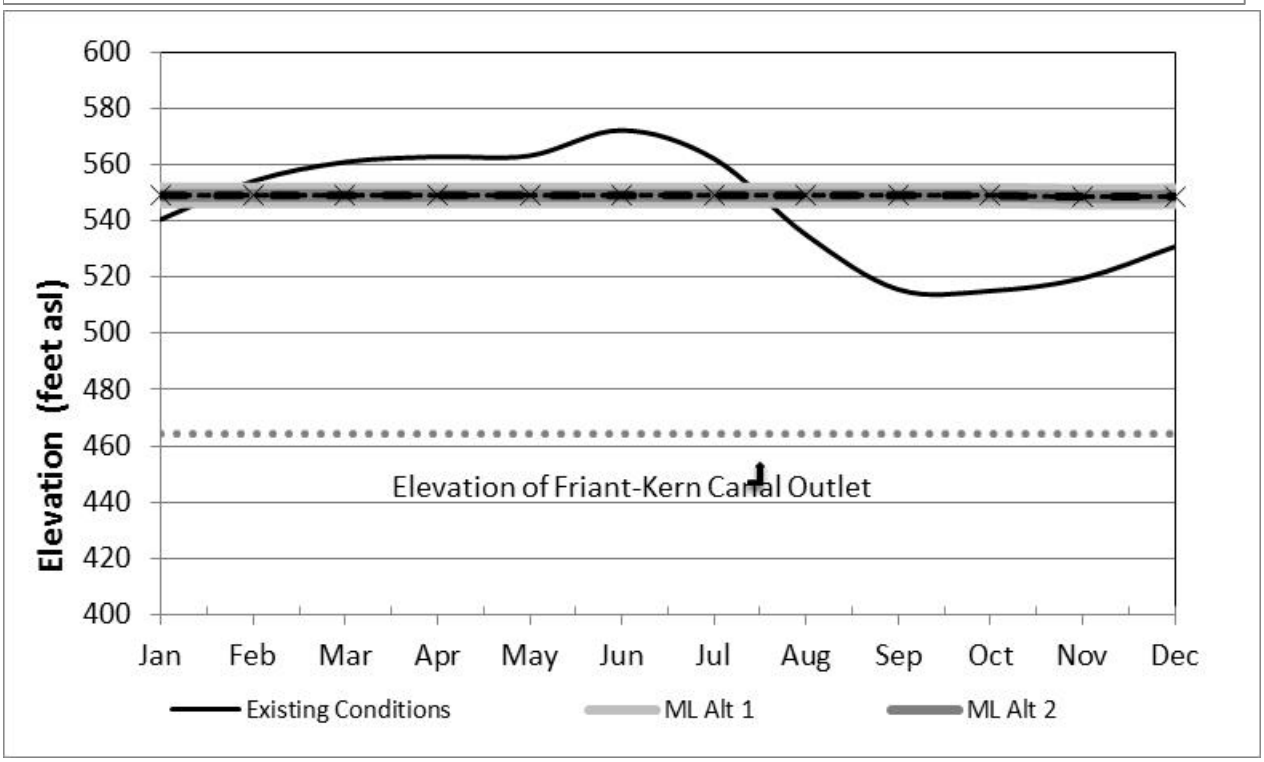
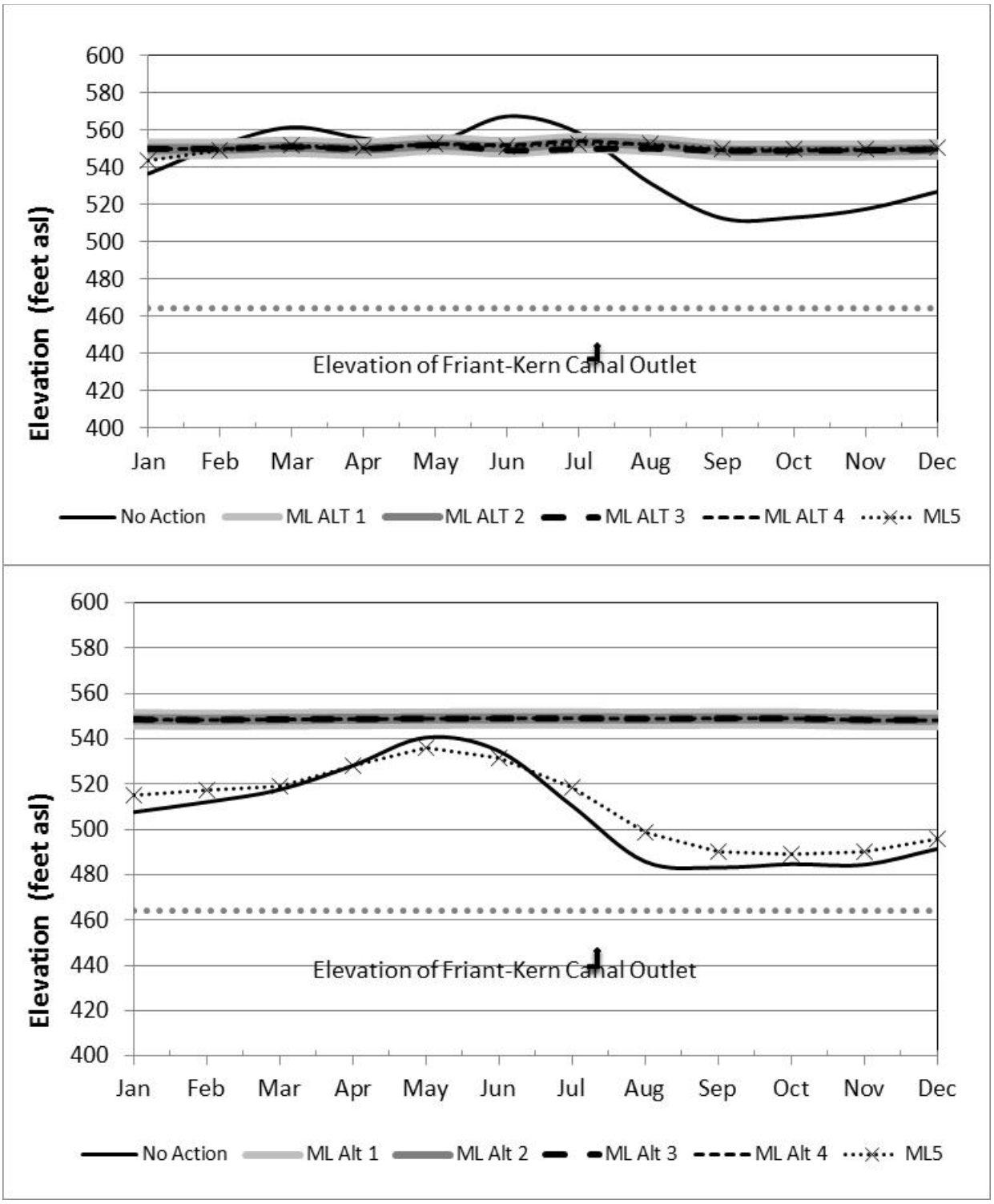




Average Water Surface Elevations of Millerton Lake Relative to the Friant-Kern Canal Outlet Elevation Under Existing Conditions in Wet and Above Normal Years (top) and Dry and Critical Years (bottom) (FSH-6)



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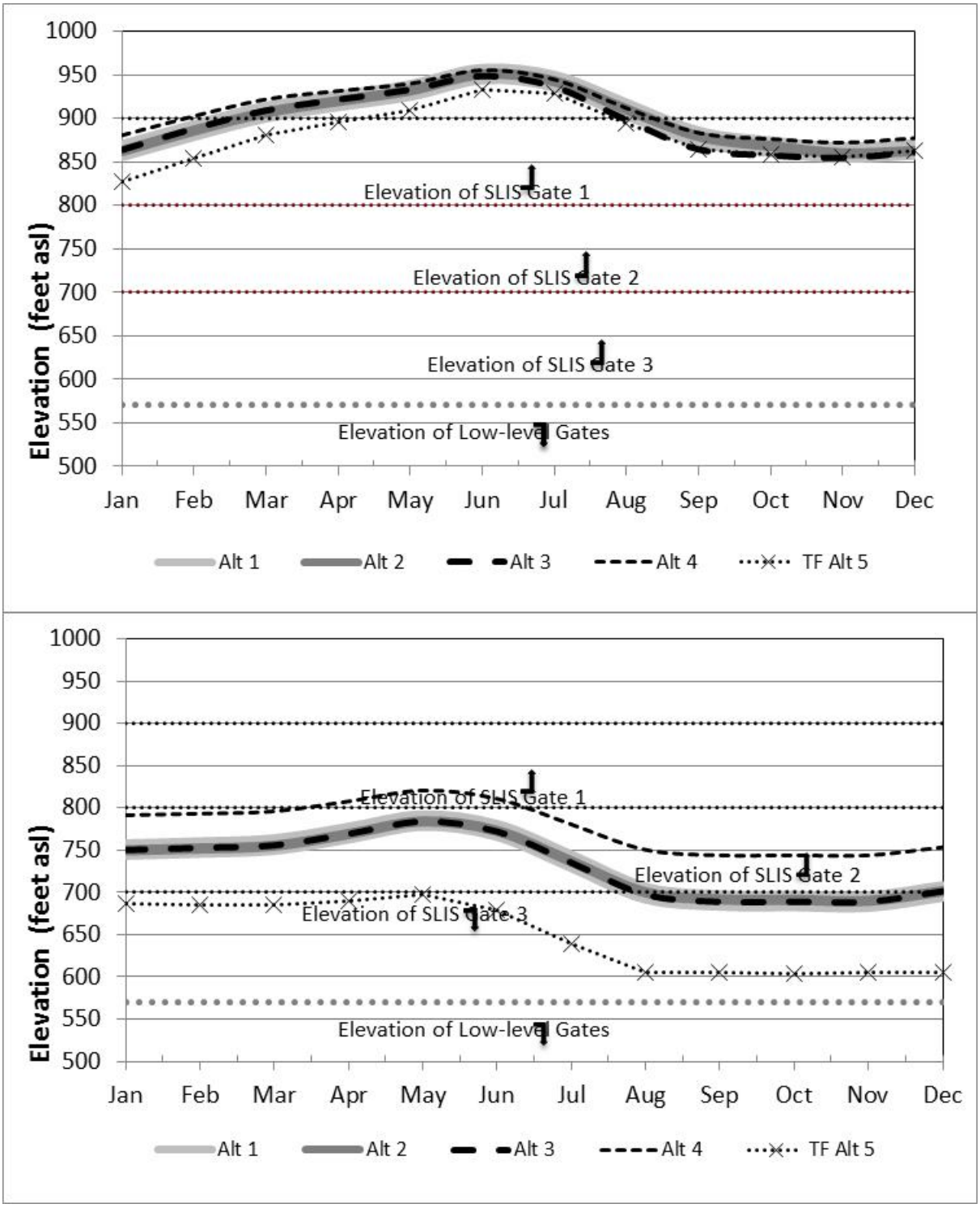
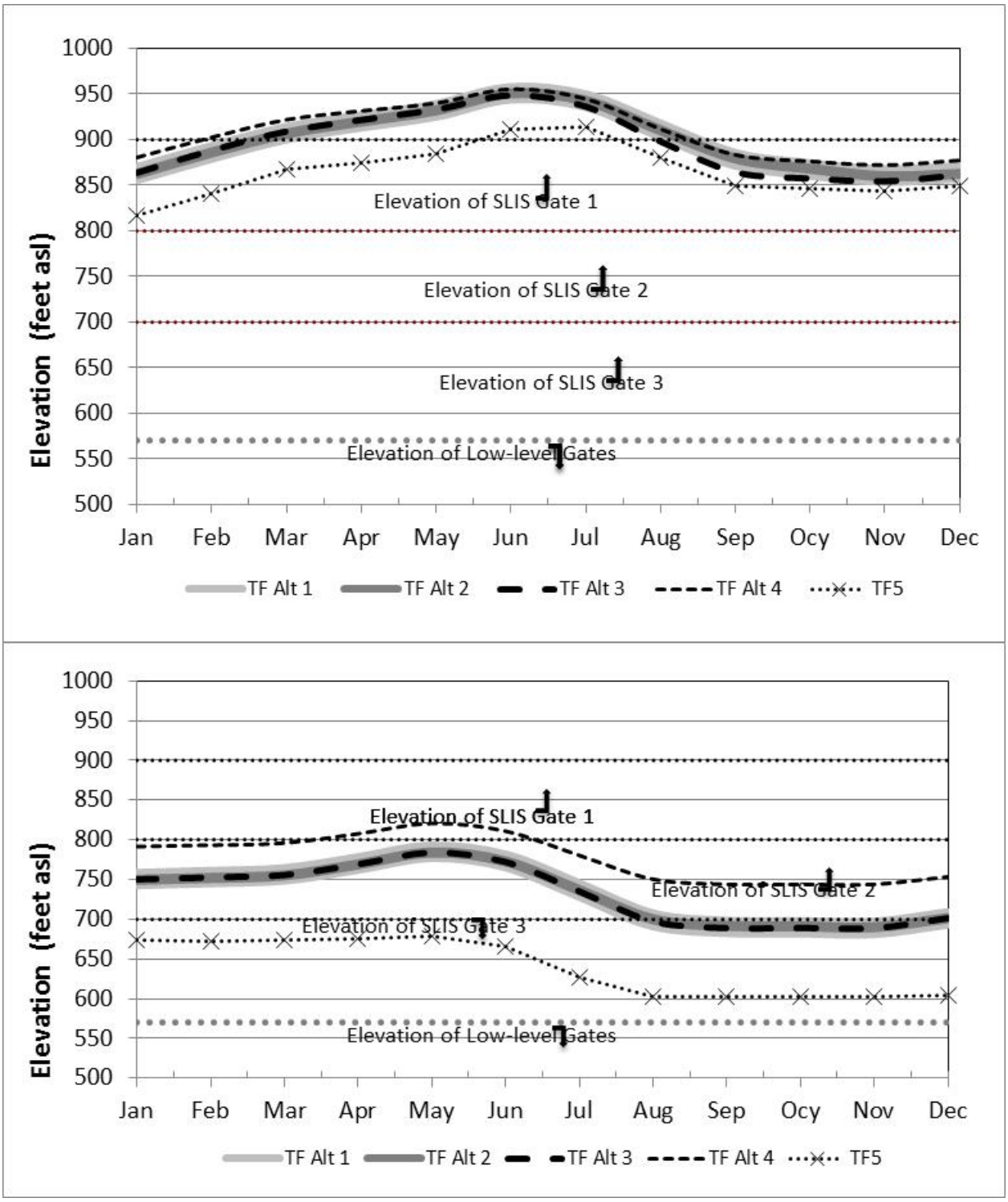


