

APPENDIX B:
Plan of Development

**Plan of Development and Maintenance for the
Northern Pipeline Conversion**

June 2026

DRAFT

Fenner Gap Mutual Water Company

Plan of Development for the Northern Pipeline Conversion

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I. APPLICANT'S PURPOSE AND NEED

Fenner Gap Mutual Water Company ("FGMWC") has proposed the conversion of an existing, idle oil/gas pipeline spanning from Cadiz, CA to Mojave, CA (the "Northern Pipeline" or "Proposed Action") for the transportation of water within private parcels and on United States Bureau of Land Management ("BLM") administered public lands, United States Air Force ("USAF") lands, and California State Lands. **Figure 1** shows the location of the existing pipeline.

The purpose of the proposed conversion of the Northern Pipeline (the "Proposed Action") is to enhance water security in Southern California by providing access to new water supplies and emergency water supplies to communities in the Proposed Action area. Southern California is highly dependent upon the State Water Project ("SWP") and Colorado River for a majority of its water supplies. In recent years, water from both the SWP and Colorado River have been subject to mandatory, emergency conservation measures during severe and prolonged drought conditions. Areas that would be served by the Proposed Action today have little to no access to alternative water supplies during prolonged droughts. This includes areas considered severe fire hazard zones by the State of California, including regions impacted by the catastrophic wildfires in the Los Angeles area in January 2025.

The Proposed Action will improve water reliability and reduce dependence on imported water supplies from the SWP and the Colorado River Aqueduct ("CRA") by providing new water conveyance facilities that interconnect these systems. Enabling the Northern Pipeline to transport water would make alternative water supplies accessible and available to communities across California through direct deliveries to systems connected to the Northern Pipeline, as well as through transfers and exchanges between other local agency conveyance facilities that are connected. Increased flexibility afforded by the conveyance of water through the Northern Pipeline offers water providers across the Southern California and Lower Colorado region the opportunity to better meet community water needs, thereby resulting in an indirect benefit to all communities.

II. DESCRIPTION OF THE FACILITY

A. What will be constructed?

The conversion of the existing 30-inch diameter buried Northern Pipeline for water conveyance will require the construction of pump stations along the pipeline alignment; the installation of air release/air vacuum valves and blow-off valves along the existing pipeline; the construction of interties to existing, parallel natural gas pipelines for serving gas to the individual pump stations; the repair and replacement of the existing cathodic protection system along the pipeline; the construction of a holding pond for the retention of flushed and hydrostatic testing water; and the rehabilitation and, if necessary, replacement of certain portions of the pipeline. It is presently estimated that at least 16 miles of the pipeline require replacement.



Figure 1: The Northern Pipeline Project

B. Commodity to be transported and for what purpose?

Of the 217-mile Northern Pipeline, approximately 162 miles between Cadiz, CA and Mojave, CA will be repurposed for water conveyance with delivery points along the pipeline route.. The Northern Pipeline's proximity to existing water infrastructure is depicted in **Figure 2**.

C. Why is use of public lands necessary?

The existing Northern Pipeline traverses BLM-managed lands and Edwards Airforce Base (“EAFB”) lands. Authorizations from BLM and EAFB are required in order to use the pipeline for the intended use.

D. When is construction planned?

Construction is anticipated to begin in mid-2026 and proceed through 2027.

E. How long will authorization be needed?

The term of the proposed ROW and easement is anticipated to be 50 years. No other ROWs are needed. No temporary use permits are needed.

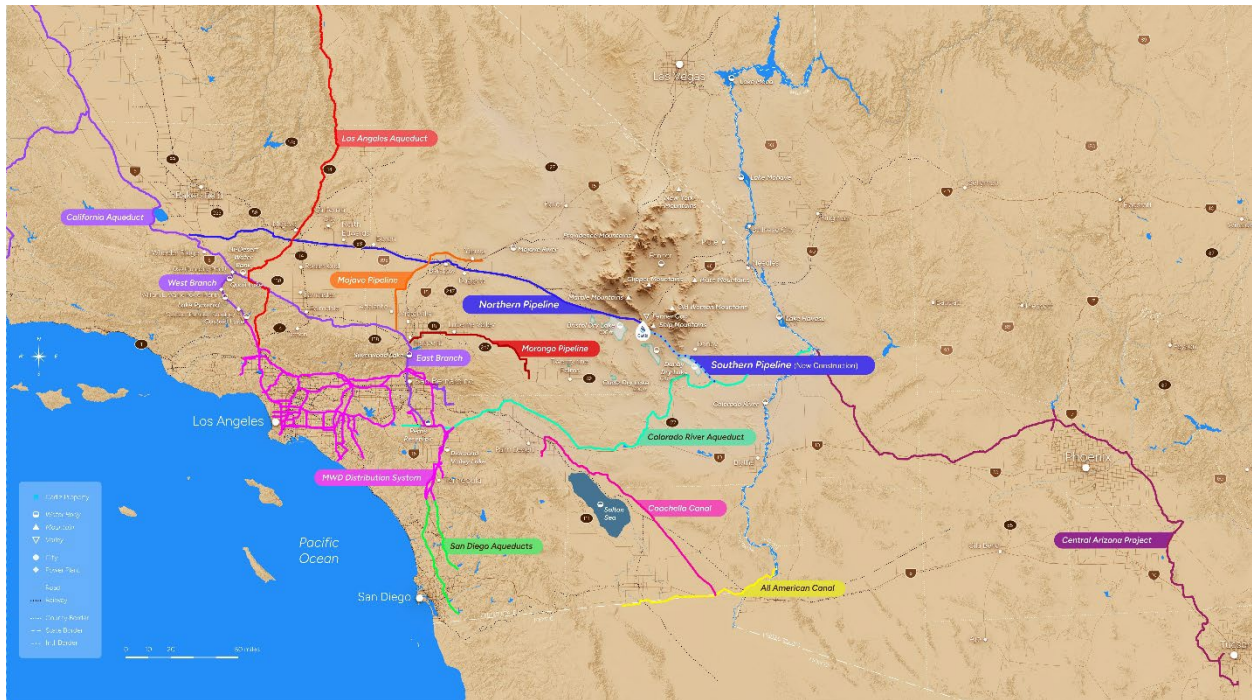


Figure 2: Northern Pipeline’s Proximity to Existing Water Infrastructure

F. Description and Location of the Existing Right-of-Way

1. Legal Description

The Northern Pipeline crosses through the townships, ranges and sections listed below:

- T. 9 N., R. 1 E.,
sec. 19, N $\frac{1}{2}$ lot 1 of NW $\frac{1}{4}$ and N $\frac{1}{2}$ NE $\frac{1}{4}$;
sec. 22, S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$,
SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$, and S $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$;
sec. 26, N $\frac{1}{2}$ NE $\frac{1}{4}$ and N $\frac{1}{2}$ NW $\frac{1}{4}$.
- T. 9 N., R. 2 E.,
sec. 30, lots 3 and 5 and S $\frac{1}{2}$ NE $\frac{1}{4}$.
- T. 9 N., R. 3 E.,
sec. 31, lots 131, 136, and 138 and NE $\frac{1}{4}$ NW $\frac{1}{4}$.
- T. 8 N., R. 4 E.,
sec. 2, N $\frac{1}{2}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, and SE $\frac{1}{4}$ SE $\frac{1}{4}$;
sec. 3, lot 1 of NE $\frac{1}{4}$, lot 1 of NW $\frac{1}{4}$, and N $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 4, lot 1 of NE $\frac{1}{4}$ and lots 1 and 2 of NW $\frac{1}{4}$;
sec. 12, N $\frac{1}{2}$ NE $\frac{1}{4}$.

T. 8 N., R. 5 E.,

- sec. 7, lot 1 of NW $\frac{1}{4}$, N $\frac{1}{2}$ lot 2 of NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, and S $\frac{1}{2}$ NE $\frac{1}{4}$;
- sec. 8, S $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, and N $\frac{1}{2}$ SE $\frac{1}{4}$;
- sec. 10, S $\frac{1}{2}$ SW $\frac{1}{4}$;
- sec. 14, S $\frac{1}{2}$ NE $\frac{1}{4}$ and NW $\frac{1}{4}$;
- sec. 15, N $\frac{1}{2}$ NE $\frac{1}{4}$ and N $\frac{1}{2}$ NW $\frac{1}{4}$.

T. 8 N., R. 6 E.,

- sec. 18, S $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$, lot 2 of SW $\frac{1}{4}$, and S $\frac{1}{2}$ SE $\frac{1}{4}$;
- sec. 19, NE $\frac{1}{4}$ NE $\frac{1}{4}$;
- sec. 20, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, and N $\frac{1}{2}$ NW $\frac{1}{4}$;
- sec. 22, S $\frac{1}{2}$ SW $\frac{1}{4}$;
- sec. 26, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, and SE $\frac{1}{4}$;
- sec. 27, NE $\frac{1}{4}$ and N $\frac{1}{2}$ NW $\frac{1}{4}$.

T. 7 N., R. 7 E.,

- sec. 4, NW $\frac{1}{4}$ SW $\frac{1}{4}$ and S $\frac{1}{2}$ SW $\frac{1}{4}$;
- sec. 10, NW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, and E $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$;
- sec. 11, SW $\frac{1}{4}$ SW $\frac{1}{4}$;
- sec. 14, NW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$, and SE $\frac{1}{4}$ NW $\frac{1}{4}$.

