

standards, as discussed above, there have been occasions when groundwater samples were found to exceed “aesthetic” or Secondary MCLs for Consumer Acceptance. As explained above, Secondary Standards are not enforceable, rather Secondary Standards are considered guidelines for predicting consumer acceptance. Consequently, Secondary Standards are not used as thresholds in this DEIR for the purpose of determining significant under CEQA. Nevertheless, because groundwater extracted from City wells has been found to occasionally exceed secondary standards for odor and TDS, related impacts are considered adverse but less than significant. Even though aesthetic impacts are considered less than significant from a CEQA perspective it is recognized that water customers may perceive a decrease in the aesthetic qualities of potable water during ASR extraction operations when compared to surface water. The degree to which this change is noticeable will depend on ASR Program operational factors including storage duration within the aquifer, rate of groundwater movement, and amount and rates of injection and extraction (as further discussed below). In general, the longer the aquifer storage time the more pronounced difference in aesthetic qualities can be expected. While the proposed ASR Program would result in the intermittent delivery of ASR extracted groundwater with potentially adverse aesthetic qualities, there are several issues that deserve consideration.

Aesthetic Qualities are Subjective. The finding of adverse but less than significant recognizes that water customers may perceive a decrease in the aesthetic qualities of potable water during ASR extraction operations when compared to surface water. Based on results of two City sponsored taste tests conducted in 2010 to gauge consumer reaction to differing degrees of surface/groundwater blends, the degree to which aesthetic changes in water quality are noticeable is considered subjective and varies between customers. Taste test results showed that there was no clear preference for the type of water (surface water or groundwater). Subjects were presented with 5 blends of water ranging from 100% surface water to 100% groundwater. Key finding of this informal taste survey are shown in Table 4-5:

TABLE 4-5. SURFACE WATER TO GROUNDWATER SURVEY

Surface Water to Groundwater Percentage	Percentage of Volunteers Who Could Accept as Everyday Drinking Water
100% Surface Water, 0% Groundwater	85.1%
75% Surface Water, 25% Groundwater blend	84.0%
50% Surface Water, 50% Groundwater blend	87.0%
25% Surface Water, 75% Groundwater blend	76.9%
0% Surface Water, 100% Groundwater	63.3%

The ASR Program Allows Aquifer Blending Which Dilutes Adverse Aesthetic Qualities - In general, the City’s native groundwater supply has more mineral content than surface water supply and as a result is considered by some to be less aesthetically pleasing for potable uses compared to treated surface water. However, the hard water and high mineral content of groundwater may be reduced under the proposed project as a result of aquifer blending. Aquifer blending occurs when treated surface water is injected into the groundwater aquifer during ASR operations allowing the two water types to mix and blend. When conducted on a regular basis, this blending will improve the aesthetic qualities of extracted groundwater because it will be a mixture of injected treated surface