Average Water Surface Elevations of Temperance Flat Reservoir Relative to Selective Level Intake Structure Gate Elevations under Existing Conditions in Wet and Above Normal Years (top) and Dry and Critical Years (bottom) (FSH-6)



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San Joaquin River Temperature Figures

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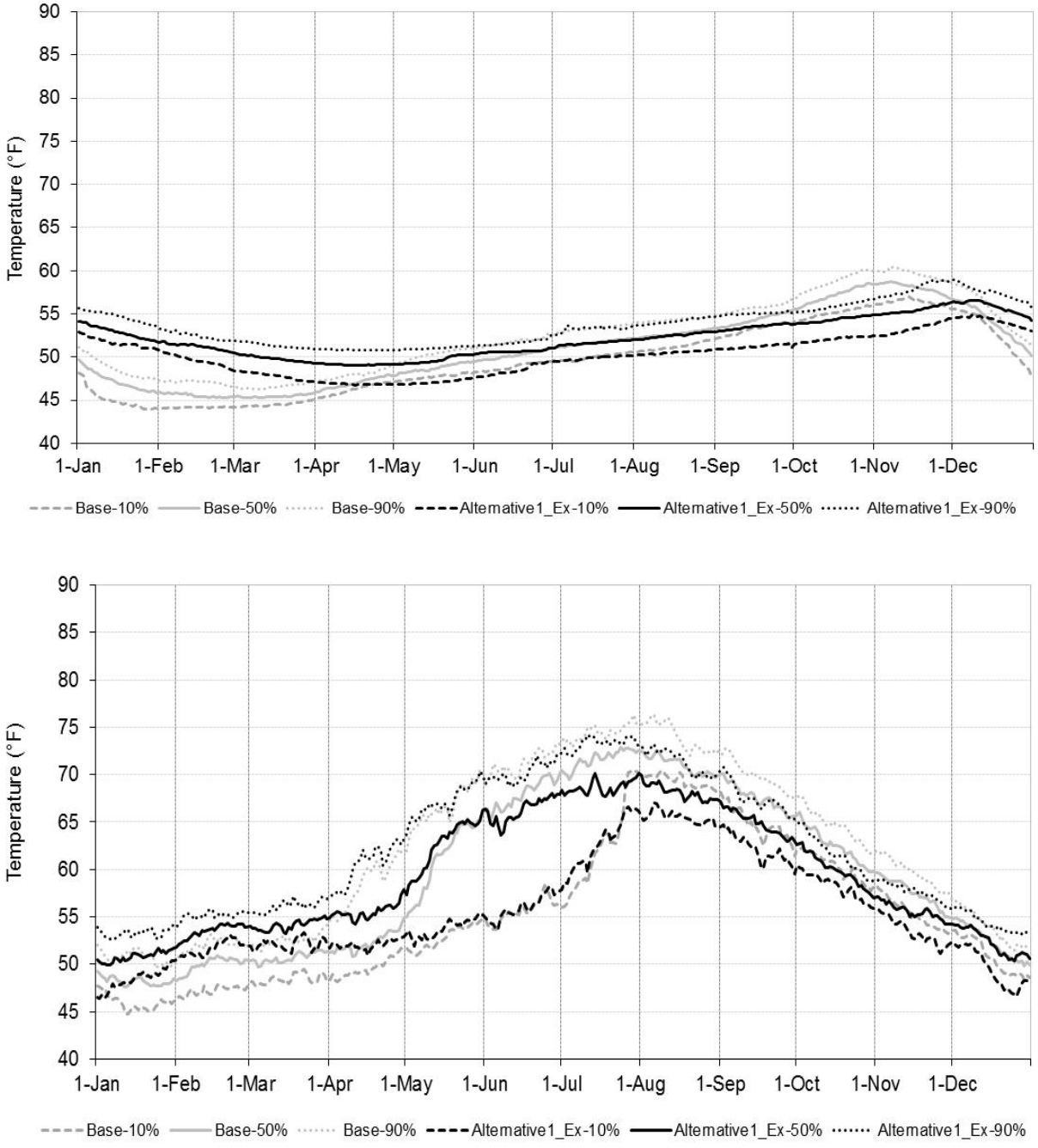
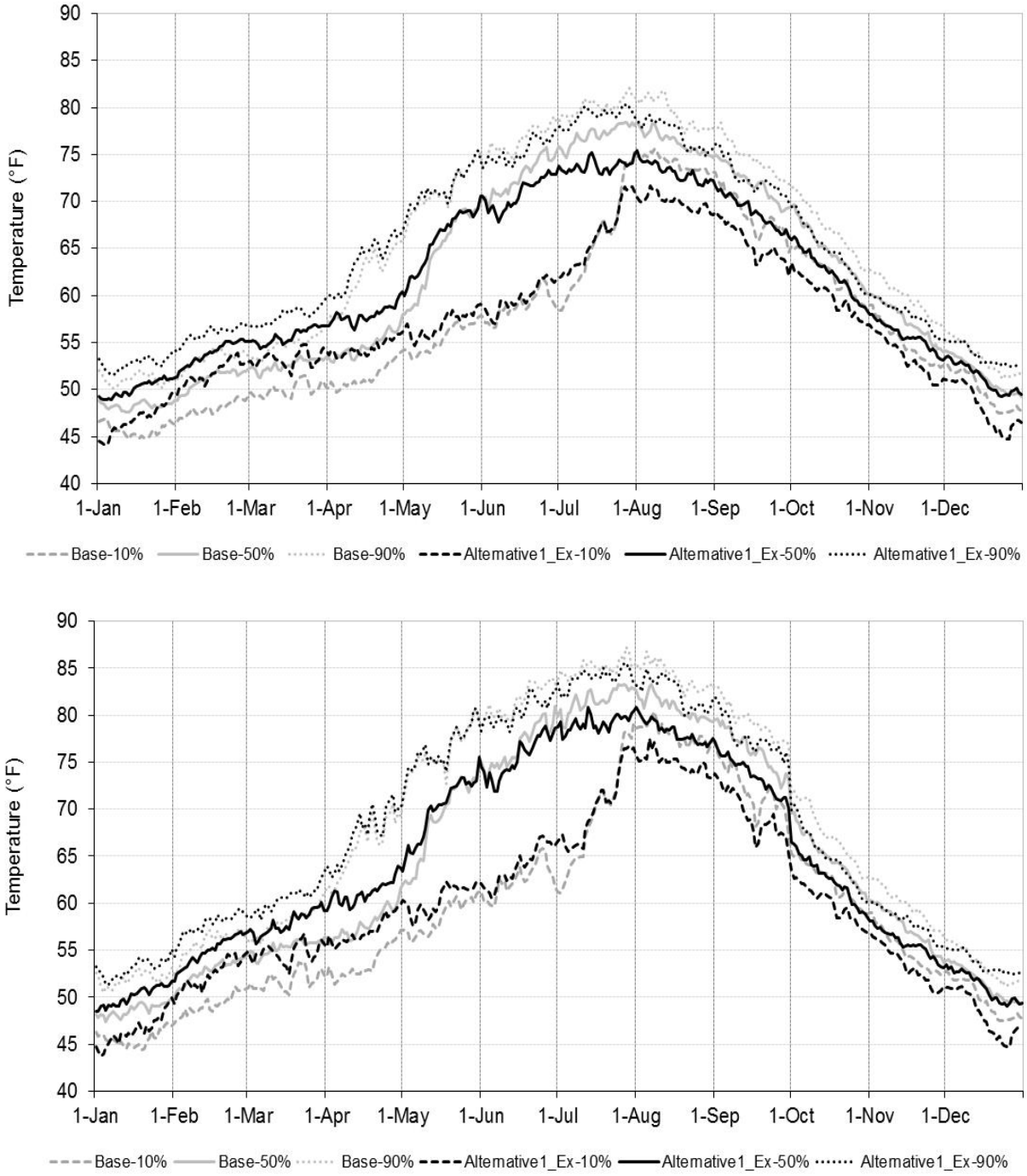


Comparison of Existing Condition Alternative and Alternative 1 Water Temperatures, 10th, 50th and 90th Percentile Distribution Across all Water Year Types for Reaches 1-A (top) and 1-B (bottom). (FSH-11, FSH-12, FSH-13)



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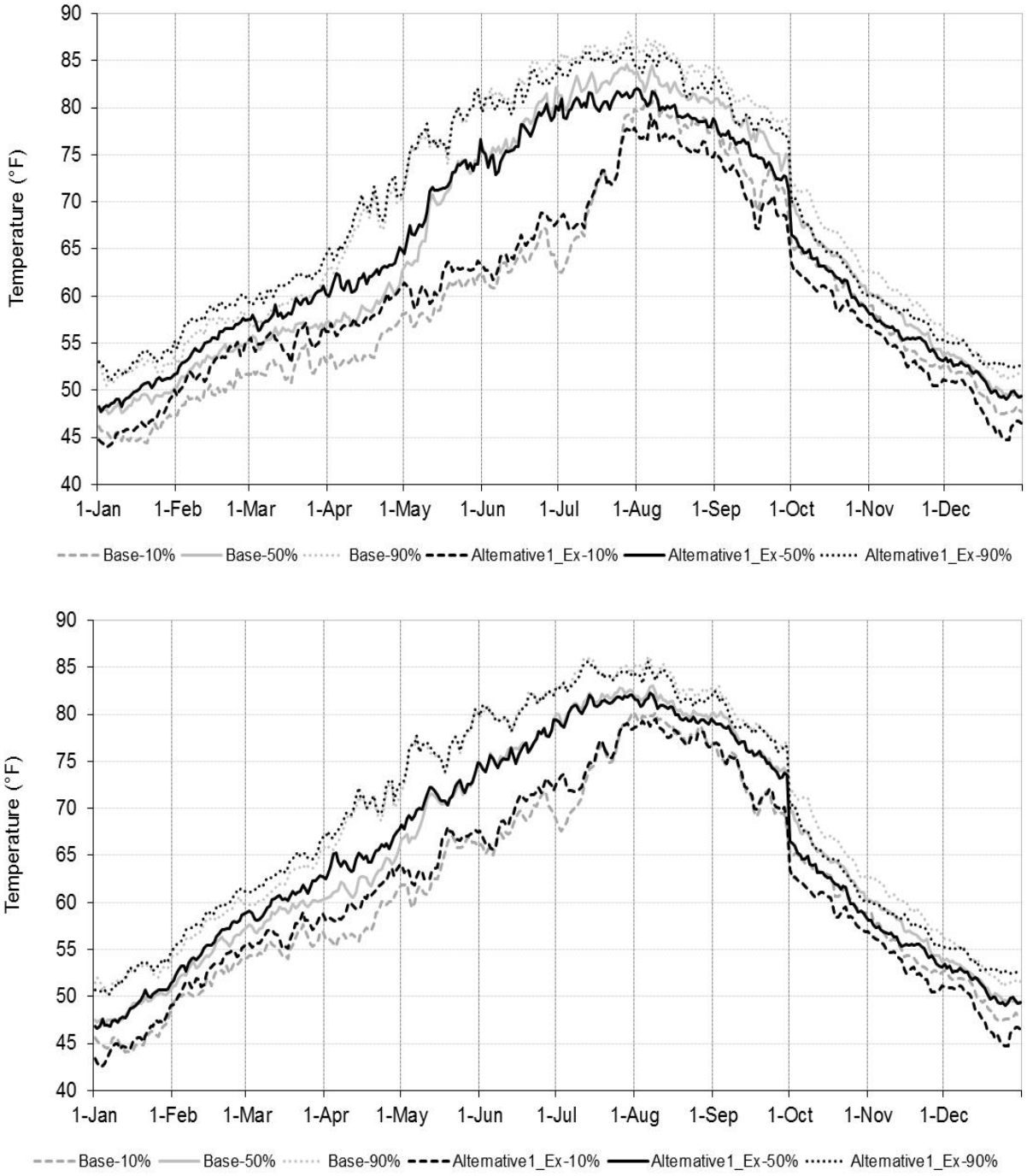