T. 8 N., R. 7 E.,

- sec. 31, S $\frac{1}{2}$ lot 2 of NW $\frac{1}{4}$, N $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$, N $\frac{1}{2}$ lot 2 of SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, and S $\frac{1}{2}$ SE $\frac{1}{4}$;
- sec. 32, SW $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 7 N., R. 8 E.,

- sec. 18, S $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$ and S $\frac{1}{2}$ lot 2 of SW $\frac{1}{4}$;
- sec. 19, N $\frac{1}{2}$ lot 1 of NW $\frac{1}{4}$, N $\frac{1}{2}$ lot 2 of NW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, and SE $\frac{1}{4}$ NE $\frac{1}{4}$;
- sec. 20, SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, and SE $\frac{1}{4}$ SE $\frac{1}{4}$;
- sec. 27, SW $\frac{1}{4}$ and SW $\frac{1}{4}$ SE $\frac{1}{4}$;
- sec. 28, S $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, and N $\frac{1}{2}$ SE $\frac{1}{4}$;
- sec. 34, N $\frac{1}{2}$ NE $\frac{1}{4}$ and SE $\frac{1}{4}$ NE $\frac{1}{4}$;
- sec. 35, SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, and SE $\frac{1}{4}$.

T. 6 N., R. 9 E.,

- sec. 6, W $\frac{1}{2}$ lot 1 of NW $\frac{1}{4}$, N $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$, N $\frac{1}{2}$ lot 2 of SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, and SE $\frac{1}{4}$ SE $\frac{1}{4}$;
- sec. 8, N $\frac{1}{2}$ NE $\frac{1}{4}$;
- sec. 10, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, and SE $\frac{1}{4}$ SE $\frac{1}{4}$;
- sec. 11, NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, and S $\frac{1}{2}$ SE $\frac{1}{4}$;
- sec. 14, N $\frac{1}{2}$ NE $\frac{1}{4}$.

T. 6 N., R. 10 E.,

- sec. 18, S $\frac{1}{2}$ lot 2 of NW $\frac{1}{4}$, N $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$, N $\frac{1}{2}$ lot 2 of SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, and SE $\frac{1}{4}$ SE $\frac{1}{4}$;
- sec. 22, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, and SE $\frac{1}{4}$ SE $\frac{1}{4}$;

sec. 23, NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 26, N $\frac{1}{2}$ NE $\frac{1}{4}$.

T. 6 N., R. 11 E.,
sec. 28, S $\frac{1}{2}$ SW $\frac{1}{4}$ and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 30, N $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 34, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, and N $\frac{1}{2}$ NW $\frac{1}{4}$;
sec. 35, S $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, and NE $\frac{1}{4}$ SE $\frac{1}{4}$.

T. 5 N., R. 12 E.,
sec. 2, SW $\frac{1}{4}$ SW $\frac{1}{4}$;
sec. 3, N $\frac{1}{2}$ SW $\frac{1}{4}$ and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 4, lot 1 of NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, and N $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 6, lots 3, 4, and 6 and lot 2 of NE $\frac{1}{4}$;
sec. 10, NE $\frac{1}{4}$ NE $\frac{1}{4}$;
sec. 11, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, and N $\frac{1}{2}$ NW $\frac{1}{4}$;
sec. 12, S $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, and N $\frac{1}{2}$ SE $\frac{1}{4}$.

T. 6 N., R. 12 E.,
sec. 31, S $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$, S $\frac{1}{2}$ lot 2 of SW $\frac{1}{4}$, and SW $\frac{1}{4}$ SE $\frac{1}{4}$.

T. 5 N., R. 13 E.,
sec. 7, N $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$, N $\frac{1}{2}$ lot 2 of SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 8, S $\frac{1}{2}$ SW $\frac{1}{4}$ and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 14, NE $\frac{1}{4}$ and NW $\frac{1}{4}$;
sec. 15, N $\frac{1}{2}$ NE $\frac{1}{4}$ and N $\frac{1}{2}$ NW $\frac{1}{4}$.

T. 9 N., R. 1 W.,
sec. 10, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$;
sec. 11, NE $\frac{1}{4}$ SE $\frac{1}{4}$;
sec. 12, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, and NW $\frac{1}{4}$ SE $\frac{1}{4}$.

T. 10 N., R. 3 W.,
sec. 31, N $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$, N $\frac{1}{2}$ lot 2 of SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, and SE $\frac{1}{4}$ SE $\frac{1}{4}$.

T. 10 N., R. 4 W.,
sec. 30, N $\frac{1}{2}$ lot 2 of SW $\frac{1}{4}$;
sec. 34, NE $\frac{1}{4}$ and N $\frac{1}{2}$ NW $\frac{1}{4}$;
sec. 35, S $\frac{1}{2}$ NE $\frac{1}{4}$.

T. 10 N., R. 5 W.,
sec. 18, S $\frac{1}{2}$ lot 1 of NW $\frac{1}{4}$, S $\frac{1}{2}$ lot 2 of NW $\frac{1}{4}$, N $\frac{1}{2}$ lot 1 of SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, and SE $\frac{1}{4}$ SE $\frac{1}{4}$;
sec. 20, N $\frac{1}{2}$ NE $\frac{1}{4}$;
sec. 22, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 23, SW $\frac{1}{4}$ SW $\frac{1}{4}$;

sec. 26, S $\frac{1}{2}$ NE $\frac{1}{4}$ and N $\frac{1}{2}$ NW $\frac{1}{4}$;
sec. 27, NE $\frac{1}{4}$ NE $\frac{1}{4}$.

T. 10 N., R. 6 W.,
sec. 4, S $\frac{1}{2}$ SW $\frac{1}{4}$ and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 5, S $\frac{1}{2}$ SW and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 6, SE $\frac{1}{4}$;
sec. 10, S $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, and NE $\frac{1}{4}$ SE $\frac{1}{4}$;
sec. 11, N $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, and S $\frac{1}{2}$ SE $\frac{1}{4}$;
sec. 12, SW $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 10 N., R. 8 W.,
sec. 3, lot 2 of NE $\frac{1}{4}$ and lot 2 of NW $\frac{1}{4}$;
sec. 4, lot 2 of NE $\frac{1}{4}$ and lot 2 of NW $\frac{1}{4}$;
sec. 5, E $\frac{1}{2}$ lot 2 of NE $\frac{1}{4}$.

T. 11 N., R. 8 W.,
sec. 31, that portion of the South $\frac{1}{2}$ described in the Grant Deed from Southern Pacific Land Company to The United States of America, Book 1966, Page 219, Recorded July 23, 1952, in the Kern County Recorder's Office, as those lands in the S $\frac{1}{2}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in a deed to the State of California, recorded in Book 163, page 561 of Official Records in the office of the County Recorder of Kern County;

sec. 32, that portion of the South $\frac{1}{2}$ as described in the Judgement of Declaration of Taking, Book 1995, Page 498, Recorded October 20, 1952, in the Kern County Recorder's Office, lying southerly of the southerly line of the State Highway (U.S. No. 466), 120 feet wide, as said highway is described in a deed to the State of California, recorded in Book 1523, page 69, of Official Records, in the office of the County Recorder of Kern County.

T. 11 N., R. 9 W.,
sec. 31, that portion Lot 2 in the Northwest $\frac{1}{4}$ as described in the Judgement of Declaration of Taking, Book 1995, Page 498, Recorded October 20, 1952, in the Kern County Recorder's Office, as those lands in Lot 2 in the Northwest Quarter lying southerly of the southerly line of the State Highway (U.S. No. 466), 200 feet wide, as said highway is described in deeds to the State of California, recorded in Book 163, page 361, of Official Records, in the office of the County Recorder of Kern County;

sec. 31, that portion of the North $\frac{1}{2}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 200 feet wide, as said highway is described in deeds to the State of California, recorded in Book 163, page 361, of Official Records, in the office of the County Recorder of Kern County, excepting therefrom any portion lying within the Northwest $\frac{1}{4}$ of section 31;

sec. 32, that portion of the Northwest $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 320, page 212, of Official Records, in the office of the County Recorder of Kern County;

sec. 32, that portion of the Southwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 316, page 37, of Official Records, in the office of the County Recorder of Kern County;

sec. 32, that portion of the Southeast $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 323, page 11, of Official Records, in the office of the County Recorder of Kern County;

sec. 33, that portion of the North $\frac{1}{2}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in a deed to the State of California, recorded in Book 316, page 292, of Official Records, in the office of the County Recorder of Kern County;

sec. 33, that portion of the North $\frac{1}{2}$ of the South $\frac{1}{2}$, lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in a deed to the State of California, recorded in Book 316, page 292, of Official Records, in the office of the County Recorder of Kern County;

sec. 34, that portion of the South $\frac{1}{2}$ as described in the Judgement of Declaration of Taking, Book 1995, Page 498, Recorded October 20, 1952, in the Kern County Records Office, as those lands in the S $\frac{1}{2}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 815, page 475 and Book 815, page 477, of Official Records, in the office of the County Recorder of Kern County;

sec. 35, that portion of the South $\frac{1}{2}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 200 feet wide, as said highway is described in deeds to the State of California, recorded in Book 163, page 361, of Official Records, in the office of the County Recorder of Kern County;

sec. 36, that portion of the South $\frac{1}{2}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California.

T. 11 N., R. 10 W.,

sec. 29, that portion of the Southwest $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 323, page 62, of Official Records, in the office of the County Recorder of Kern County;

sec. 29, that portion of the Southeast $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 323, page 62, of Official Records, in the office of the County Recorder of Kern County;

sec. 30, that portion of the Southwest $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 814, page 401, of Official Records, in the office of the County Recorder of Kern County;

sec. 30, that portion of the Southeast $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 814, page 401, of Official Records, in the office of the County Recorder of Kern County;

sec. 32, NE $\frac{1}{4}$ NE $\frac{1}{4}$;

sec. 33, N $\frac{1}{2}$ NE $\frac{1}{4}$, and N $\frac{1}{2}$ NW $\frac{1}{4}$;

sec. 34, N $\frac{1}{2}$ NW $\frac{1}{4}$;

sec. 34, that portion of the North $\frac{1}{2}$ of the Northwest $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), as said highway is described in deeds to the State of California, recorded in Book 1131, page 172, of Official Records, in the office of the County Recorder of Kern County;

sec. 35, that portion of the North $\frac{1}{2}$, lying southerly of the southerly line of the State Highway (U.S. No. 466), 200 feet wide, as said highway is described in deeds to the State of California, recorded in Book 163, page 351, of Official Records, in the office of the County Recorder of Kern County;

sec. 36, that portion of the Northeast $\frac{1}{4}$ lying southerly of the southerly line of the State Highway (U.S. No. 466), 100 feet wide, as said highway is described in deeds to the State of California, recorded in Book 213, page 466, of Official Records, in the office of the County Recorder of Kern County;

sec. 36, the South $\frac{1}{2}$ of the Northwest $\frac{1}{4}$, excepting that portion, if any, of the above described land lying Northerly of the Southerly line of the State Highway (U.S. No. 466), 100 feet wide, as described in a deed to the State of California, recorded in Book 395, page 354 of Official Records, in the office of the County Recorder of Kern County.

