

## Enclosure (2) - Response to EPA Comments on Draft MFP, May 2025

1. ***Consider reviewing and updating the key problem areas based on any new data gathered. The areas/lines included may not change but it's good practice to review them periodically. If there are any concerns based on new field data or repeated complaints in an area after the first year or two, consider adding areas/lines, increasing flushing frequency, or taking other operational steps for areas/line currently in the plan.***

**Navy Response** - Acknowledged. Due to system changes, a periodic review is needed to make sure that the water quality concern areas are being flushed. Maintenance programs are not static and will be subject to change based on the following:

- Water quality data
- Customer complaints, and
- Significant changes to the JBPHH distribution system.

Added the above language to sections 2.3 and 3.4 to address this comment in the report.

2. ***One of the three parameters used to identify low water quality is high water age identified from the Hydraulic Water Model. Under what operating conditions was the Hydraulic Water Model developed? Does it take into consideration three sources? JBPHH will have one primary source for the next several years, should the analysis of areas with low water quality be adjusted?***

**Navy Response** - Water age was determined from the hydraulic model under various operating conditions as documented in the hydraulic model development report that was reviewed and approved by the EPA. The areas with highest water age are downstream of the Red Hill, Camp Smith, and Army tanks. Water age and distributed water quality is not a concern in this system as was reported in the EDWM quarterly reviews. AH used the Waiawa pump station source only for the development of the MFP. When comparing the water age for Waiawa only, and Waiawa + Red Hill pump station running at the same time, the water quality in the water distribution system was basically the same.

3. ***Were disinfection byproduct results used as a factor to determine water quality?***

**Navy Response** - Disinfection byproducts (DBPs) are often not detectable in the system. However, areas in which DBPs are detected frequently coincide with areas of high water age. A discussion of DBP data was provided during the Q4 EDWM review. For the MFP, only water age, low chlorine residual, and pipe material were used to identify the areas in the MFP.

4. ***From Draft MFP page 3-6: "From Figure 3- 4, AH developed maintenance flushing loops that can be used to increase the chlorine residual as needed. A total of 42***

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*maintenance loops in 28 JBPHH areas were developed to perform this task. Out of the 42 maintenance loops, 30 loops were located in Pearl Harbor areas while 12 loops were located in Hickam zones.” This indicates the plan focuses on areas of low water quality. Does this mean other areas are not flushed?*

**Navy Response** - Other areas are not flushed unless they have dead-ends or water quality complaints. All areas are flushed under the UDF plan in the first 18-months and 20% of the areas in subsequent years.

5. *Are the UDF zones the same as MFP zones? How is timing of flushing of the two plans integrated?*

**Navy Response** - Yes, the zones are the same for both UDF and MFP. Initially, the UDF will be implemented in its entirety in the first 18-months. After the first 18-months, the UDF plan will be implemented over a 5-year period with 20% of the JBPHH system being flushed every year. The same crew that is implementing the UDF plan will be implementing the MFP, which will allow for better coordination of the two plans. The MFP areas that fall under the UDF plan for the corresponding year will not be flushed under the MFP plan. Section 3.5 was added to the report to address this comment.

6. *Some flushing velocities are high: Camp Smith dead end is (b) (3) (A) ft/sec and Doris Miller is (b) (3) (A) ft/sec. Are these accurate? Is this going to cause pressure to drop below 20 psi? Is there concern with structural damage at that high a velocity?*

**Navy Response** - No. The hydraulic model shows that plenty of flow is available for the flushing which translates to high velocity with minimum pressure drop. The high velocities are associated with the smaller pipe sizes (b) (3) (A) and unless we throttle the flushing hydrant, this is the flow that we will get out of the (b) (3) (A) opening.

7. *Dead end flushing in Appendix B does not include a monitoring hydrant, even though the instructions are to not let pressure drop below (b) (3) (A) psi.*

**Navy Response** - Because dead-end flushing will use the last hydrant in the line, the plans in Appendix B were modified to include pressure monitoring at the same hydrant or upstream hydrant to monitor the residual pressure.