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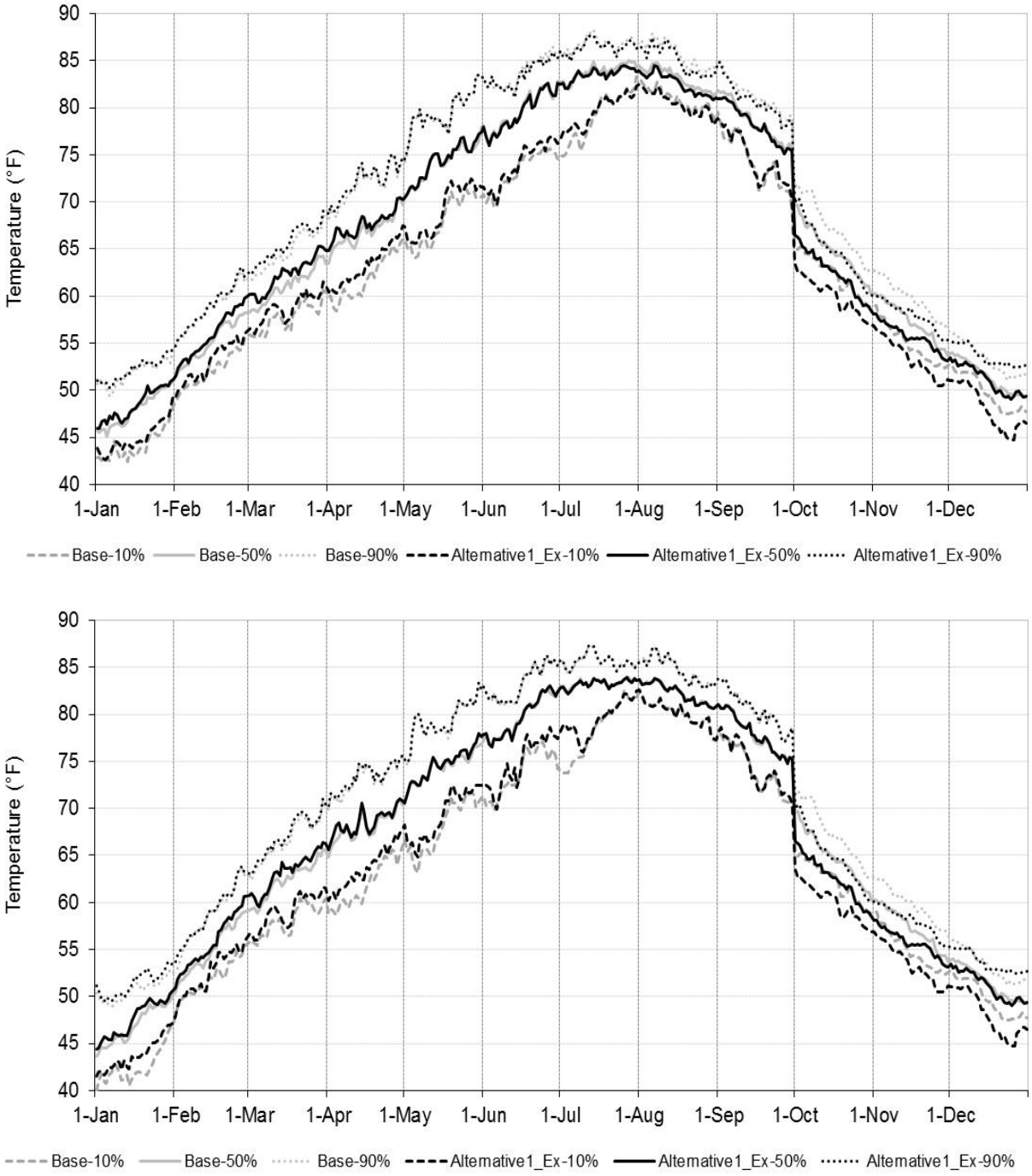

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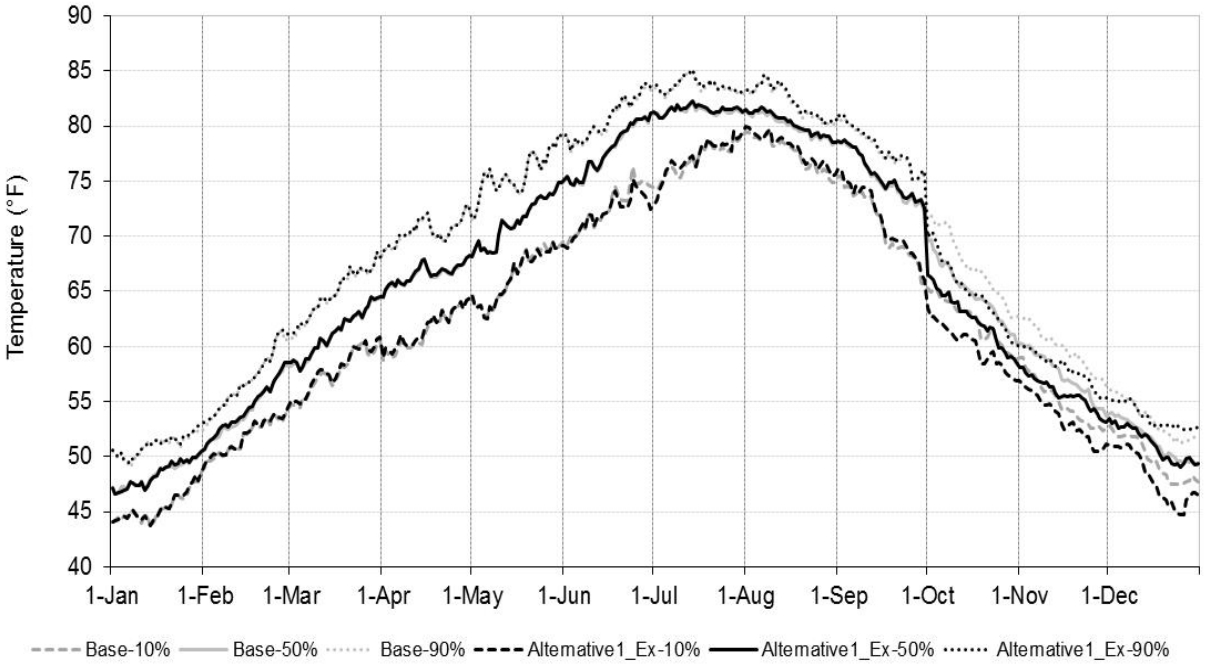

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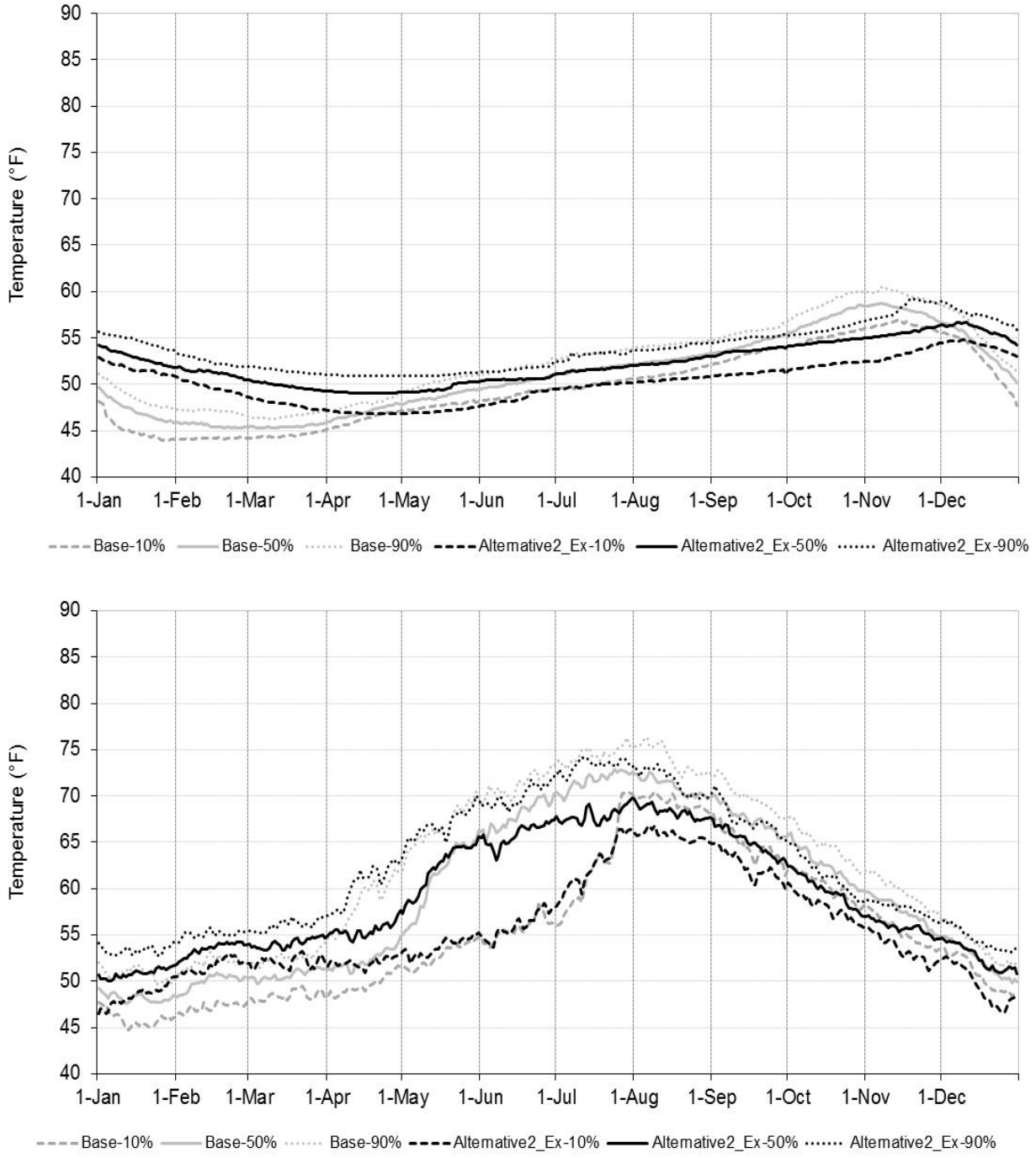
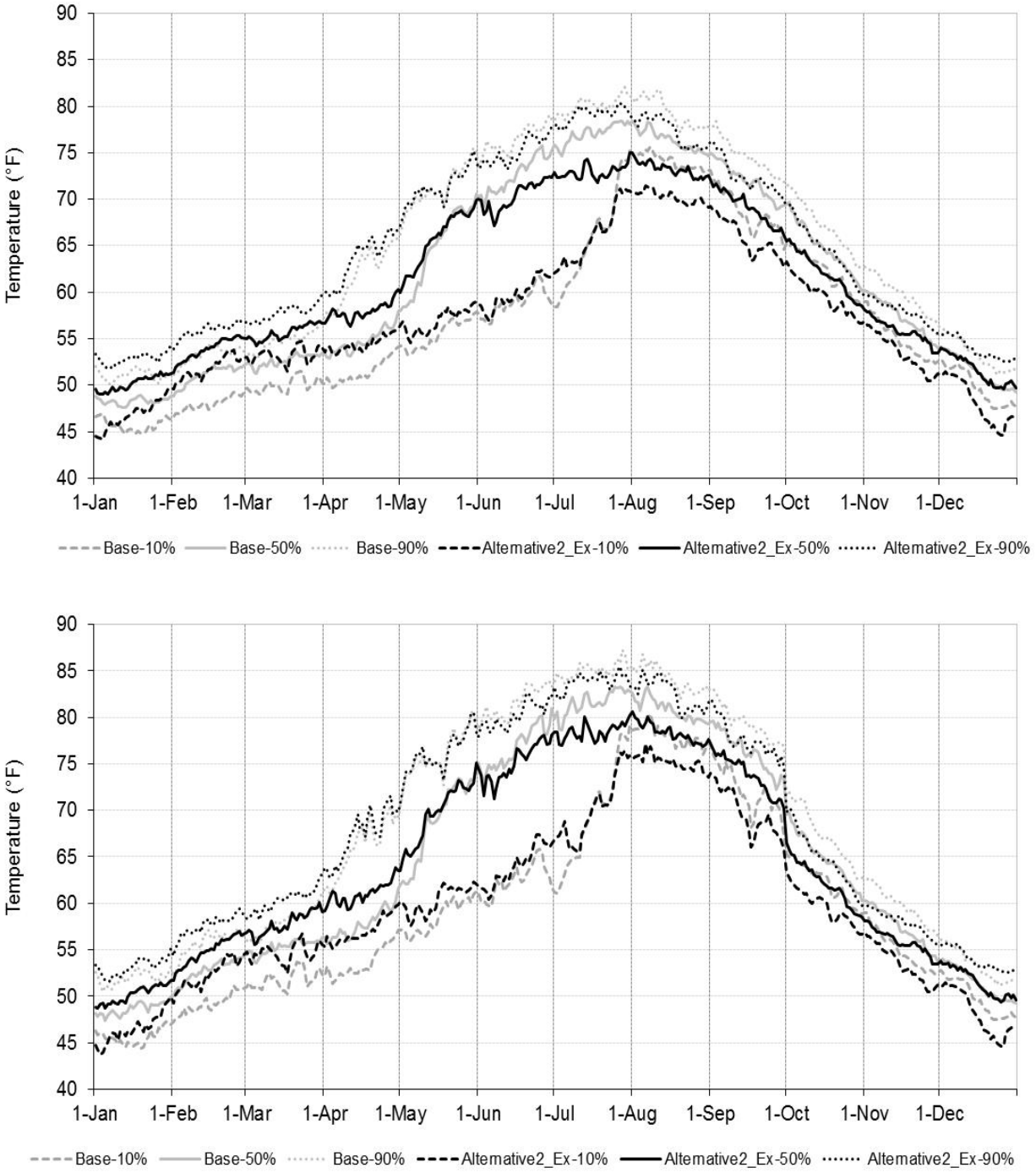


Comparison of Existing Condition Alternative and Alternative 2 Water Temperatures, 10th, 50th and 90th Percentile Distribution Across all Water Year Types for Reaches 1-A (top) and 1-B (bottom). (FSH-11, FSH-12, FSH-13)