T. 11 N., R. 13 W.,

sec. 14, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ and W $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.

G. Maps and Drawings Showing River Crossings

The only river crossed by the existing buried pipeline is the Mojave River illustrated in **Figure 3**.

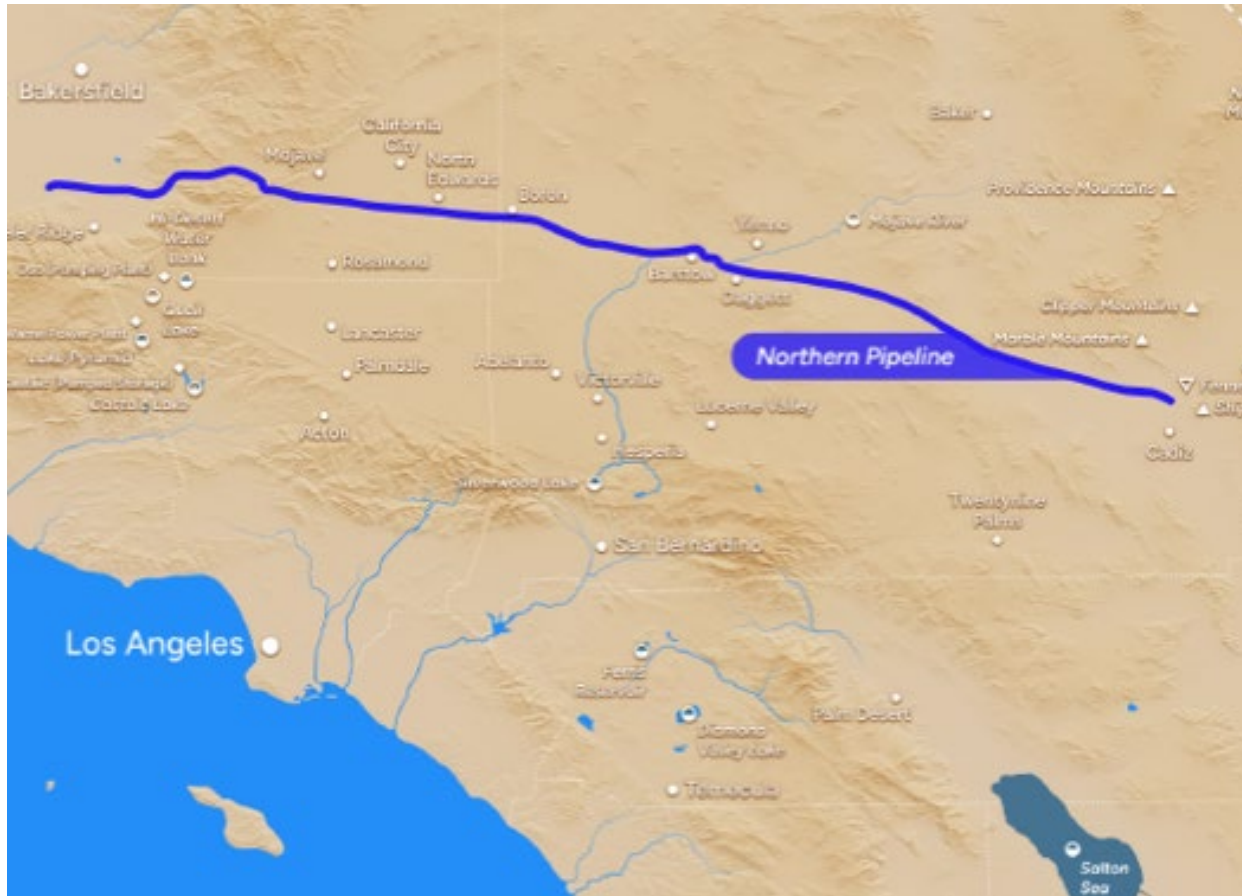


Figure 3: River Crossings along the Northern Pipeline

H. Acre Calculation of the Right-of-Way by Land Status

Based on a 50-foot-wide right-of-way (“ROW”), the total approximate acreages for federal, state and private lands for the 162-mile portion of the Northern Pipeline to be converted for the conveyance of water are shown in **Table 1** below. The portion of the Northern Pipeline crossing BLM-administered public lands subject to the Federal Land Policy and Management Act of 1976 (“FLPMA”) ROW is approximately 53.61 miles long, for a total of approximately 324.90 acres. The portion of the Northern Pipeline crossing EAFB and subject to a proposed easement is approximately 17.81 miles long, for a total of approximately 107.94 acres.

Table 1. Acreage Calculation of the Northern Pipeline Right-of-Way

Land Ownership/Management	Linear Miles	Pipeline ROW Acres	Pump Station Acres	Access Road Acres	Total ROW Acres
Public Lands (BLM – subject to proposed FLPMA Title V ROW Grant)	53.57	324.67	6.18	123.51	454.6
Public Lands acquired by BLM after construction of the Northern Pipeline (not subject to proposed FLPMA Title V ROW Grant) ⁴	11.02	66.79	0	21.81	91.93
Military Lands (subject to proposed EAFB easement)	17.81	107.94	0	36.19	144.13
State (not subject to proposed FLPMA Title V ROW Grant)	1.10	6.67	0	3.06	9.73
Private (not subject to proposed FLPMA Title V ROW Grant)	78.75	477.27	8.08	164.45	646.23
Total	162.26	983.34	14.26	349.02	1346.62

The existing Northern Pipeline on federal lands is currently authorized under a Mineral Leasing Act ROW. The existing Northern Pipeline corridor traverses portions of the Mojave Desert and Antelope Valley, including ungraded native surfaces, dirt roads and paved highways. A portion of the alignment also is within the 368 Energy Corridor. Some segments are more remote and feature varying desert terrain and sparse vegetations. The ROW has been monitored and maintained since 1985 and has achieved a natural, sparsely revegetated desert condition.

III. FACILITY DESIGN CRITERIA

A. Length and width of ROW

The proposed FLPMA ROW is approximately 162 miles long and encompasses 324.91 acres that generally encompasses 25-feet on either side of the existing pipeline, the new pump stations, and

existing access roads on BLM-administered lands as shown in Table 1. The proposed EAFB easement is approximately 107.94 acres, encompassing 25-feet on either side of the existing pipeline.

B. Diameter and material of pipe

The Northern Pipeline is an existing steel pipeline with a nominal inside 30-inch diameter.

C. Depth of the Pipeline

The Northern Pipeline is buried at an average depth of 5 to 6 feet to top of pipe.

D. Size of trench

Excavation trenches accessing the existing pipeline to install valves and connections will be approximately 25 feet wide. Excavation for new gas pipelines will be approximately 6 feet wide.

E. Temporary Areas Needed

Temporary areas needed for construction of related facilities (e.g., pump stations) are described further in Section V, below.

F. Construction equipment requirements

Equipment required for conversion activities will be stored in dedicated areas on private lands in close proximity to the work sites in accordance with local, state and federal rules and regulations.

G. Site Specific Engineering Surveys for Critical Areas

Site specific topographic engineering surveys of the pump station locations and air relief. Blow off valve locations may be required prior to conversion activities.

H. Cathodic Protection Site, Valve Stations, Compressor Stations

Conversion of the existing Northern Pipeline to water conveyance will require the construction of up to seven (7) pump stations. It is currently anticipated that three pump stations will be constructed on BLM-administered public lands and four pump stations will be constructed on private lands. See description in Section V, below.

I. Pipeline Pressure Standards

The Northern Pipeline is an existing steel pipeline with a varying pipe wall thickness of 0.28 to 0.5 inches. The Northern Pipeline has a maximum pressure rating of 700 psi, with an operating range of 300 psi to 600 psi.

J. Toxicity of Pipeline Product

The new FLPMA ROW Grant and EAFB easement will authorize conveyance of water, which is non-toxic.

K. Anticipated Operating Temperatures

Anticipated operating temperatures of the Northern Pipeline range between 70 to 75 degrees Fahrenheit.

IV. ADDITIONAL COMPONENTS OF THE ROW

A. Connection to an Existing Right-of-Way

The Northern Pipeline is a 162-mile portion of the 217-mile idle segment of an existing 1,100 mile buried pipeline, which was previously authorized through a ROW granted to All American Pipeline Company by BLM in 1985 under the Mineral Leasing Act of 1920 (“MLA”). The ROW was assigned by BLM to El Paso Natural Gas Company (“EPNG”) in 2001. The ROW was renewed by BLM in September 2020. BLM partially assigned the ROW to Cadiz Real Estate LLC, the current holder of the MLA ROW, on January 19, 2024 for the portions of the idle segment that cross public lands administered by the BLM and military lands.

Conveyance of water across military lands is not within BLM’s jurisdiction, therefore FGMWC has separately applied to the US Air Force Edwards Air Force Base (EAFB) for an easement for the conveyance of water in the pipeline over lands managed by EAFB. No future components or additional federal ROWs connected to the Northern Pipeline are planned.

