

MEMORANDUM – DRAFT

To:	Daniel Smith, General Manager	Date:	November 16, 2022
From:	James F. Owens, P.E. - NV5	Client:	Apple Valley Heights County Water District
Subject:	Water Connection Fee Calculation		

Apple Valley Heights County Water District (AVHCWD) is an existing public water system (No. CA 3600009) that currently provides water to approximately 312 residential connections in the unincorporated portion of the community of Apple Valley. AVHCWD does not provide water to commercial or industrial connections.

From time to time, AVHCWD receives requests for the provision of water service to residential properties within the service area of AVHCWD that do not currently receive water service. This memorandum calculates a Water Connection Fee that AVHCWD would charge to property owners desiring to connect to the AVHCWD water system for the provision of water service through a nominal 1” service connection to an equivalent single family residence. This Water Connection Fee does not include costs for the design, construction or inspection of mains or other facilities to convey water to the proposed connection.

This Water Connection Fee calculation relies on the data contained in the Preliminary Engineering Report for Storage Tanks and Transmission Pipeline Improvements (NV5, October 2018) and on data provided by the local Watermaster (Mojave Water Agency).

During calendar years 2013 and 2016, inclusive, AVHCWD produced approximately 119,024,000 gallons from its two water supply wells. This water was distributed among approximately 280 residential connections. This equates to an average annual production of 106,272 gallons/year/connection, or 14,208 cubic feet/year/connection, or 0.33 acre-feet/year/connection, or 291 gallons/day/connection.

Build-Out Connections

AVHCWD, currently serving 312 connections, could foreseeably provide service to 350 residential connections with a planning period through 2050. Therefore, estimated costs for system improvements are divided among 350 connections to attain a per connection cost for improvements.

Principal Facilities

AVHCWD owns and operates two water supply wells (Well Nos. 3 and 4), the Roundup Booster Pump Station, and two storage tank sites (Mesa Vista Tank Site and Central Tank Site). These facilities would be principally impacted by the addition of customers to the system, and are the sole infrastructure components contained in this calculation of the Water Connection Fee. The replacement of these facilities that are aging, i.e. Central Tank and Well No. 3, are included in the Water Connection Fee calculation.

Pending Water Infrastructure Improvements – State Water Resources Control Board

AVHCWD anticipates that it will receive a grant from the State Water Resources Control Board in mid-2023 for a replacement of the Mesa Vista Tank Site's storage facilities, minor improvements to the existing well site, emergency power supply improvements at the well site (transfer switch), an interconnection with Golden State Water Company for emergency use, the installation of a transmission pipeline, and the replacement of a distribution pipeline. Charges to new connections for these facility improvements are not included in the calculation of the proposed Water Connection Fee.

Production Well Replacement

AVHCWD has sufficient groundwater production capacity in each of its two groundwater wells for 350 connections. AVHCWD's regulator, the Division of Drinking Water, requires 100% water supply backup. AVHCWD's oldest well, Well No. 3, is greater than 30 years old and is beginning to approach the end of its useful life. An approximate cost for the design and construction of a replacement well at the same site is \$900,000. Among 350 build-out connections, the cost for this improvement would be \$2,571/connection.

Central Tank Replacement

AVHCWD will have sufficient storage capacity at its two storage sites following the anticipated improvements at the Mesa Vista Tank Site. However, the Central Tank is greater 30 years old and is beginning to approach the end of its useful life. An approximate cost for the design and construction of a 200,000 gallon replacement tank at the same site is \$600,000. Among 350 build-out connections, the cost for this improvement would be \$1,714/connection.

Roundup Booster Station – Emergency Generator

There is no emergency power supply capacity at the Roundup Booster Station. An approximate cost for the design and construction of a transfer switch and generator, and for adjacent land acquisition to accommodate these facilities is \$200,000. Among 350 build-out connections, the cost for this improvement would be \$572/connection.

Well Site – Emergency Generator

There is no emergency power supply capacity at the Roundup Booster Station. An approximate cost for the design and construction of a transfer switch and generator, and for adjacent land acquisition to accommodate these facilities is \$50,000. Among 350 build-out connections, the cost for this improvement would be \$143/connection.

Office Site

AVHCWD is planning the development of an office and public meeting space for AVHCWD in the coming years. An approximate budget for this improvement is \$400,000. Among 350 build-out connections, the cost for this improvement would be \$1,142/connection.

Account Setup and Meter Fee

AVHCWD incurs cost for the setup of a new customer account and for the provision and installation of a new 1-inch meter. The approximate cost for a new account setup and water meter installation is \$900/connection.

Groundwater Rights – Watermaster/Mojave Water Agency

AVHCWD has a 2021-2022 Base Free Production Allowance (BFPA) of 69 acre-feet/year. In 2020-2021, AVHCWD had a verified production of 110 acre-feet, which was 41 acre-feet greater than the BFPA. Therefore, AVHCWD does have rights to excess water to provide to properties desiring to connect to the system.

The approximate price for securing additional permanent water rights, including notarizing and executing transfer documents with and for the Watermaster, is \$9,000/acre-foot. With an average production of 0.33 acre-feet/connection/year (2013-2016), this component of the Water Connection Fee is \$3,000/connection.

Summation of Connection Fee

The calculated Water Connection Fee for Fiscal Year 2023 is \$10,042 for a 1-inch water service and meter per equivalent single family dwelling.

Production Well Replacement	\$ 2,571
Central Tank Replacement	\$ 1,714
Roundup Booster Pump Station - Emergency Generator	\$ 572
Well Site – Emergency Generator	\$ 143
Office Site	\$ 1,142
Account Setup and Meter Fee	\$ 900
<u>Groundwater Rights</u>	<u>\$ 3,000</u>
Total	\$10,042

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