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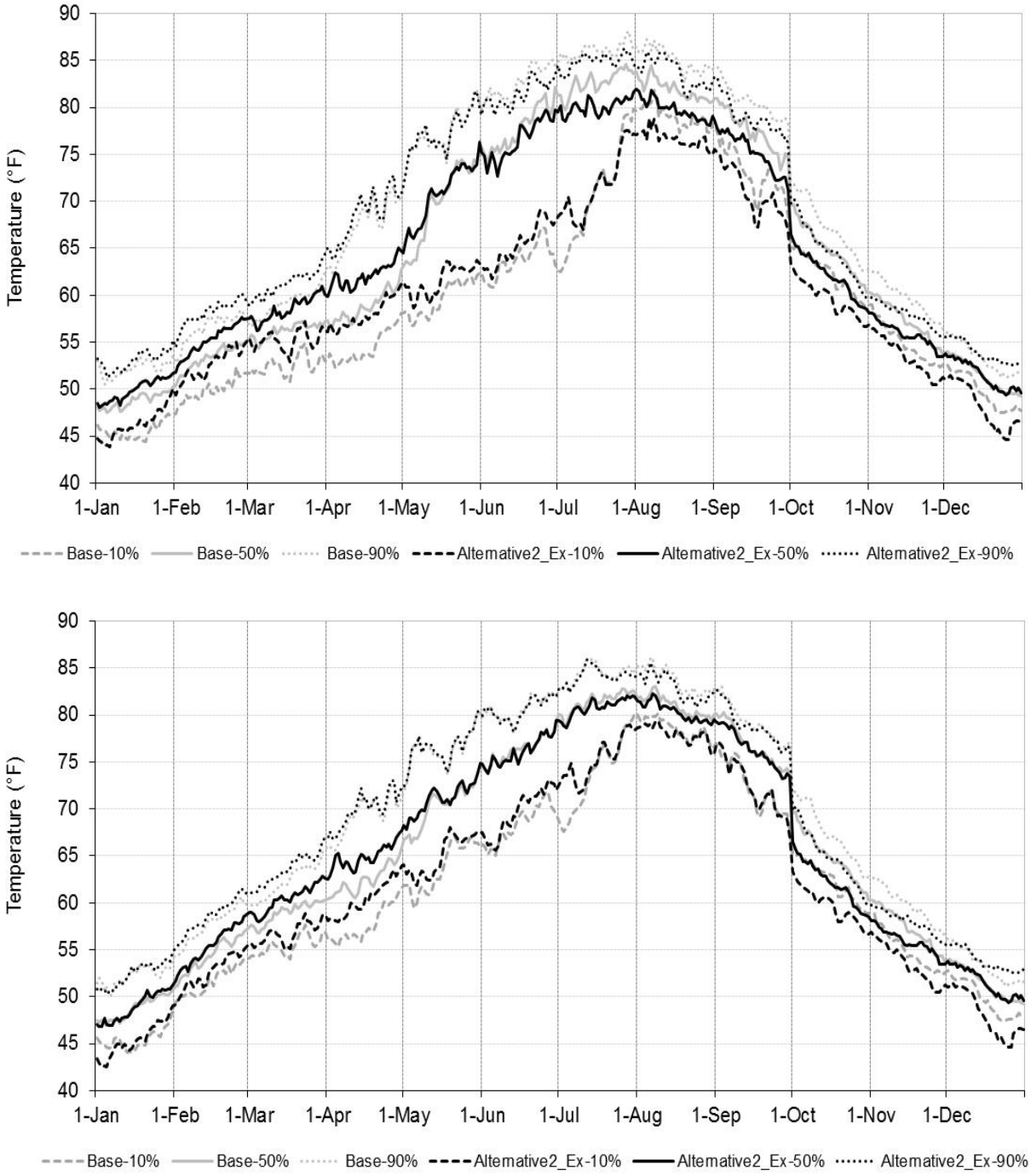

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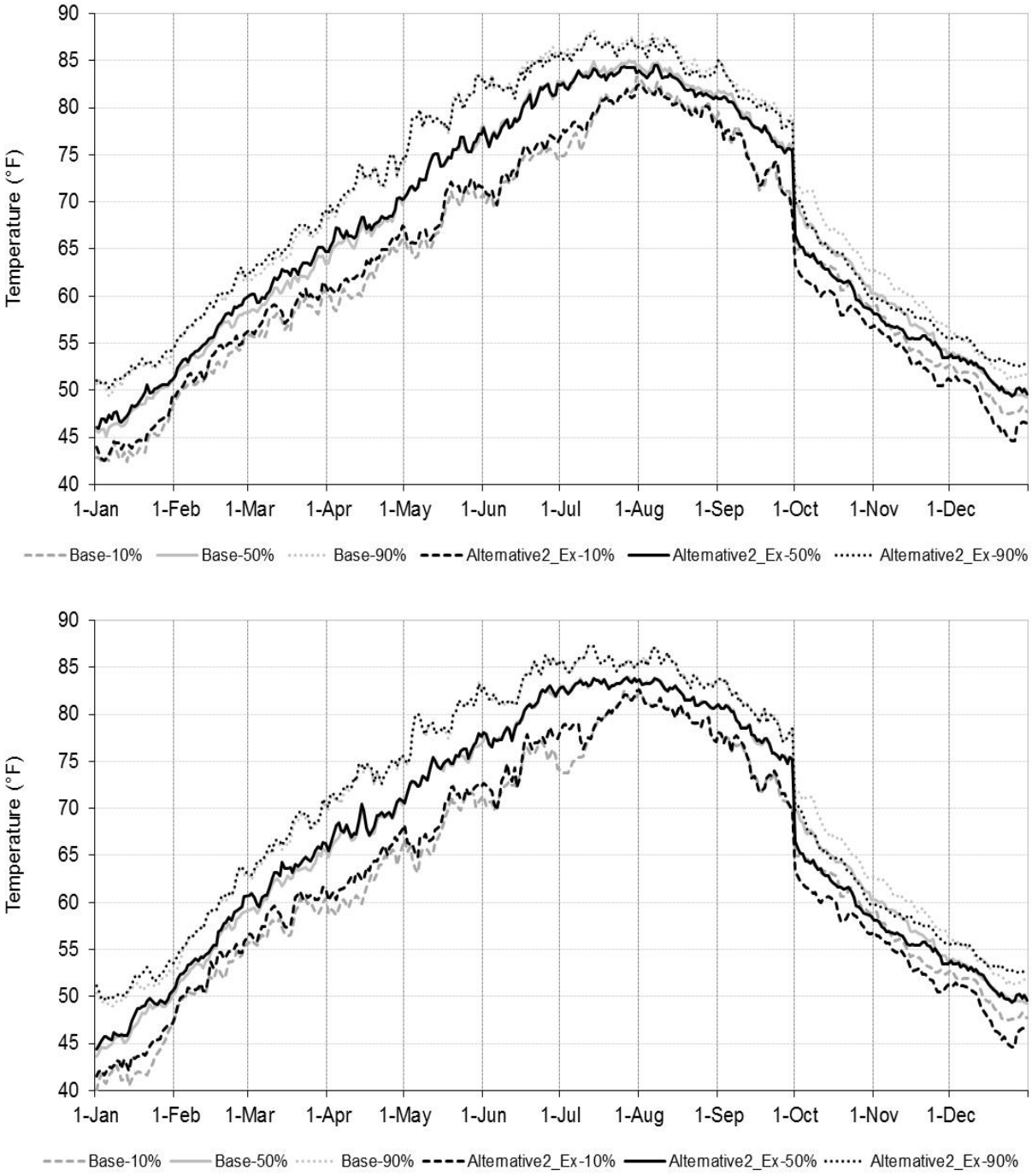

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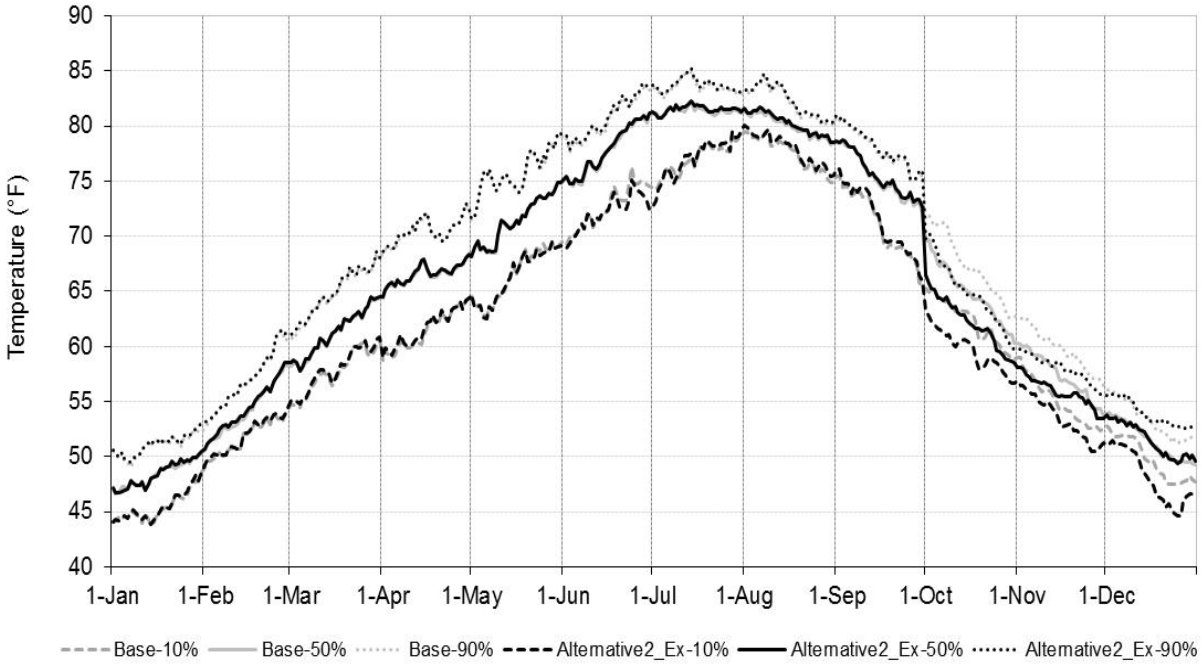

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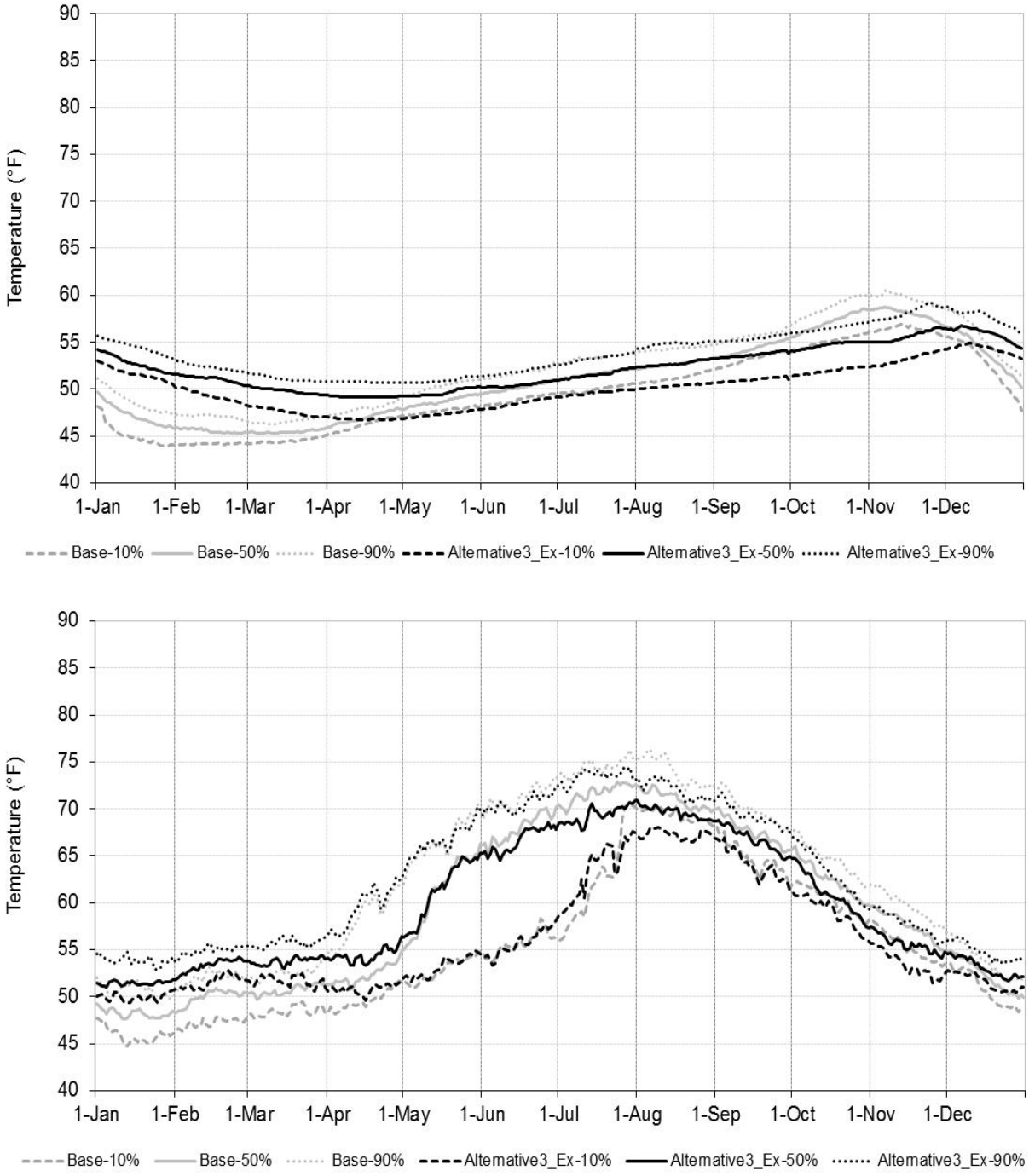
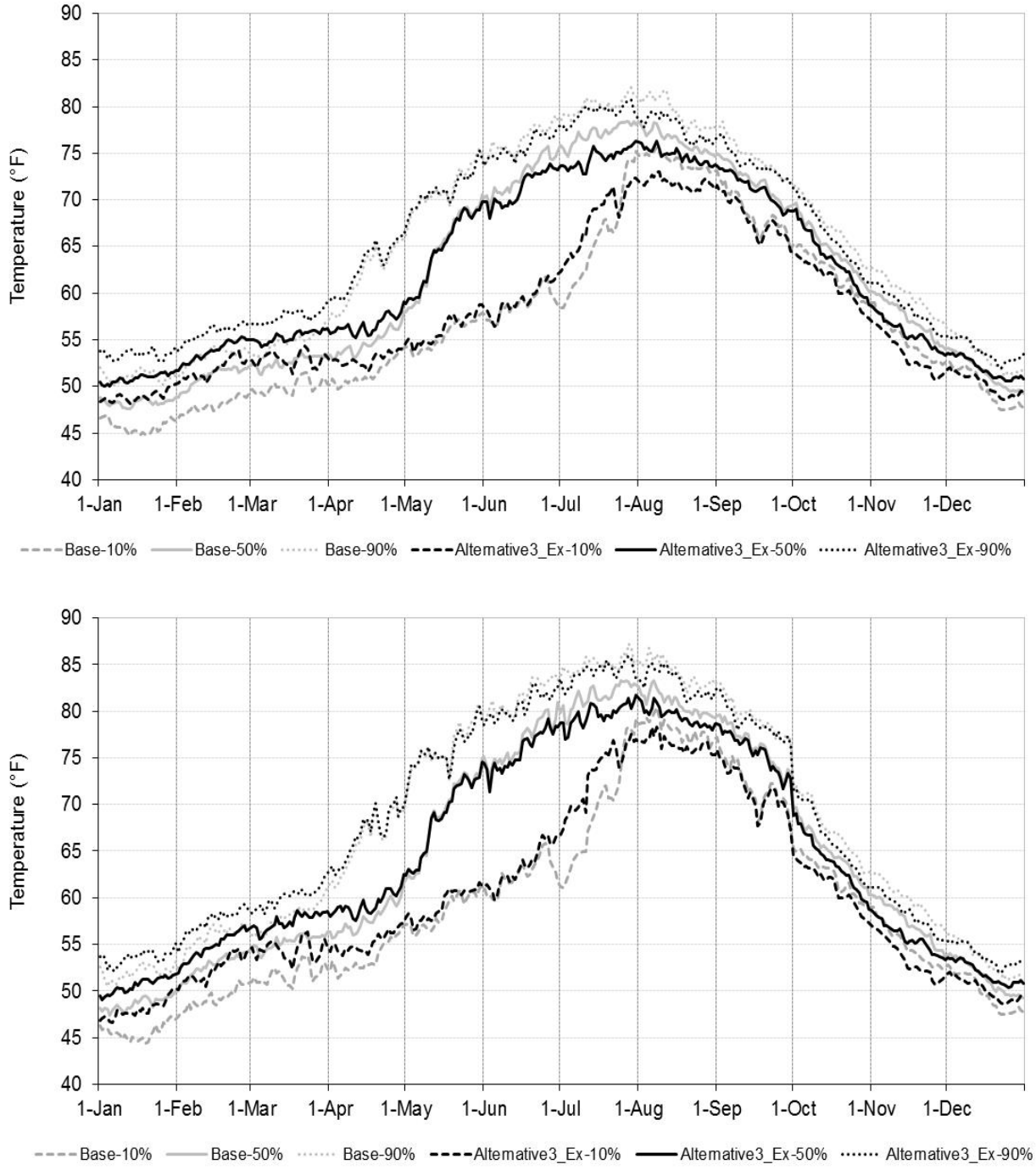