B. Need for Sand and Gravel and Where Will It Be Obtained

For portions of the pipeline that require replacement (See Section V.G), the new pipeline will be installed with 6-inch-deep gravel bedding. To reduce the volume of spoils that would need to be disposed of following excavation, native material removed during excavation will be used to surround the new pipeline and up to 6 inches above the pipeline if it is determined to be suitable for this purpose. Final grades will be viewed by the biological monitor to identify and remove potential for wildlife hazards of the final grade. Where feasible, topsoil will be salvaged and staged on site to be placed on top of the filled trench. The remainder of the trench will likewise be backfilled with native material to return to existing grade. If native material cannot be used to backfill the area around the pipeline, then imported sand material (SE30) will be used. For any work on EAFB, all imported material is required to be certified weed-free to meet obligations under EO 13751.

C. Government Agencies Involved

The Northern Pipeline crosses federal, state and private lands. FGMWC will secure all the applicable federal, state, and local permits and approvals prior to any construction taking place. In the event that circumstances necessitate that FGMWC amends the terms included in this Plan of Development, it will work with the appropriate government agencies to ensure all reviews and requirements are satisfied and will ensure that any variances are properly documented through a formal change of management process.

V. FACILITY CONSTRUCTION

A. Brief Description of Construction

The Northern Pipeline is a portion of what was formerly known as the “All-American Pipeline,” a buried 30-inch steel pipeline that was constructed in 1985. As discussed above, FGMWC is not constructing a new pipeline.

FGMWC currently plans to convert approximately 162 miles of the existing Northern Pipeline to water conveyance along two geographical reaches:

- Reach 1. Approximately 96 miles from the wellfield on Cadiz property to a terminus near Barstow, CA (approximately milepost 220 to 130), and
- Reach 2. Approximately 66 miles from Barstow to a terminus in the vicinity of Mojave, CA near the intersection between California State Route (“CR”) 58 and CR 14 (approximately milepost 130 to 65),

There is approximately 70 miles between Mojave, CA and Wheeler Ridge, CA (approximately milepost 70 to 0) (Reach 3) that FGMWC does not propose to convert to water conveyance because FGMWC can access existing water infrastructure for exchange and delivery without converting this portion.

Reach 3 is located entirely on private land, except for a 0.19 mile portion of the pipeline on BLM-administered public land. Should FGMWC seek to convert Reach 3 for water conveyance in the future, it will work with the appropriate governmental agencies to secure all applicable state and local permits and approvals.

To enable the incremental delivery of water to communities along the pipeline alignment, the conversion of the Northern Pipeline will be sequenced to first allow for the delivery of up to approximately 15,000-23,000 AFY through Reach 1 and Reach 2, and subsequently to enable the delivery of approximately 25,000 acre-feet per year through Reach 1 and Reach 2. The phased conversion of the Northern Pipeline will require the following activities within appropriate portions of the pipeline:

- Pipeline inspection
- Flushing
- Hydrostatic Testing
- Rehabilitation (including replacement of pipeline in some locations if deemed necessary based on inspection results)
- Construction of pump stations, requiring facilities approximately two acres per pump station site
- Installation of air release/air vacuum valves (AR/AV) and blow-off (BO) valves along the existing pipeline
- Repair and replacement of existing cathodic protection system along existing pipeline

Each of these construction activities will require minimal vehicle traffic and may require minor material removal.

B. Flagging and Staking

Prior to the start of construction, the location of each pump station, AR/AV valve, and BO valve would be surveyed and staked. In addition, the areas where pipeline replacements will occur will be surveyed and staked. No additional flagging or staking is required for the existing ROW.

C. Clearing and Grading

Vegetation within the existing Northern Pipeline ROW is currently managed in order to protect the existing buried pipeline. Construction of the pump stations and installation of the AR/AV valves and BO valves would require vegetation clearing and grading. However, FGMWC will seek to avoid vegetation removal wherever possible in construction of pump station facilities and AR/AV valve sites. Staging or equipment layout for the construction of the pump stations will take place within the 2-acre area associated with each pump station site and will not require additional land disturbance.

D. Initial Pipeline Inspection

Previous assessments have been performed on the existing 30" diameter pipeline. These assessments have consisted of running diagnostic instrumentation through the pipe to determine if there has been a reduction in pipe wall thickness. Information from these assessments was then used through extrapolation to those sections of the pipe that have not been investigated yet to determine the probable useful life and in an effort to identify where work is anticipated to be needed throughout the life of the project. Based on these assessments, approximately 16 miles of pipe have been identified as needing replacement immediately. The remaining sections of the pipeline have been identified as having variable anticipated life. The portion that has been identified as needing replacement are in areas that are known to have highly corrosive soil with the remaining segments of pipeline being in moderate to minimal ranges of corrosion potential

Additional pipeline integrity testing using "smart pigging" is anticipated to occur in the initial stages of construction. This early construction phase action is advantageous in identifying those areas that may also be in need of replacement. This integrity testing will be performed on the remaining portion of the pipeline that has not been tested within the last 8-10 years. Pig launching sites will require excavation to access pipeline.

FGMWC will inspect the pipeline during design development to identify areas of the pipeline in need of repair or replacement. Engineers will temporarily remove surface material to access the pipeline, cut into the pipe, connect the pipeline to water for flushing, and install cameras and/or other inspection equipment inside the pipeline to assess the pipeline's condition and integrity. Access points for inspection will be located at intervals of approximately 20 to 30 miles. None of the inspection points would be located on EAFB. Each temporary access point will include an area of disturbance approximately 6 feet by 40 feet within the ROW along the pipeline alignment. After inspection and flushing are complete, equipment will be removed, the pipeline will be re-buried, and the ground surface over the pipeline alignment will be returned to existing

grade. Approximately 79 miles of pipeline may be inspected in Reach 1. The inspection process does require small amounts of water to be introduced into the pipe to aid in the inspection activities. This water will be trucked to the location being tested, introduced into the pipe and, following that particular segment's inspection, will be collected and treated in mobile treatment units. The treated water will then be collected in trucks and disposed of in a manner that meets all applicable, local, state and federal regulations. All the work, including equipment staging would be conducted within the 50-foot-wide ROW and on soils previously disturbed by the original pipeline installation. Approximately 6-10 people will perform the inspection. The inspection process is anticipated to take 2 to 6 months to complete.

E. Flushing

Once the pump stations are operational, FGMWC will flush the pipeline as part of the startup and commissioning of both the pump stations and the pipeline. Flushing means that water will be conveyed through the pipeline in order to clean the interior of the pipeline. High quality well water will be used for flushing. Water may be flushed through the pipeline several times over approximately 1 to 2 months. Depending on the location within Reach 1, up to approximately 15 acre-feet of water would be conveyed through the pipeline for flushing over the course of a few hours to determine the water quality at the delivery point. Subject to the appropriate approvals, a holding pond for the retention of flushed water from the conversion of Reach 1 will be constructed on private lands intersecting the pipeline alignment at the terminus of Reach 1 (near Barstow, CA). Following the completion of the conversion of Reach 2, flushed water will either be collected and stored in portable water tanks in the vicinity of Mojave, CA or drained back to the holding pond used for the flushing water from Reach 1. Water used for flushing will be sampled and tested to determine it meets water quality requirements prior to discharge. Approximately 6-10 people will assist with flushing.

Following the pipeline flushing, the water will be drained back to the pump station that feeds that segment of the pipeline. The water will be put into portable holding/treatment tanks and then released to the nearest appropriate manmade receiving station if available or released as a surface discharge to a predetermined and approved location. The water quality will be determined prior to release. If the discharge water meets all the requirements of the receiving entity in the case of discharge to a manmade facility, or to meet the Lahontan Regional Water Quality Board's requirements, the water will be released at a rate that does not cause a negative impact on the receiving location. If the water quality does not meet the standards described above, the necessary treatment will be provided to this water prior to discharge. This treatment may include settling, chemical enhancement or filtration. Due to the high-water quality of the water being conveyed in the pipeline, it is not anticipated that any constituents will exceed discharge requirements. Prior to any of these described planned activities, a general discharge permit will be obtained from the Regional Water Quality Control Board to allow for a surface discharge from the pipeline.

F. Hydrostatic Testing

Hydrostatic testing will be conducted along the pipeline to confirm the integrity of the completed pipeline using the same water used for flushing. Hydrostatic testing consists of filling the pipeline with water at pressure and confirming the pipeline is able to hold the same pressure over

a finite period of time. If additional hydrostatic testing is required, water used for hydrostatic testing will be retained in the same manner as water used in the flushing operation. Subject to the appropriate approvals, a holding pond for the retention of hydrostatic water from the conversion of Reach 1 will be constructed on private lands intersecting the pipeline alignment at the terminus of Reach 1 (near the City of Barstow). Following the completion of the conversion of Reach 2, hydrostatic water will be collected and stored in portable water tanks in the vicinity of Mojave or drained back to the same holding pond being utilized for Reach 1 as described above. Water used for hydrostatic testing will be sampled and tested to determine it meets water quality requirements prior to discharge.

G. Rehabilitation/Replacement

Based on the results of inspections, testing and assessments, FGMWC will take any necessary action to rehabilitate or replace sections of the pipeline as necessary and make it ready for water conveyance. It is currently estimated that approximately 16 miles of pipeline will require replacement along the route. Sections of pipeline removed for inspection pits will be repaired or replaced with a new steel pipeline. Rehabilitation may consist of lining the pipeline, repairing sections of the pipeline, or replacing sections of the pipeline, as required. The amount of time required to complete the rehabilitation of the pipeline will depend on the results of the inspection but would take approximately six to eight months, if it were required. If an area of the pipeline requires rehabilitation or replacement, notice will be provided to the BLM authorized officer or EAFB authorized officer prior to beginning any such work.

Rehabilitation or replacement of pipeline will begin with excavation of a trench in the area(s) that has been identified as needing rehabilitation to expose the pipeline. An access hole will be made in the pipeline, and the contractor will send crews or remotely operated equipment into the pipe to make the necessary improvements. Use of remotely operated equipment on EAFB if needed would require advanced authorization from EAFB. The equipment/crews will be extracted from the pipe, and a blind flange will be welded onto the top of the access hole to allow for a future access point. The excavated soil will be backfilled into the trench, and the surface will be restored to a similar grade as existed prior to the work being performed.