Comparison of Existing Condition Alternative and Alternative 3 Water Temperatures, 10th, 50th and 90th Percentile Distribution Across all Water Year Types for Reaches 1-A (top) and 1-B (bottom). (FSH-11, FSH-12, FSH-13)



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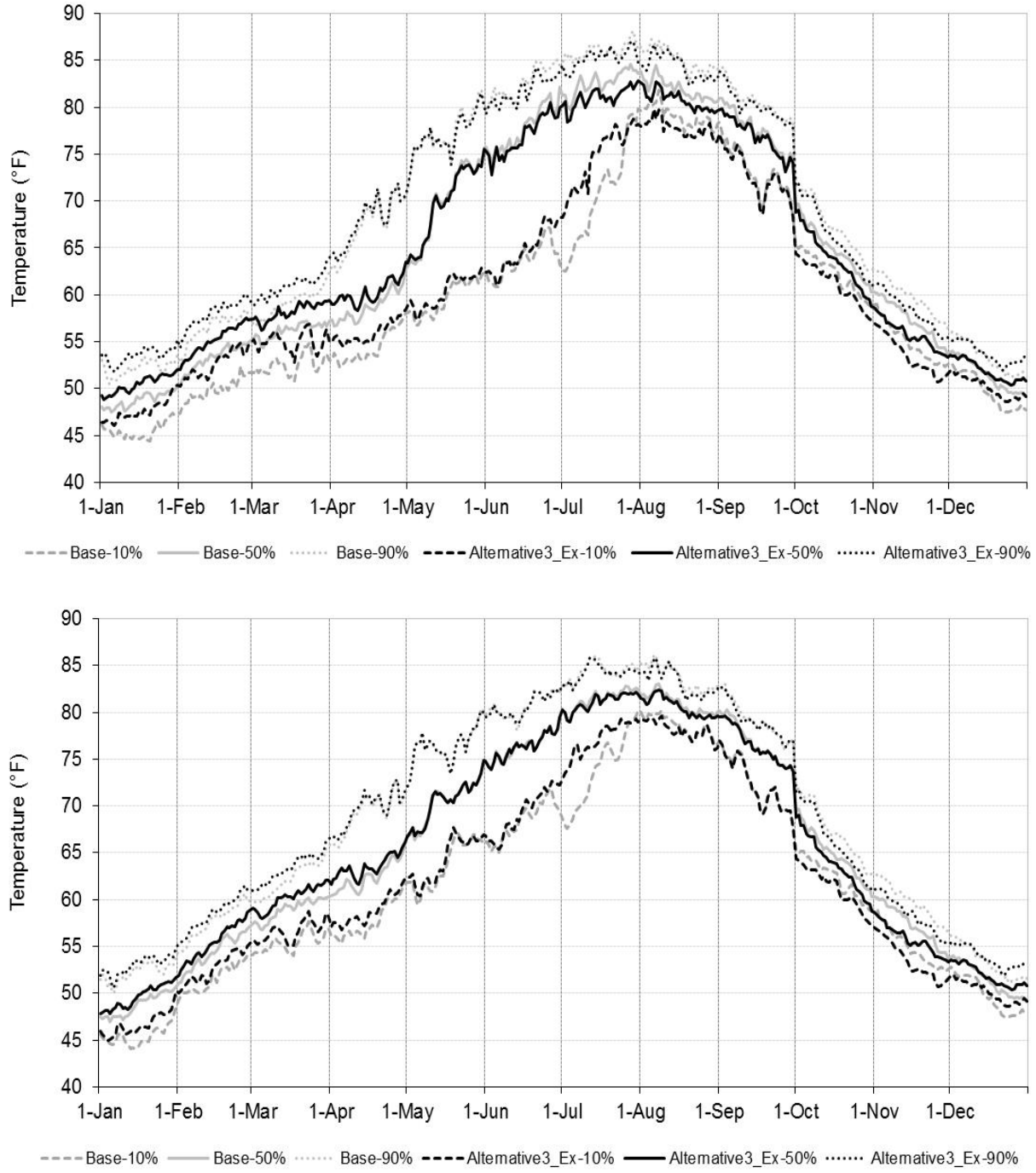

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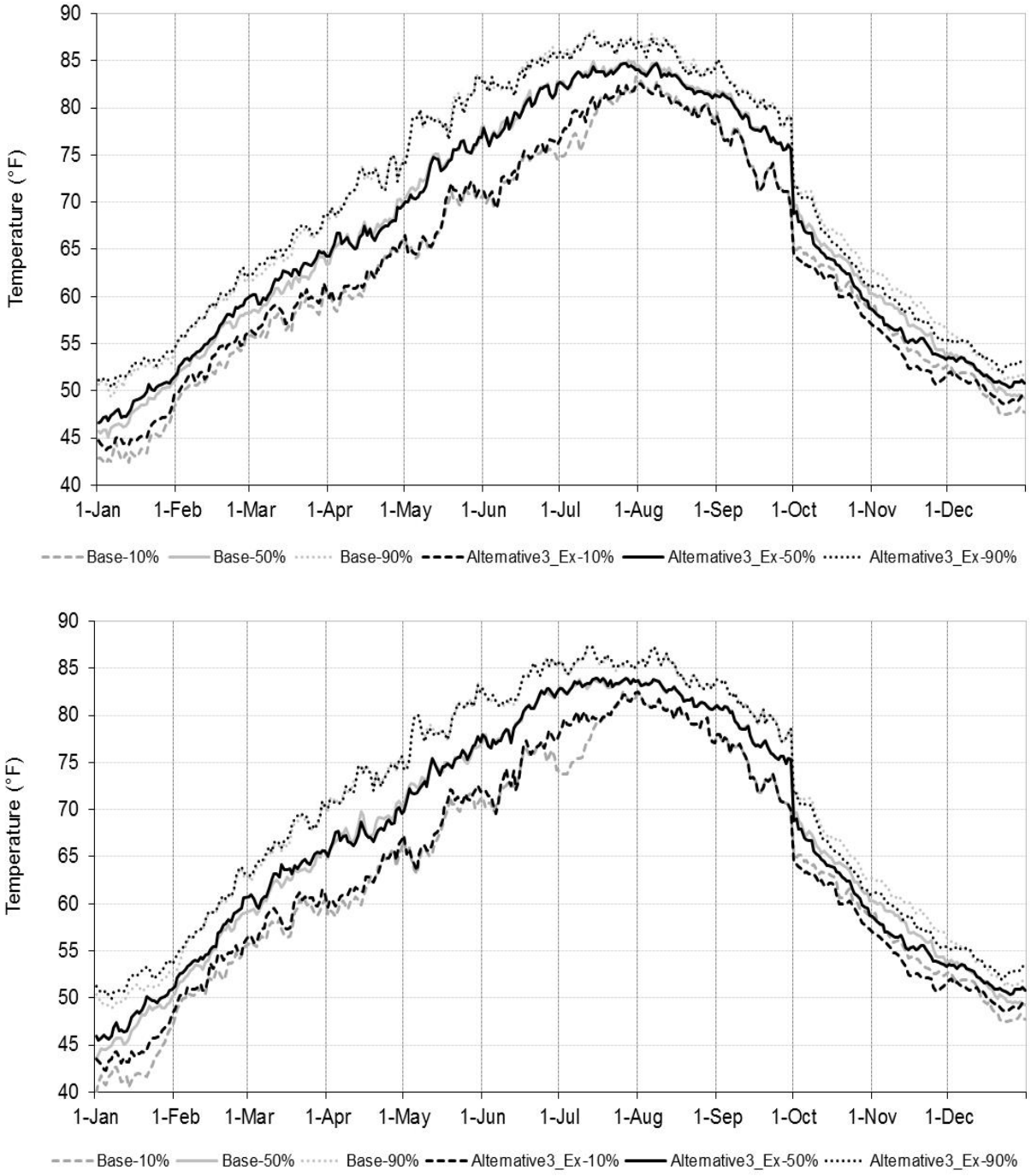

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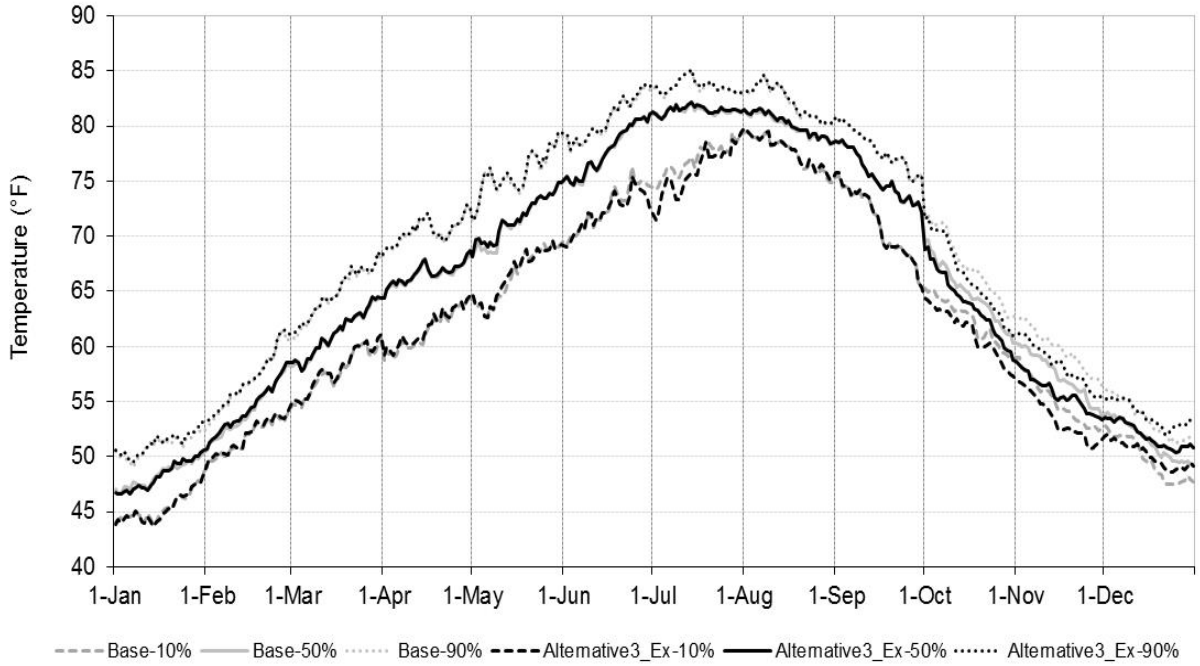

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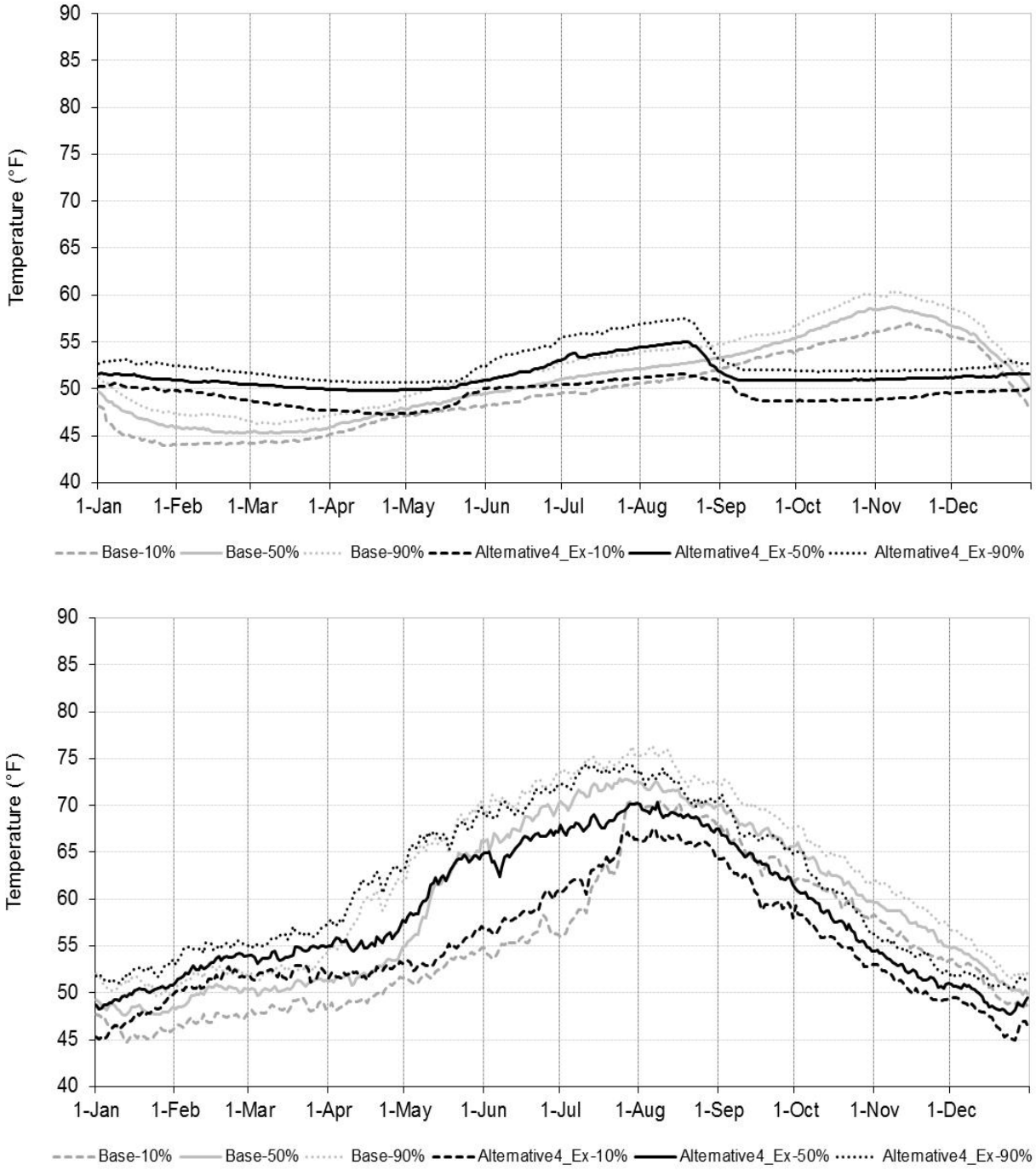
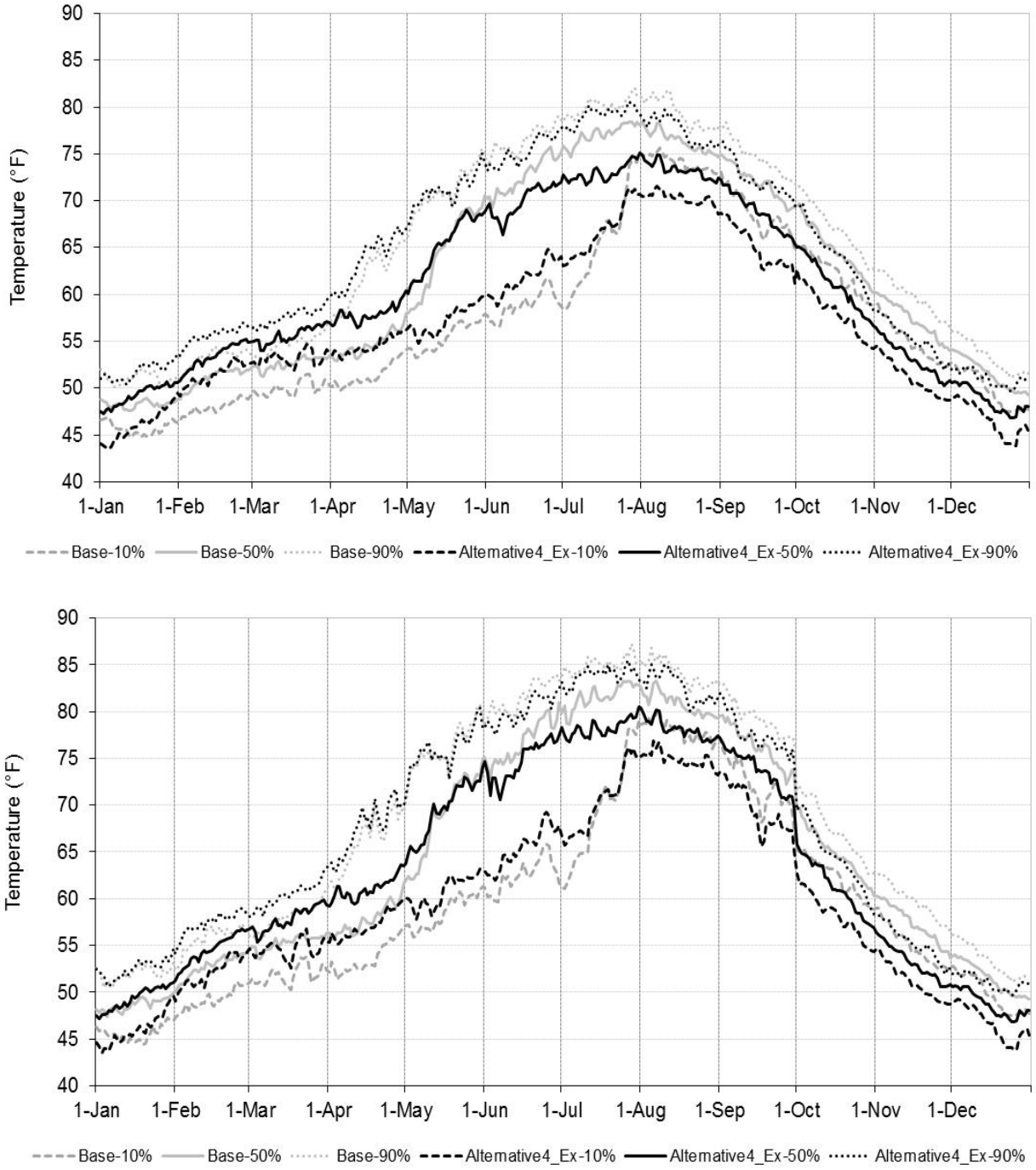


Comparison of Existing Condition Alternative and Alternative 4 Water Temperatures, 10th, 50th and 90th Percentile Distribution Across all Water Year Types for Reach 1-A (top) and Reach 1-B (bottom). (FSH-11, FSH-12, FSH-13)



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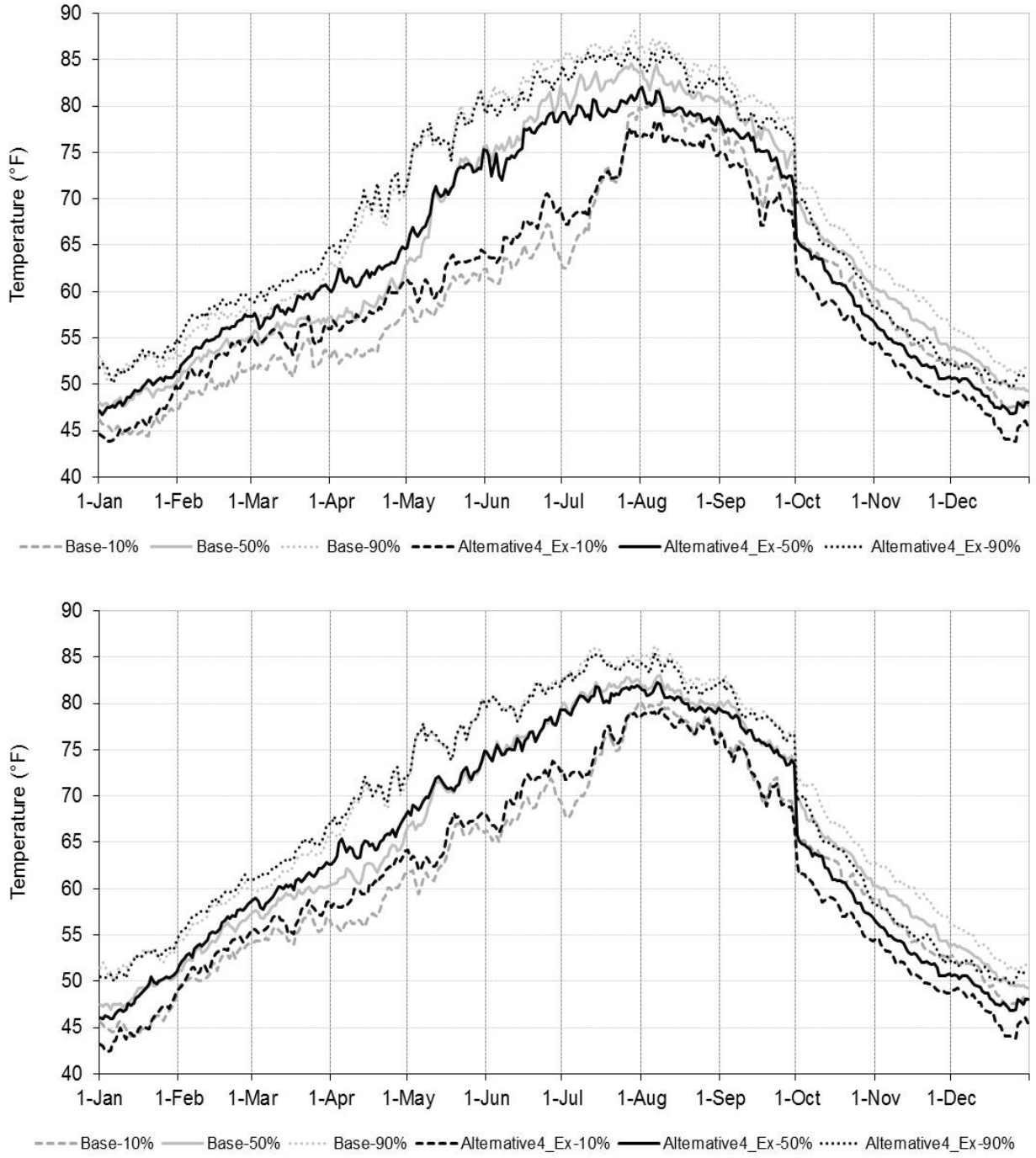