Where the pipe is being replaced, the extents of the replacement will be identified prior to initiating the replacement process. The contractor will excavate a hole in the vicinity of the starting point where the pipe must be replaced. Excavation will require salvage of top soils for re-placement on the surface following backfilling to support restoration. The existing pipe will be cut, and a pipe bend will be installed at this location to provide a connection to the competent remaining pipe. A new 6-foot-wide by 9 to 10 feet deep trench will be excavated to install the new pipe. The new pipe will be installed parallel to the existing pipeline with the outside edge of the pipeline expected to be approximately 2 to 3 feet from the outside edge of the existing pipeline. Once the pipe is installed, both trenches (existing pipe and new pipe) will be backfilled with native soil and the trenches filled back up to match the existing edges of the trenches. This procedure will continue until the identified length of pipe needing replacement is reached. A hole will be excavated at the point that competent existing pipe is identified and a bend installed to allow for the connection between the new pipe and the existing pipe. All of the excavations will be backfilled with native soil with any excess hauled off site and legally disposed of in accordance with applicable local, state and federal regulations. All backfilled soil shall be

compacted back into the trench(es) with soil beneficial to the safety of the pipe then watered down thoroughly to prevent shifting and settling.

H. Pipeline Integrity Monitoring

Once the pipeline is operational, continuous monitoring of pipeline pressures and flow rates will be collected as well as water level elevations in each of the pump station forebays, to determine if leaks are occurring in the pipeline system. Various alarm triggers will be programmed into each of the pump station control programming. These triggers will be set based on calculated flow volumes and pressures that are anticipated to exist at the various operational set points. Depending on the variance between the programmed set point to the actual reading from the field instrumentation, an alarm will be made to alert the operating personnel to the possibility of a leak occurring in the system. If the difference between these two set points is greater than a preprogrammed amount, the pumps that are pumping into that particular segment of pipes will immediately be shut off. This will result in the other pump stations to also be shut off. Restarting of the pumps will have to take place manually to confirm an operator has researched the cause of the alarm(s) and the issue has been rectified.

I. Pump Stations

The conversion of the Northern Pipeline is currently anticipated to involve the construction of up to seven new pump stations along the existing pipeline alignment to deliver approximately 25,000 AFY through Reach 1 and Reach 2. Based on current development plans, this would include the construction of up to five pump stations along Reach 1, including three on public lands and two on private lands, and two pump stations along the Reach 2, which are both expected to be built on private lands. Construction of pump stations 3, 4 and 7 may occur later than the others to ramp up to full capacity over time.

Each of the pump stations will consist of the following typical main components:

- Tank(s)
- Surge Tanks
- Vertical Turbine Pumps or Horizontal Pumps (5 Duty Pumps + 1 Standby Pump)
- Natural Gas Generators
- Electrical Transformers
- An air conditioned electrical and control block wall building housing motor control center, panels, and instrumentation equipment. The building will include roof mounted solar panels to provide power for lighting, ventilation, and AC systems.

Pump Station 1 (to be located on private land) will require approximately 10 acres for siting the pump station, control facilities and storage tanks. The typical area needed to house each of the Pump Stations 2-7 equipment and to allow truck and equipment access to perform maintenance is approximately two acres per location. These pump stations would be located adjacent to the pipeline and would extend approximately 300 feet from the pipeline centerline. Construction crews would employ existing public roads to access the ROW during construction. In the event

that construction crews need to cross public lands to access the proposed pump station locations, FGMWC will work with BLM to secure the necessary authorizations. A preliminary rendering for a typical pump station site layout is shown in **Figure 4**. The color scheme to be used for each pump station located on public lands will be in accordance with Bureau of Land Management standard environmental colors. For those pump stations, AR/AV and BOs located within the Needles Field Office unit, all aboveground facilities would be a painted Covert Green and Shale Green in a matte or non-reflective finish, as shown in the BLM Standard Environmental Color Tool (BLM undated). For those facilities within the Barstow Field Office unit, the colorization would be Covert Green and Carlsbad Canyon, also in a matte or non-reflective finish.



Figure 4. Preliminary Rendering for a Typical Pump Station Site Layout

The pump stations would be powered by natural gas-driven electric generators to energize the pumps' electrical motors. The pump stations would require a combined generation capacity of approximately 50,000 horse-power incorporating either internal combustion engines, linear generators, or other technologies with reduced emissions. The generators would be delivered to each pump station site and installed within the two-acre pump station footprint. Permits from the Mojave Desert Air Quality Management District (MDAQMD) would be needed to both construct and to operate the engines.

For each pump station, natural gas would be accessed from an existing natural gas pipeline that parallels the Northern Pipeline. To access the natural gas, a small pipeline would be extended from the new pump station to the parallel gas pipeline, generally a distance less than 100 feet. The gas pipeline would be accessed through excavation and a tap installed on the natural gas pipeline, in coordination and with approval from the gas pipeline owner and operator. For any

pump stations constructed on private parcels, it is anticipated that the gas pipeline tap and connection would be constructed within the right-of-way or on private lands owned by the gas pipeline owner/operator, not federal land outside the right of way.

Construction of the pump stations would require up to 20 one-way worker trips, 10 vendor trips, and 24 haul truck trips per day. Construction of each pump station is anticipated to take approximately 9 months to one year depending on the availability and procurement time of pumps and major equipment. Construction will include site preparation, installation of underground pipelines to connect to the existing buried pipeline, and installation of reinforced concrete support pads for pumps, valves, tanks, and other infrastructure. Each pump station site will be paved with a combination of concrete surface (PCC), pervious all-weather material or ¾-inch crushed rock and a fence or wall will be constructed around the perimeter with access gates. The natural gas-powered generators would be installed on pads within the pump station fenceline. During construction, 3 to 5 trucks could be present at the site at one time. Additional construction equipment such as excavators and cranes may also be used for some construction elements. Construction crews will access pump station locations using existing public roads along the pipeline alignment. At any given time, approximately 7 to 10 people could be involved with the construction of each pump station.

Due to the remote locations of the various pump stations, it is anticipated that all portions of the project that can be constructed in a modular fashion will be fabricated offsite and trucked to the facilities for installation at the various pump stations. This will aid in reducing costs associated with lost work time due to travel, improve uniformity and quality of the finished project. The construction of the pump stations will involve site specific site preparation activities at each of the pump station sites. This will include performing rough grading that will prepare the site for the construction of the various facilities to be located at that specific pump station, and will also include some grading to protect the site from surface flows during construction.

Once the site is graded, it is anticipated that the underground piping will be installed along with underground electrical conduit runs thereafter, boundary fencing consisting of a masonry block wall, or similar construction, is expected to be installed to provide security for the site during construction, and will also assist in providing the facilities long-term protection from surface water flows.

Building foundations, the power island and the reservoir/forebays will then be constructed followed immediately by the construction of the building and the reservoirs. Once these facilities are all completed, the modular components of piping and electrical equipment and the roof will be installed. Outdoor night lighting would be required during construction which would, in some cases, occur 24 hours a day. Worker housing areas and nighttime security lighting within staging areas would increase light temporarily in the area during the construction period. Once in operation, the pump stations may be equipped with permanent lighting used during infrequent nighttime maintenance activities. No security lighting will be needed. The final efforts will be the completion of the site work and then proceeding to the commissioning efforts for each pump station. It is anticipated that these work segments will take place sequentially along the pipeline alignment with the crew responsible for the initial site work completing this work at Pump Station 1 then moving to Pump Station 2 while the underground crew moves into Pump Station 1 to begin that effort and so on throughout the project.

J. Air Release/Air Vacuum Valves and Blow-offs

FGMWC will retrofit the existing pipeline to add Air Release / Air Vacuum valves (“AR/AV”), which will allow for air release and manage vacuum conditions in the pipeline, and Blow-offs (“BO”), which will allow for filling and draining the pipeline as needed for maintenance. The existing pipeline includes several valves; FGMWC will maintain these existing valves and add additional valves. A total of 140 new AR/AVs and 140 new BOs will be installed in Reaches 1 and 2. The exact location of these appurtenances would be determined during final design but they are expected every ½ mile in Reach 1 and 2, except no AR/AVs or BOs are anticipated on EAFB military lands, as the area is relatively flat without change in grade or elevation. To access the AR/AV’s and BOs, construction crews will use existing public roads coupled with the existing pipeline access road along the pipeline alignment.

Combination AR/AVs approximately 3 to 4 inches in size would be located at high points along the pipeline and other locations as required to safely operate the pipeline.¹ These valves allow trapped air in the pipeline to be released during normal operation and allow large volumes of air to be purged while the pipeline is being filled with water. The AR/AVs also allow air to enter the pipeline while the pipeline is being drained for maintenance procedures.

BOs typically involve 6-inch valves and drain lines located at low points along the pipeline to drain the pipeline if maintenance or repairs are required. Use of the BOs would occur rarely, only when the pump stations were turned off due to maintenance or malfunction. Water within the pipeline would need to be released to prevent inundating the downstream pump station(s). Each BO would be equipped with a subsurface discharge area that is sufficient to accommodate the volume of water being discharged from the section of pipe being drained. The subsurface dispersal system, which is similar to a leach field, would consist of multiple 4-inch diameter, perforated pipes installed in an area approximately 24 feet by 250 feet. The BO water would be introduced into the perforated pipes using a controlled flow rate and would be released to percolate into the soil.

For construction of appurtenances, excavation will be required to install a tapping sleeve on the existing pipeline with outlets at low points of the pipeline for BOs and at the high points of the pipeline for AR/AVs. Buried isolation ‘gate’ or ‘butterfly’ valves would be installed at these outlets. The area of excavation is estimated at 20-feet-long by 24-feet-wide by up to ten-feet-deep at each location. The AR/AV assembly would be mounted at grade in a 24-inch diameter enclosure that is approximately 4-feet-tall.

The BO unit will consist of an operator nut within an 18-inch diameter concrete ring, which has an extended shaft down to the buried 6-inch valve. Downstream of the 6-inch buried BO valve a solid 6-inch pipe will feed into a manifold system of up to four 4-inch diameter perforated pipes that will be installed parallel to the Northern Pipeline. These pipes will be wrapped with a geofabric followed by the 1-foot-wide trenches will be backfilled with native soil. The backfill will be installed to bring the surface of the trench back up to match the existing surface topography. FGMWC would minimize visual impacts of both the BO and AR/AV elements to

¹ See, e.g., American Water Works Association Standard C512-07: Air-Release, Air/Vacuum, and Combination Air Valves for Waterworks Service.

the extent possible. For instance, BOs can terminate below grade in small precast vaults accessible from the surface. These vaults would be approximately 3 feet deep and enclosed in a 2-foot by 3-foot box. AR/AVs can also be installed belowground in precast vaults with a 3 to 4-inch vent pipe extending approximately 12 inches above grade, which can be painted to blend with surrounding environment and reflective tape or a reflective paint stripe may be added in areas of high off-highway vehicle traffic to improve with the intent of improving visibility to off-highway-vehicles within 50 feet. **Figure 5** shows an example of a typical above grade AR/AV.



Figure 5. Typical Air Release/Air Vacuum Valve at Grade

Proposed AR/AVs and BOs will be installed along the existing pipeline, within the right-of-way. The surface area typically needed for a completed AR/AV assembly is approximately 36 to 50 square feet. The surface area needed for a completed BO valve is approximately 8 to 16 square feet, plus the leach field that would be approximately 6,000 square feet.

Installation of each AR/AV and BO could take approximately 1 week per location. AR/AVs and BOs could be constructed concurrently along the pipeline with other construction activities before the pipeline is put into service. All of the work would be conducted within the 50-foot-wide ROW. Two to three trucks may be required at each location along with excavators. A crew of approximately 3 to 5 people may be required at each location for excavation, installation, and backfill operation.

K. Cathodic Protection Repair

FGMWC will repair and/or replace the existing cathodic protection system along Reaches 1 and 2 of the pipeline based on the results of the pipeline and cathodic protection inspection. No cathodic protection replacements will occur on EAFB. Where it is necessary to replace and install anodes connected to the existing pipeline, a 12- to 18-inch temporary trench may be needed to access the pipeline. The trench would be backfilled once the repair is complete and soil would be compacted and watered down. Old and defective cathodic protection equipment

currently mounted above grade near the pipeline may be replaced as necessary. These repair activities will occur concurrently with other construction activities and could last throughout the entire construction phase. Repairs will be conducted by approximately 3 to 5 people and 2 to 3 trucks at each repair location. All of the repair work would be conducted within the 50-foot-wide ROW.

L. Workforce

FGMWC anticipates a total average of approximately 10 construction personnel working on a given day during the construction period for each Reach. During specific activities, there could be as many as 20 construction personnel on a particular workday such as those days when concrete or masonry block is being placed or significant pieces of equipment are being delivered and installed. Crews will likely work concurrently on the conversion activities outlined above and estimated deployment and number of crew members would vary depending on factors such as material availability and construction scheduling. In general, construction efforts would occur in accordance with accepted construction industry standards.

M. Facility Construction Data (Description of Construction Process)

Information about construction required to convert the existing buried pipeline to water conveyance is summarized in Sections V.A.

N. Access to the ROW During Construction

Construction crews would employ existing public roads to access the ROW during construction. No new access roads or improvements to existing roads are anticipated at this time.

O. Engineering Drawings and Specifications for Site-Specific Problems Relating to Surface Use or Special Mitigation

No site-specific problems relating to surface use or special mitigation have been identified.

P. Diagrams, Drawings, and Cross Sections to Help Visualize the Scope of the Project

The Northern Pipeline is an existing buried pipeline. The scope of the existing pipeline is depicted in **Figure 1**.

Q. Special Equipment That Will Be Utilized

No special equipment will be utilized.

R. Contingency Planning

Efficient and accurate communications during construction is essential. The BLM Authorized Officer (“AO”) is the primary contact for all activities. Prior to construction activities on any portion of public lands, a FGMWC Representative will notify the AO. No activities are anticipated on EAFB. The AO shall also be the contact in emergency maintenance situations

during BLM office hours. However, when the AO cannot be reached, FGMWC will contact the local BLM representative where the emergency exists. When an emergency arises after hours and/or on weekends, the AO will be notified the next normal workday.

If an unplanned release of water occurs from the pipeline or any of the pump station sites, the pumps would be shut off to minimize the amount of water released. Once the emergency is mitigated, the Regional Water Quality Control Board will be notified of the unpermitted spill and the appropriate reporting steps will take place to determine what, if any, corrective measures will need to take place.

S. Holder Contacts

For general inquiry or correspondence:

- 1. Applicant Contact:**
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1. BLM Contacts

Name: _____
Title: _____
Phone: _____
Email: _____

2. EAFB Contacts

Name: _____
Title: _____

Phone: _____
Email: _____

T. Safety Requirements

In the performance of construction activities, FGMWC will require that all employees and contractors adhere to applicable federal, state, and local safety requirements. All construction contractors will be required by FGMWC to meet numerous contract performance standards, including health, safety, security and environmental (“HSSE”) standards.

1. Traffic Control

All construction work where members of the public may be recreating shall be signed according to the *Manual on Uniform Traffic Control Devices for Streets and Highways* (U.S. Department of Transportation, Federal Highway Administration, 1988) and applicable Department of Transportation (“DOT”) standards as well as the requirements of the State of California.

2. Accident Reports

During BLM office hours, FGMWC shall notify BLM, as soon as practicable, that an accident occurred during construction, to either FGMWC employees, a member of the public, or to the environment. After hours, and on weekends, the appropriate sheriff's office will be notified, and BLM will be notified the next normal workday. FGMWC will provide a copy of the accident report to BLM. For accidents on EAFB, FGMWC shall also contact EAFB.

U. Industrial Wastes and Toxic Substances

The purpose of the Project is to facilitate the transportation of water through the existing Northern Pipeline. No hazardous materials will be used or transported in the Northern Pipeline. Any solid waste generated during construction activities would be hauled off site and disposed of at appropriate permitted waste collection facilities. Small volumes of hazardous materials would be present to support construction equipment and vehicles (e.g., ethylene glycol, oil, transmission/hydraulic fluids) and used for emergency maintenance. Storage of hazardous materials on EAFB land is not authorized. Since no pump stations would be located on EAFB lands, no hazardous materials storage would occur on EAFB. All hazardous materials would be stored, handled, and disposed of in accordance with applicable local, state, and federal hazardous material statutes and regulations. On-site materials storage, fueling, and vehicle maintenance areas would be equipped with secondary containment and spill containment equipment. A Spill Prevention and Response Plan will be developed to minimize the potential for small spills or leaks. The Plan will be tailored for each facility and include the following components:

- Identification of potential spill or source areas such as loading and unloading, storage, and processing areas and areas designated for waste disposal.
- Identification of individuals responsible for implementing the plan.
- Description of safety measures to take with each kind of waste.

- Procedures for notifying appropriate authorities, such as police and fire departments, hospitals, or publicly owned treatment works.
- Procedures for notifying BLM and EAFB
- Procedures for containing, diverting, isolating and cleaning up the spill.
- Description of spill response equipment that staff should use, including safety and cleanup equipment.
- Storage of spill response supplies in easily accessible locations and in staff vehicles.
- Identification of a contractor for larger spill response.
- For spills on private property, procedures to collect cleanup and abatement costs from the responsible party.
- Procedures to document spills and spill response.

The Plan establishes on-site controls of possible contaminants and requires on-site availability of absorbents and other spill cleanup materials. Because the quantities of materials used would be relatively small, potential spills also would be small and more easily contained than on a larger construction site. The potential for a spill to reach surface water or to migrate below the surface of the land to groundwater would be minimal. The contractor would have the standard requirement to implement onsite controls of possible contaminants and to have available absorbents and other spill cleanup materials.

1. Waste Disposal

All forms of refuse and waste produced from activities of employees, agents, or contractors along the ROW will be collected and disposed of in a designated landfill or appropriate waste disposal site.

Refuse and waste is defined as any discarded material, trash, garbage, packing material, containers, waste petroleum products, broken equipment, used parts, excess construction materials including waste rock and excess excavation, or human waste.

2. Fuels and Lubricants

Construction equipment used in the conversion of the existing Northern Pipeline to water conveyance will not be refueled or maintained within stream or drainage channels, wetlands, or floodplains. No equipment will be re-fueled within 300 feet of any wetland or waterway without prior approval of BLM. All equipment will be regularly inspected for leaks. Any significant leaks detected will be promptly corrected. During fueling operations, personnel will prevent overfill of equipment. Absorbent materials will be kept at the work site to clean up and contain spills. Vehicles and equipment with leaks will have drip pans, heavy plastic sheeting or other containment devices placed on the ground beneath them as a preventative measure to contain any potential spills, and the vehicle or equipment will not be used until the leak is corrected.

3. *Prevention of Oil Spills and Contamination*

FGMWC shall not dispose of any oil, oil products or petroleum containers on public lands. Appropriate preventive measures shall be taken to ensure that any such spill of oil or oil products does not enter any stream or other waters of the United States. In accordance with the Spill Prevention and Response Plan, FGMWC shall notify BLM (and EAFB if spill occurs on EAFB property) if a spill does occur, and cleanup will be in accordance with all applicable federal and state laws.