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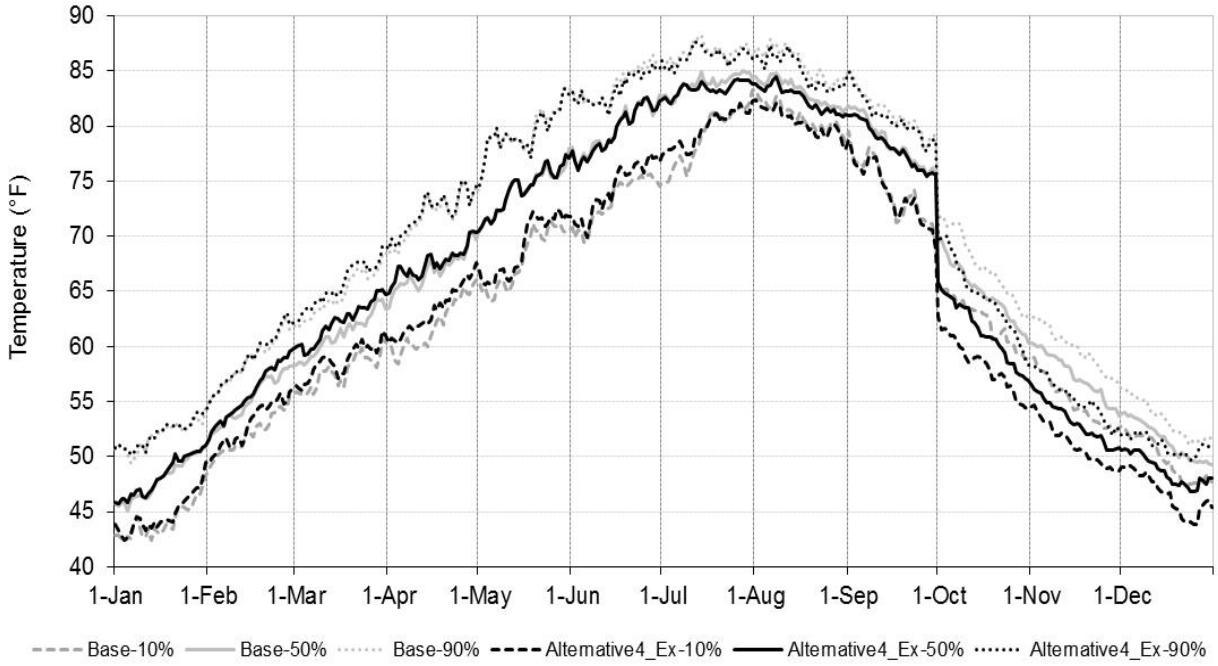
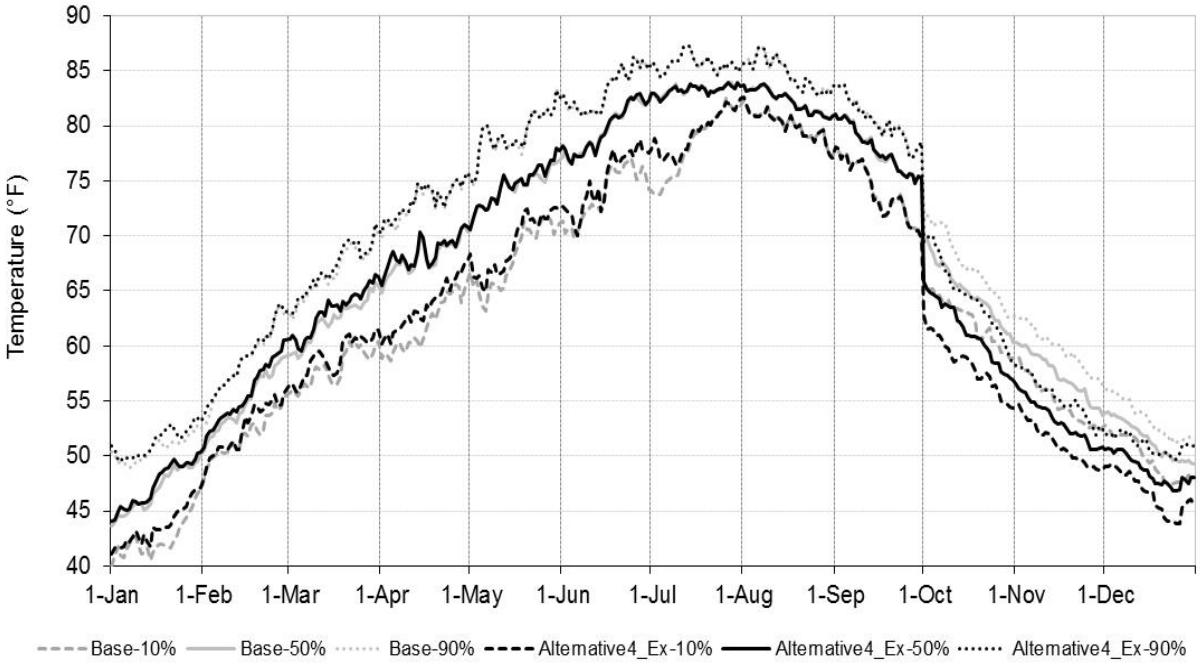
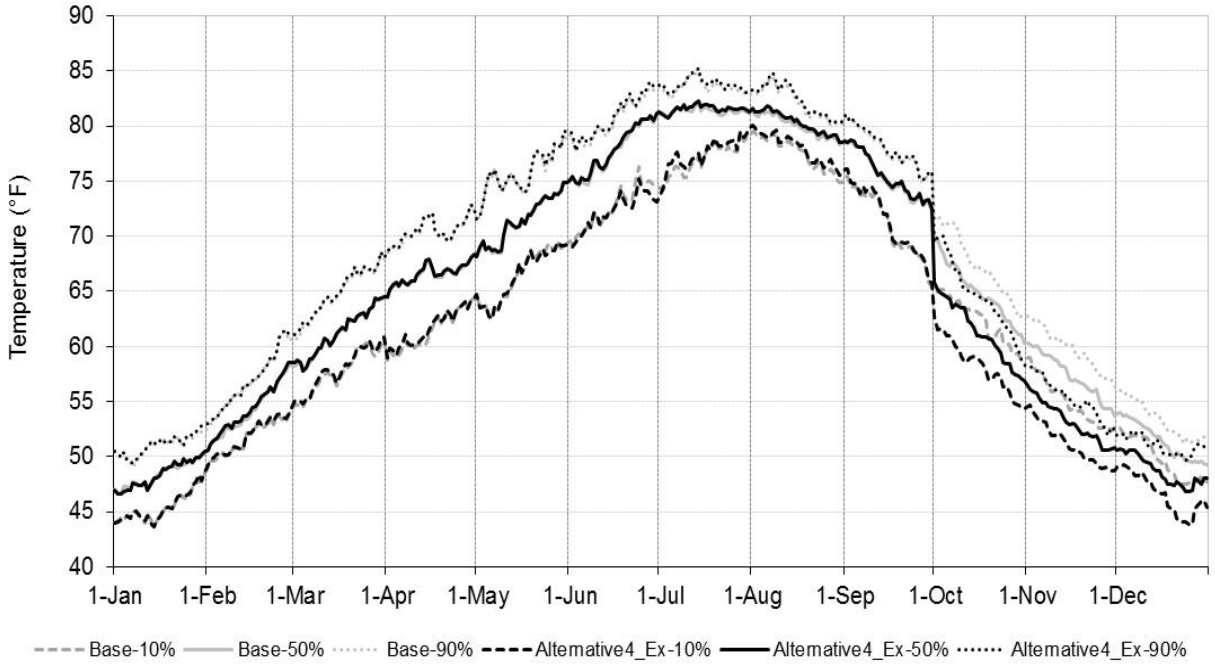




Comparison of Existing Condition Alternative and Alternative 4 Water Temperatures, 10th, 50th and 90th Percentile Distribution Across all Water Year Types for Reaches 4-A (top) and 4-B (bottom). (FSH-11, FSH-12)



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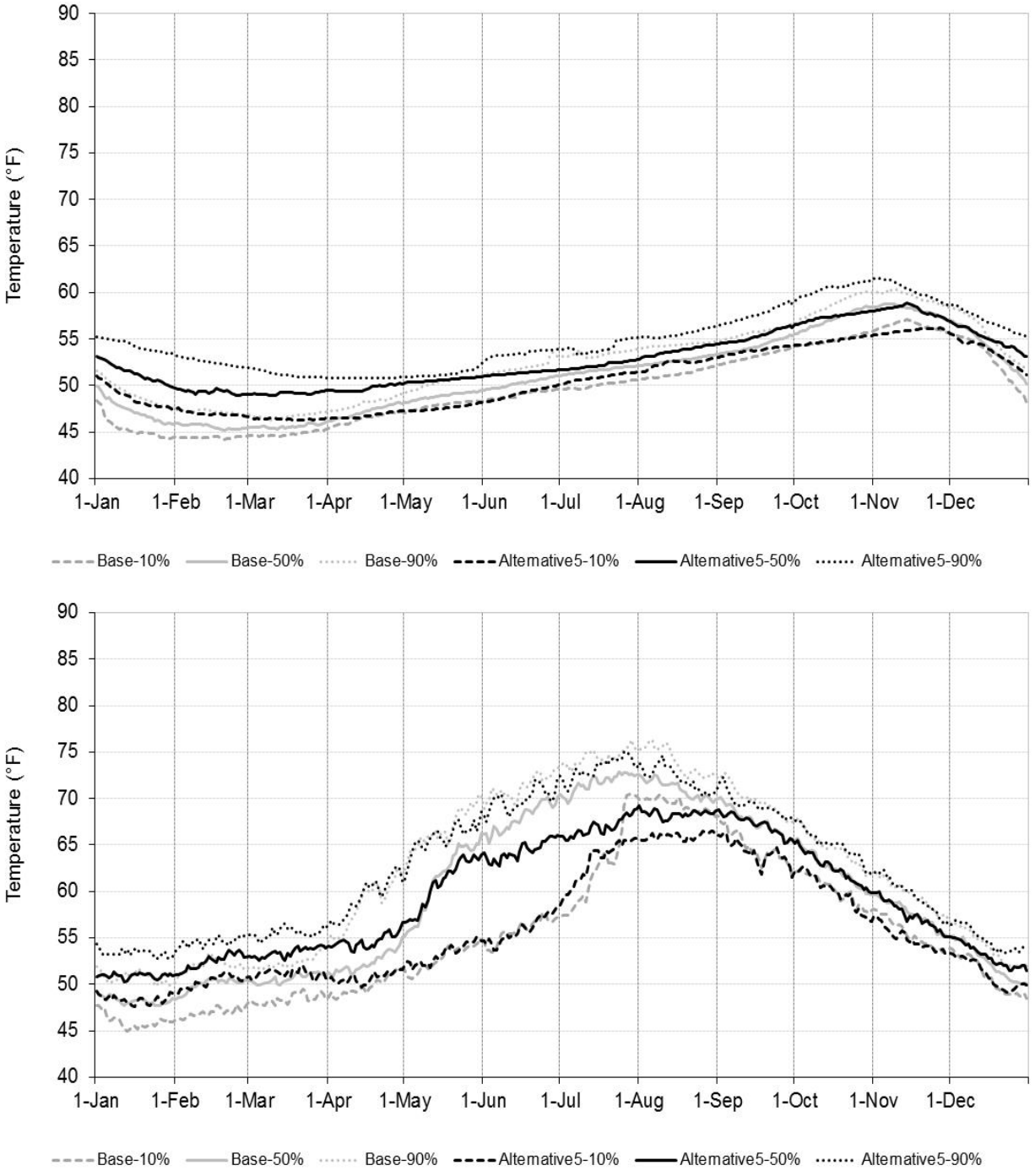
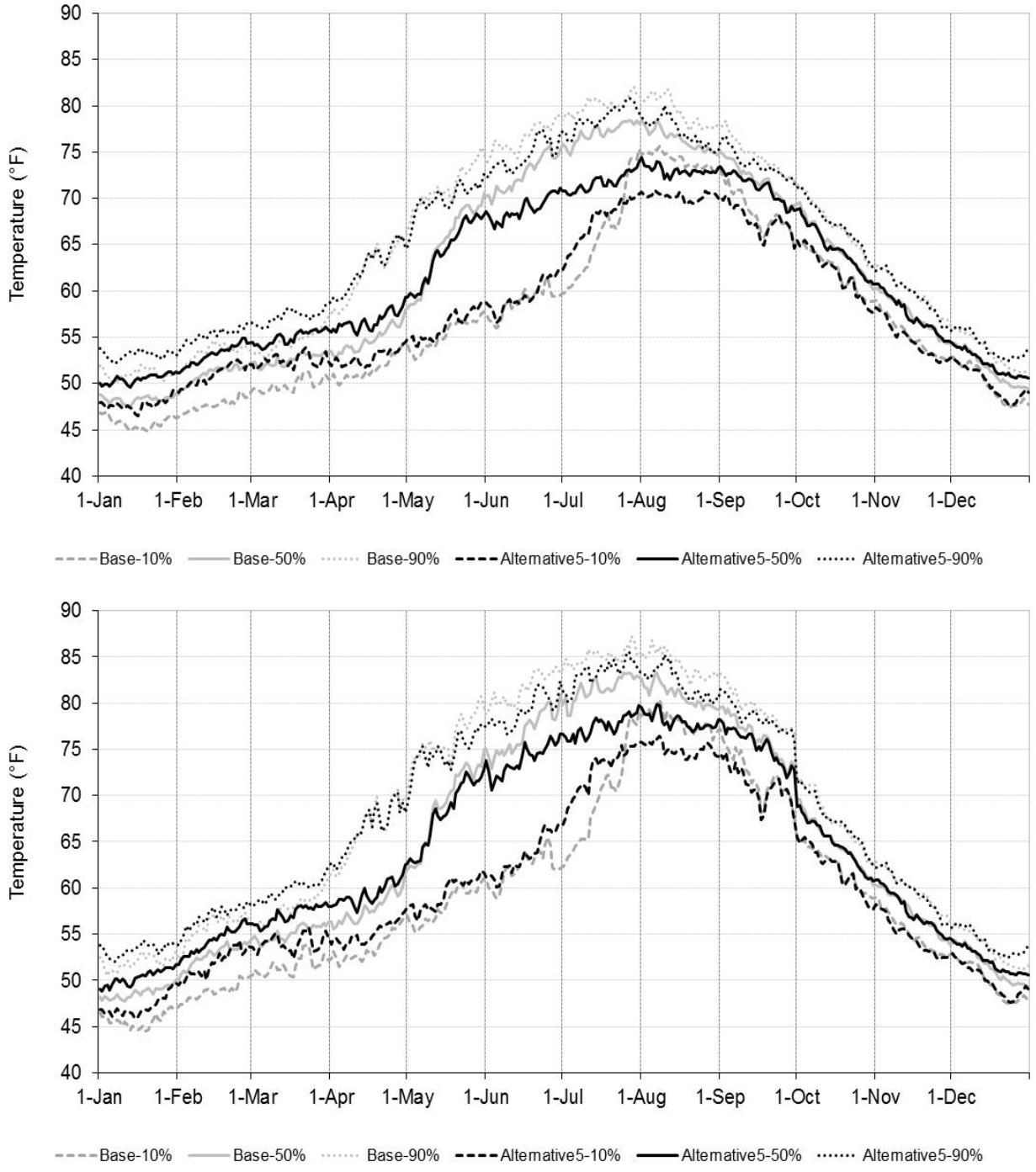


Comparison of Existing Condition Alternative and Alternative 5 Water Temperatures, 10th, 50th and 90th Percentile Distribution Across all Water Year Types for Reach 1-A (top) and Reach 1-B (bottom). (FSH-11, FSH-12, FSH-13)