VI. RESOURCE VALUES AND ENVIRONMENTAL CONCERNS

Construction of infrastructure needed to utilize the pipeline for water conveyance will be consistent with applicable laws and regulations, which may include but are not limited to:

- Endangered Species Act
- National Environmental Policy Act (“NEPA”)
- California Environmental Quality Act (“CEQA”)
- National Historic Preservation Act and other cultural resource protection laws
- California Desert Protection Act
- Clean Water Act
- Clean Air Act
- Wilderness Act
- Sikes Act
- Federal Executive Orders and Congressional Mandates
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act

Impacts to listed species and waters of the U.S. and State would be avoided where feasible. Construction of necessary infrastructure would be subject to applicable regulations, which would ensure that impacts to sensitive species and habitats, including waters of the U.S., would be minimized. Compliance with CEQA and NEPA review requirements would demonstrate if project would have the potential to result in significant impacts on any of the following environmental resources: air quality; visual resources; surface and groundwater quality and quantity; streams or other waterbodies; the surface of the land, including vegetation, permafrost, soil, and soil stability; historic or archaeological resources or properties; or populations of fish, plant life, wildlife, and marine life, including threatened and endangered species. Mitigation measures identified in the CEQA and NEPA documents to avoid or minimize impacts would be implemented. Routine maintenance activities would be conducted in accordance with applicable laws and regulations using the best management practices described herein to minimize impacts. FGMWC will comply with mitigation measures and best management practices to avoid

sensitive resources where feasible, including by minimizing vegetation removal and avoiding special status species including desert tortoises. A full assessment of potential environmental effects of constructing and operating the proposed project is included in the Environmental Assessment prepared by BLM to comply with NEPA. The Environmental Assessment includes impact Avoidance and Minimization Measures (AMMs) as conditions of approval to minimize potential environmental effects.

VII. STABILIZATION, REHABILITATION AND REVEGETATION

A. Soil Replacement and Stabilization

Following the physical conversion of the existing Northern Pipeline to water conveyance, any disturbed areas would be revegetated and stabilized using BLM approved erosion control measures (e.g., earthen or belted waterbars, drain-dip, filter fence, straw bales, slash filter windrow, slash mats, etc.) prior to seeding. Although no disturbance is planned on EAFB associated with the conversion activities, a Habitat Restoration Plan compliant with the EAFB Habitat Restoration Plan (HRP) would be prepared and implemented with EAFB approval for any future proposed disturbance on EAFB.

B. Disposal of Vegetation Removed During Construction and Maintenance

FGMWC shall be responsible for disposing of slash (branches, boles) and other debris created as a result of vegetation clearing, logging, or other activities. Slash shall be treated to meet applicable BLM and State standards for hazard reduction. Unless otherwise directed by BLM, the following standards shall apply:

- In areas where either hand crews and/or mechanized equipment methods are employed, slash shall be cut to lengths not to exceed three (3) feet with a diameter of two (2) inches and shall be scattered evenly with slash depth not to exceed one (1) foot. (per agency direction).
- All tree stumps shall be cut as to not to exceed a height of six (6) inches from the ground measured.
- All culverts, ditches and other drainage structures shall be cleared of all slash and debris resulting from ROW operation and maintenance activities.

C. Seeding Specifications

The soil on areas to be seeded shall be left in a roughened condition favorable to the retention and germination of the seed; usually ½ inch of surface soil shall be in a loose condition. BLM, depending upon the disturbed area, may also prescribe scarification, fertilizing, and/or mulching. An approved Seed Mix will be obtained from BLM. No work shall be done during extremely windy or rainy weather. No seed shall be applied to frozen ground. Seeding shall occur within 7 days of final disturbance, unless otherwise directed by BLM. Areas that do not achieve adequate cover may require additional scarification and reseeding and fertilizing. For disturbance on EAFB land, a Habitat Restoration Plan compliant with the EAFB HRP would be prepared and approved by EAFB. Use of fertilizers is not permitted on EAFB.

1. Noxious Weed Control

FGMWC will be responsible for the prevention and control of noxious weeds associated with its facilities and as stated in the ROW. Following construction, FGMWC will control invasive species for a period of two years in areas disturbed by construction activities. After two years, additional monitoring may be required in certain areas as recommended by a qualified botanist to ensure infestations are controlled as feasible. Crews will remove non-native plant species from the construction areas using handheld equipment, including rakes, shovels, weed trimmers, hoes, and other similar tools. Weed removal methods will be minimally disruptive and will comply with BLM and EAFB standards. If herbicide application is needed, it will be applied twice per year for two years in areas affected by invasive weeds in conformance with all applicable regulations. In addition, all effort shall be made to minimize and control the spread of noxious weeds by power washing all off road equipment (backhoes, etc.) prior to being moved onto public lands. No equipment washes on public lands shall be allowed. Equipment washes may be required between Field Office jurisdictions if one jurisdiction has a noxious weed not common to the other jurisdictions.

2. Pesticide Use

FGMWC does not anticipate the usage of pesticide in connection with the conversion of the Northern Pipeline to water conveyance. However, if the use of pesticides becomes necessary, FGMWC shall obtain a Pesticide Use Permit from BLM prior to any application. Any use of pesticides or herbicides on EAFB shall conform with EAFB plans and policies in coordination with EAFB.

D. Fertilizer

FGMWC will apply BLM-approved fertilizer if prescribed by the agency. Use of fertilizers is not permitted on EAFB.

E. Limiting Access to the ROW

Access is important to the maintenance and integrity of the pipeline facilities. No public access is allowed on EAFB land. Any maintenance or inspection crew access on EAFB land would be required to obtain approval from EAFB through base access approval process. Non US citizens are not permitted on EAFB land.

BLM access roads and trails that are open to the public receive considerable recreational traffic throughout the year. Roads and trails shall not be blocked for more than 30 minutes, except with BLM approval or in an emergency. FGMWC will permit free and unrestricted public access to and upon its linear ROW for all lawful purposes, unless otherwise designated as restricted by BLM. Access to the pump station locations will be limited for security and operational purposes. BLM officers will be authorized to enter.

F. Reclamation of Roadways Built for Access During Construction

No new roadways will be built for access during construction.

VIII. OPERATION AND MAINTENANCE (O&M)

A. Operation

Once the pump stations and associated appurtenant facilities are installed, water will be conveyed through the Northern Pipeline in either direction, depending on the water supply requirements of the participating off-takers. The Northern Pipeline is expected to be operated year-round.

Under normal operations, water will be pumped sequentially between pump stations, beginning at Pump Station 1, located at the wellfield. Water pumped from Pump Station 1 will be conveyed to Pump Station 2, where it will be received in a storage tank that serves as a forebay for the Pump Station 2 pumps. This same process will occur between each subsequent pump station.

This pump-and-forebay sequence will continue through Pump Station 6. Water pumped from Pump Station 5 will be received in a storage tank at Pump Station 6. At that point, depending on system demands and the designated delivery location, the water will either be pumped onward to Pump Station 7 or delivered to the existing local or regional water distribution system in the Barstow area near Pump Station 6.

If water is ultimately conveyed to Pump Station 7, it will first be stored in a tank at Pump Station 6 that serves as the forebay for the Pump Station 7 pumps. From Pump Station 7, water will be conveyed to the general vicinity of the town of Mojave for final delivery. In Mojave, the water may be discharged to surface spreading basins, treated and introduced into the local or regional water distribution system, or treated (if required by the receiving water facility) and introduced into the State Water Project (SWP) system.

The number of duty pumps operating at any given time in each of the pump stations will depend on the volume of water requested by end users. During periods when an end user is unable to receive water, pumping rates will be reduced accordingly to match offtake demand. Overall flow rates and pumping volumes will be determined by end-user demands and water delivery orders.

All water demands and associated flow rates will be managed through a central control center described below. Daily operational parameters, including pumping rates and specific pump operation schedules, will be programmed into the system's control software to ensure coordinated and efficient operation of the pipeline.

Centralized SCADA System

The operation of the Northern Pipeline will be managed using a dedicated Supervisory, Control and Data Acquisition (SCADA) system that will be located in a central control room either at Pump Station 1 or Pump Station 6 site. This SCADA system will control the number of pumps that are operating within the system as well as all of the support facilities such as valves, surge control equipment and forebays. In addition to controlling the operation of the mechanical equipment, the SCADA system will monitor the operation of the system by analyzing the data being received from each of the pump stations and the pipeline. This will

include operating parameters of the pump stations including but not limited to: on/off status of the pumps, individual pump speeds, individual pump motor temperatures, flow rates from the various flow meters on the outlet side of each pump station, pressures on the inlets and outlets of each of the pumps, receiving water reservoir/forebay water levels, and open/closed status of the various valves on the inlet and outlet side of the pumps.

It is anticipated that there will be three operators that are working during the day. One that will be located at the command center and the other two located such that they are able to visit each of the pump stations at least once a day. The work performed on this semi-daily basis will be to confirm the operational readiness of the pump stations, troubleshoot minor problems as they arrive, provide minor maintenance activities such as regular site inspections of the mechanical and electrical equipment, general housekeeping, painting, instrumentation calibrations and adjustments as outlined in the Maintenance Section below.

The centralized SCADA system will also remotely provide security conditions for each of the distant pump stations through the use of intrusion alarms, photographic and motion sensors and video feeds. If activity is detected, an alarm will be given which will alert the lead operator on-duty to the situation. The lead operator will then determine if non-desirable activities are occurring and take appropriate action to address the situation.

In addition to operations monitored from Pump Station 1's centralized SCADA system, operators will be able to connect remotely to the system allowing for 24/7 monitoring and control. This will give the operators the ability to respond quickly in the event of an operational emergency, including allowing for any or all of the pumps to be shut off using the system. This remote capability will also allow for adjusting the flow rate based on operational demands. Each of the pump stations will also have a local on-site SCADA system connection that allows for viewing the operational status of each of the other pump stations.

Leak Prevention

As a part of the ongoing operation of the system, leak prevention and detection will be a priority. Information will be continuously collected from remote sensors on the pipeline and the individual pump station reservoirs to monitor leaks or other related operational issues. The pressure sensors will be set to indicate an alarm if there are deviations in the pipeline pressure outside of predetermined set points which could indicate a possible leak. Should an alarm condition be identified, the pumps will be shut off, and a physical inspection of the system will take place. Flow meters will be installed at each pump station to measure the actual flows in the pipe with the indicated values being continuously compared to the flow rate(s) that the pump station is programmed to provide. If the indicated flow rates do not match the programmed set point, this may be an indication of a leak, the pumps will be shut off, and a physical inspection of the system will take place as soon as possible. Ongoing maintenance measures, outlined in more detail below, will also include driving the pipeline alignment at least once a month to allow for visual inspection of the ground surface to evaluate indications of possible pipe leaks such as wet areas and corroborate remotely collected data.