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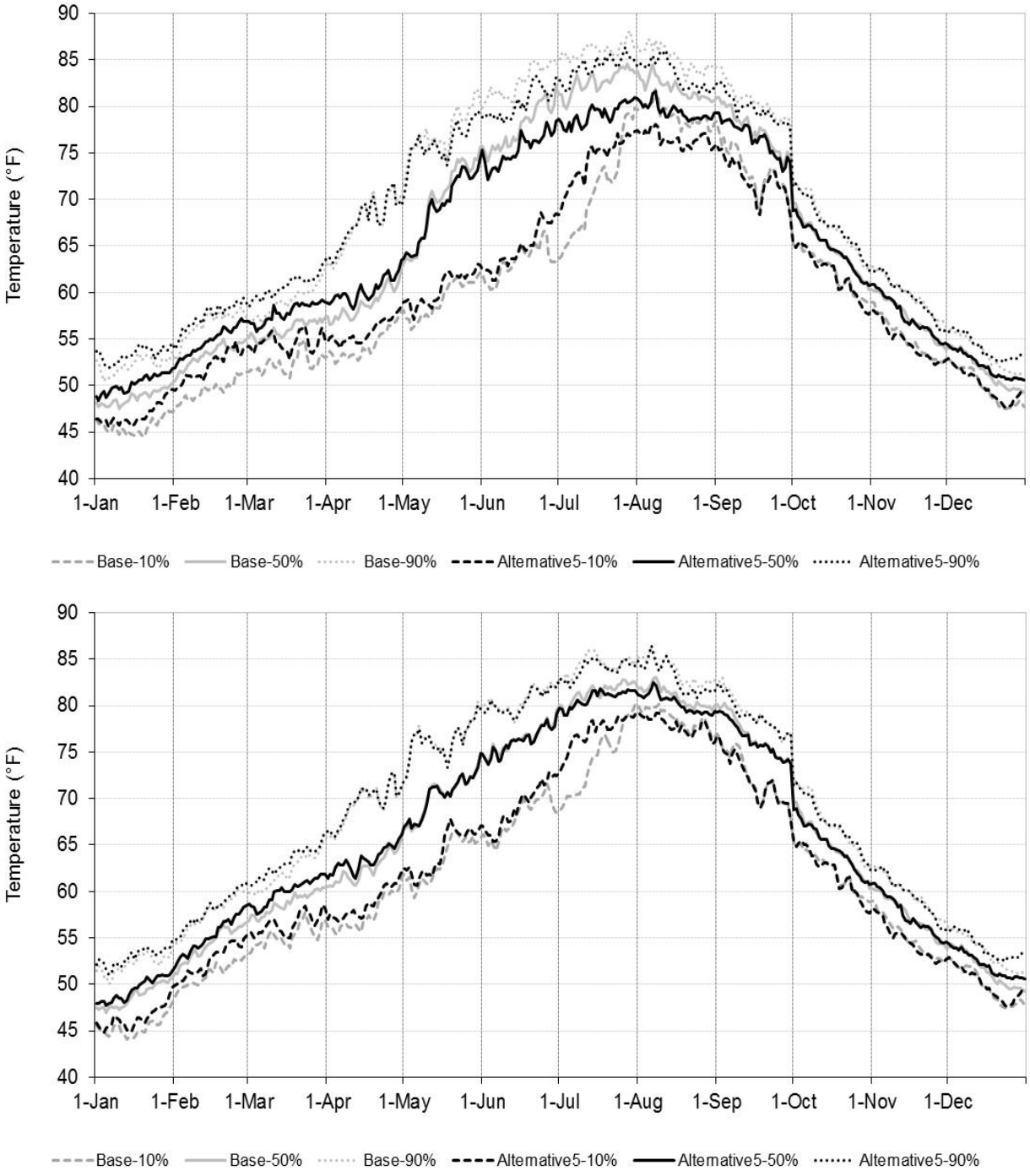

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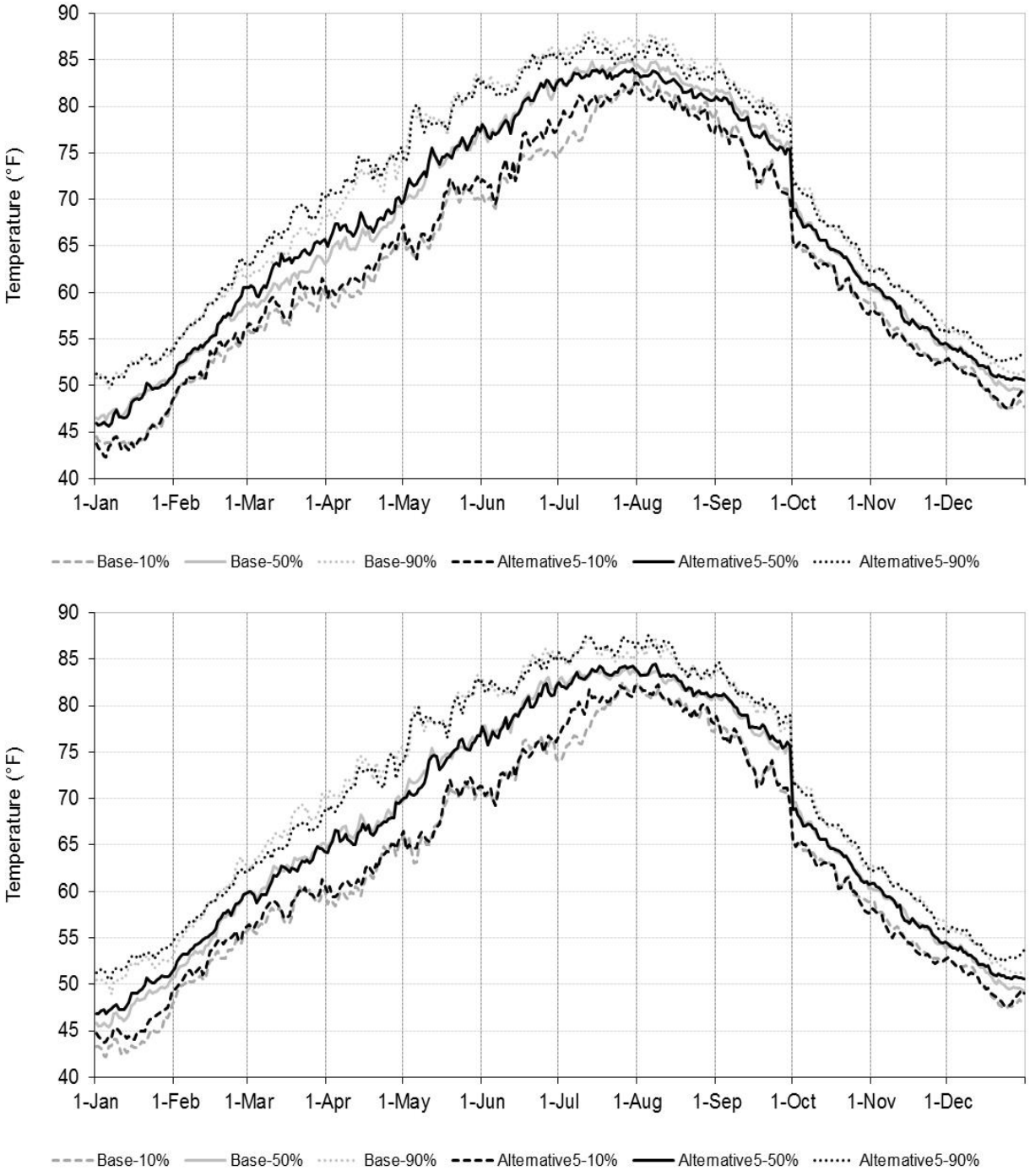

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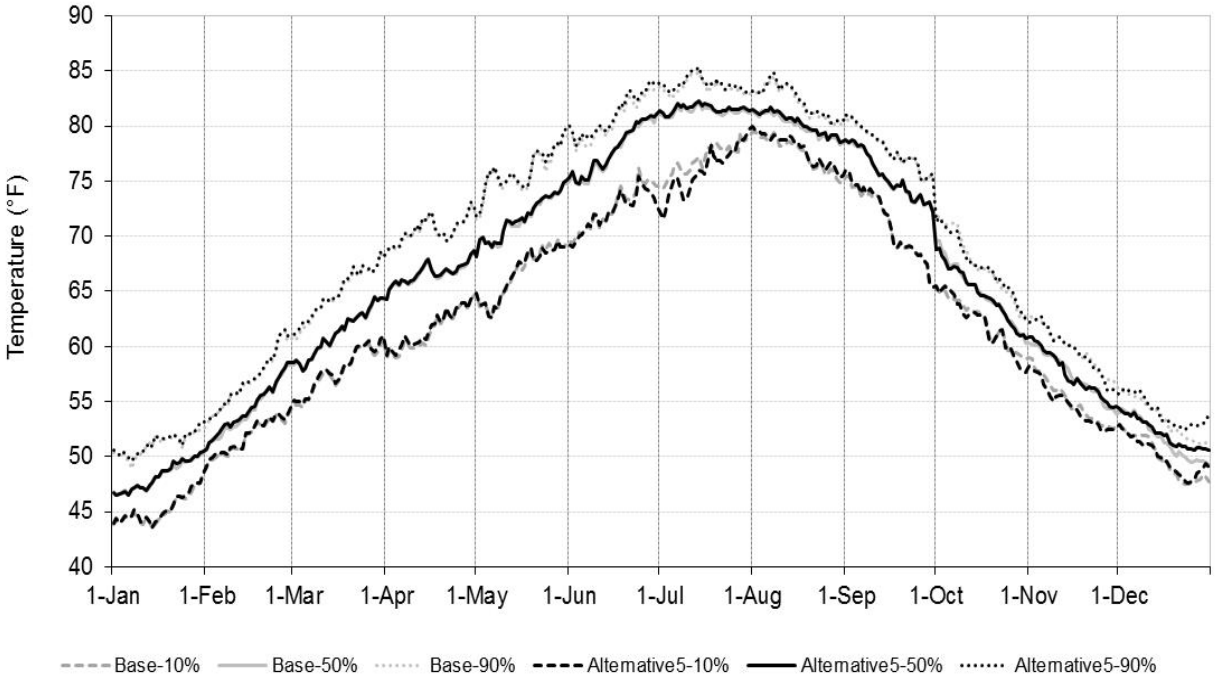

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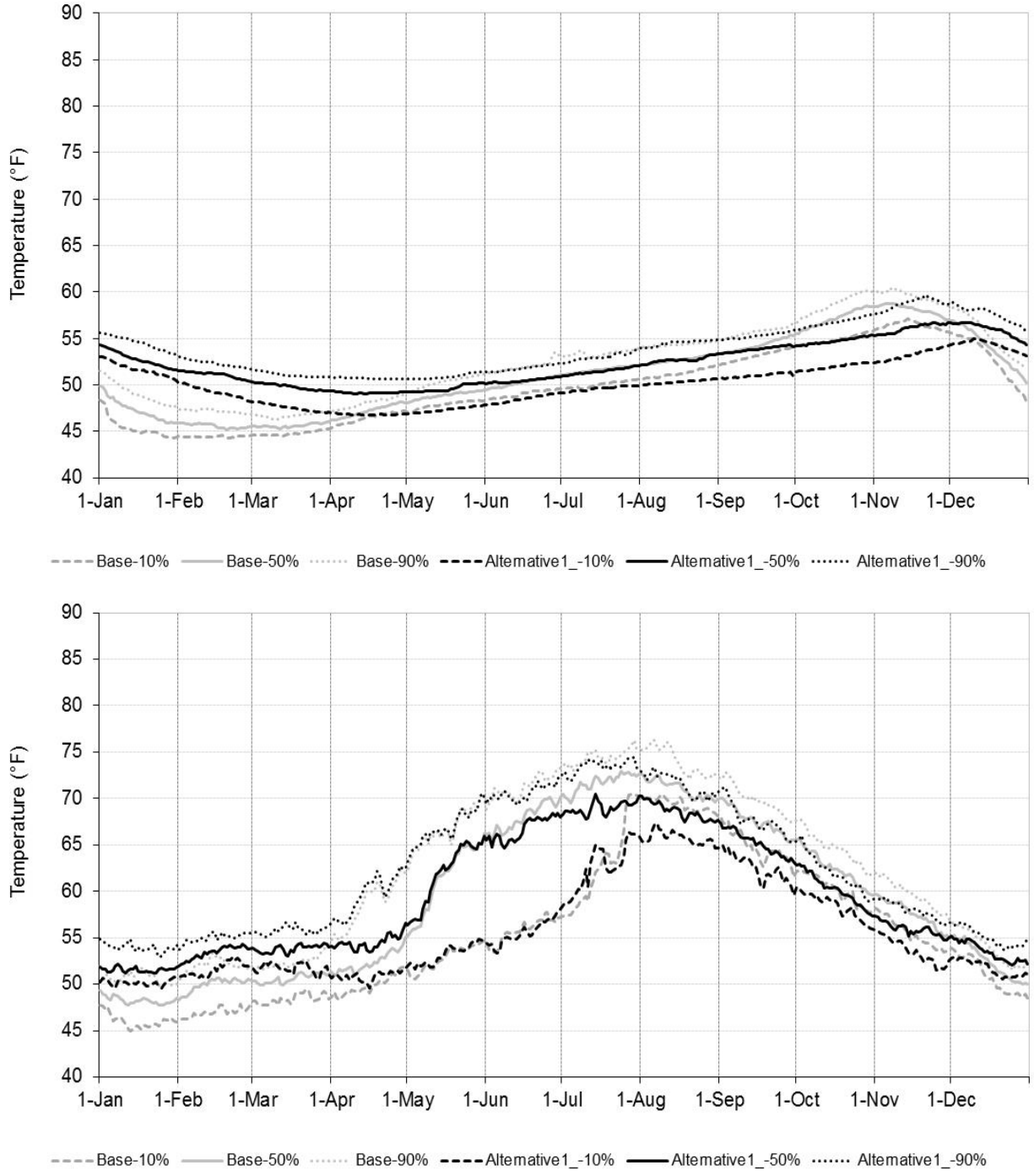

Comparison of No Action Alternative and Alternative 1 Water Temperatures, 10th, 50th and 90th Percentile Distribution Across all Water Year Types for Reaches 1-A (top) and 1-B (bottom). (FSH-11, FSH-12, FSH-13)