B. Maintenance

Maintenance Overview

After the conversion process, the water conveyance pipeline and related support facilities (e.g., valve sites, pump stations, pig facilities, cathodic protection units) will require periodic maintenance to remain in operation. These maintenance actions would include routine inspections to confirm operational conditions. These actions may include, but are not limited to the following:

- 1) regular inspection of the pipeline corridor for pipe exposure and leaks, including inspection and evaluation after any geological hazard activity;
- 2) perform periodic internal inspection and tracking of “smart pigs”;
- 3) regular inspection of the condition of valve sites and deep well or horizontal anode beds;
- 4) regular evaluation of above-ground support equipment, including centerline markers, Cathodic Protection Units (CPUs), and valve sites;
- 5) repair and maintain valves, anode beds, and CPUs as needed;
- 6) selective placement of additional CPUs to reduce pipe corrosion rates;
- 7) monitor, repair and maintain pump stations; and
- 8) blading/grubbing, mowing or trimming to clear vegetation from existing maintenance roads and repair of maintenance road segments due to washouts, erosion, or other damage.

In addition to these regular maintenance activities, certain construction type activities may need to be performed during the course of annual maintenance depending on outcomes during routine inspections of the pipeline’s and the pump stations’ integrity.

Classification of O&M Activities

FGMWC has grouped the proposed conversion, operations and maintenance activities into Classes I through V, which are defined as:

- Class I: Activities that do not result in new surface disturbance;
- Class II: Activities that result in minimal surface disturbance within the previously disturbed 50-foot ROW or the pump station sites;
- Class III: Activities that result in major surface disturbance within the previously disturbed 50-foot ROW or the pump station sites;
- Class IV: Activities that result in major surface disturbance beyond the previously disturbed pipeline ROW corridors or the pump station sites; and
- Class V: Unscheduled emergency repairs.

The distinction being made between the classes recognizes different levels of risk associated with types of surface disturbance. All activities that result in major surface disturbance (Class

III and IV) would be scheduled unless they are an emergency action (Class V). This classification system also recognizes that failure to carry out emergency repairs would have the potential to risk human health and safety and must be allowed to proceed unimpeded.

A variety of routine maintenance activities generally considered as Class I and Class II would likely occur on a regular and/or daily basis on different portions of the pipeline system. Except as noted, under these classes of activities, workers would use pick-up trucks equipped with tools or instruments appropriate for the given task.

Class I: Activities that do not result in new surface disturbance

Inspections/Surveillance

Inspection of the pipeline, centerline markers, deep well and horizontal anodes, valves, CPUs and the pump stations is necessary and required to identify possible encroachments, erosion, exposed pipe, and any other concerns that might affect the safety and operation of the pipeline and its ancillary facilities. These activities could occur on a daily basis on different portions of the pipeline system. The pipeline would be inspected a minimum of every 9 months, at least twice a year at highway and railroad crossings, and at least once a year at all other locations. Valves two inches and larger would be inspected at least annually. Pump stations will be inspected at least once per week.

Pipeline inspections would be conducted from the air, by vehicle, and on foot as operating conditions permit, but no less frequently than required by applicable regulatory requirements or described previously. The purpose of surveys would be to identify areas where the pipeline has become uncovered. Field personnel would advise the appropriate operations personnel of new land use changes along or near the pipeline system. Pipeline inspections at highway and railroad crossings would be completed as required by the USDOT or other governing agencies. Surveillance would also include periodic inspection of surface water crossings for correct depth of cover and indications of erosion.

Replace Markers

Due to damage or theft, aerial markers require periodic replacement. The replacement of markers may involve the excavation of a small hole with a posthole shovel or drill and placement of concrete post foundation to ensure stability. Repair typically takes less than one day using a pickup truck and hand tools.

Standby Monitoring

Provide onsite personnel during excavation within the 50' easement of the utility, whether mechanical or hand digging.

Pump Station Maintenance

An operator will attend each pump station at least once per day to perform various tasks. The operator performing his/her rounds will drive a large pickup truck to the pump station on public highways to access points to the access road. These tasks include the observation, servicing and documenting of the following:

- The condition of the mechanical equipment associated with each of the pump station sites will be assessed. This includes the pumps, piping, valving, and the surge mitigation systems. This work would be performed by a single worker in one pickup truck. This will be done on a minimum of once per week basis.
- The condition of the reservoir/forebays associated with each of the pump stations including review of all of the exterior piping and connections. This work would be performed by a single worker in one pickup truck. This will be done on a once-per-month basis.
- The condition of the building, including the roofing, doors, walls and the protective coatings on exterior and interior walls, piping and mechanical equipment and maintaining these items as needed. This work would be performed by a single worker in one pickup truck. This work will be done on a twice a year basis.
- The condition of the electrical and instrumentation equipment. Verification that instruments are indicating the correct information. Calibration of instrumentation may be required on a periodic basis to ensure the correct information is being provided to the SCADA system. This work would be performed by a single worker in one pickup truck. This will be done on a minimum of once per week basis.
- Confirm the proper operation of the communication and security systems, make adjustments or replacements as necessary. This work would be performed by a single worker in one pickup truck. This will be done on a minimum of once per week basis.
- Maintain all of the outside yard areas including the removal of weeds, debris, trash and elimination of graffiti. Confirmation of the proper operation of the exterior lighting and the security systems in place. This includes the exterior of the walls and the access gates. This work would be performed by a single worker in one pickup truck. This will be done on a once-per-month basis.
- Maintain all power generation equipment once per month. The typical work effort consists of replacing internal seals. Based on the time required to replace a seal and the number of anticipated generators, it is anticipated that this work will require 4 days per month to perform. This work will be performed by a single individual in one pickup truck.
- Periodic replacement of major equipment will be required. This work is expected to include the pumps, the major electrical switch gear, the VFD's and possibly the valves and piping. When these major replacements are necessary, there will be a crew of 3 to 5

people, each driving a separate vehicle including pickup trucks, a flatbed truck and a boom truck. It is anticipated that this level of activity will occur once a year, over a one-to-two-week duration.

Reports

Provide an annual report of 811 Dig Alert, maintenance, and rectifier logs.

Consulting

Provide information, feedback and planning for future pipeline work or construction.

Class II: Activities that result in minimal surface disturbance

ROW Maintenance

The permanent pipeline ROW would be maintained only as required to facilitate visual inspection and access. Surface disturbance would be required to maintain access and remove intrusive vegetation around facilities such as valves to reduce fire danger.

Access Road Maintenance

Access road repair would typically be performed after heavy storms. Access roads are within the ROW or immediately adjacent to and parallel to the pipeline to facilitate inspection and maintenance. Blading may be required to remove minor washouts and wash boarding and to maintain a vegetation free route. This activity would involve a motor grader, backhoe, and/or a front-end loader. FGMWC anticipates that access road repair, involving 2 employees or contract personnel, could require up to 10 days per year to complete. An average year might require 2 to 3 miles of access or patrol road repairs.

Install or Maintain Cathodic Protection Units

CPU units exist along the pipeline. Additional CPU installation may be needed to retard corrosion rates along the pipeline system. Installation includes: placement of a 30-foot-high wooden pole with a mounted electrical meter rectifier box where commercial power is available; an overhead power line connecting the pole to an existing electrical line; one deep well anode bed approximately 12 inches by 500 feet deep drilled within a 20-foot by 30-foot pad; and an underground conduit, approximately 20 feet in length, connecting the existing pipeline, anode bed, and rectifier. Each CPU installation would affect less than 0.5 acre. Installation would involve the use of one or two trucks and require approximately five working days. CPU maintenance would involve the replacement of any of the components described. FGMWC expects to add or replace one CPU on this system in a typical year.

Class III: Scheduled activities that result in major surface disturbance

Maintenance may include activities resulting in ground disturbance depending on the results of annual inspection of the integrity of the pipeline system.

Aboveground Facility Construction, Upgrade and Maintenance

Activities covered under this category of construction include: 1) valve installations, upgrades, and removals; 2) pump station upgrades and removals; 3) pig launcher/receiver/signal installations, removals, and upgrades; and 4) installation of cathodic protection test stations. The majority of these activities would be performed at distinct work areas along the length of the pipeline (i.e. at locations of any initial pipeline replacement, the seven pump stations, and air release and blow off valve sites). It is expected that these activities would be performed within the originally disturbed 50-foot ROW or pump station footprint.

Valve Installation, Upgrade and Removal:

Valve installation, upgrade, and removal would require construction techniques that expose the pipe/valve in question. In each case, work would involve salvage of top soils, clearing and grading of the construction area, excavation and drenching, removal of the pipeline segment, welding in a new replacement pipeline segment, burial at the existing pipeline depth, replacement of topsoil, recontouring of the site (to include berms that reduce velocity of water on sloped areas of the ROW), installation of silt fences and other sediment barriers around sensitive resources, application of locally salvaged mulch if available in areas that require wind erosion control, and reseedling of the disturbed site with native seed mixtures recommended by the BLM AO and local soil conservation organizations. Straw mulch would not be utilized on EAFB. For disturbance on EAFB land, a Habitat Restoration Plan would be prepared and approved by EAFB.

Maintenance activities could include the replacement or upgrade of valves. It is not anticipated that more than five valves will need to be replaced during the first ten years of maintenance given expected useful lifespan of the equipment. All activities at these valve locations would be limited to a 250 x 24-foot pre-marked work area within which all vehicles and equipment would remain. Approximately 5 people would be required onsite for the ARV and BO valve work. Heavy equipment use at the work site could include backhoes, track backhoes, boom trucks, fuel trucks, skid trucks, water trucks, water trucks, and dump trucks.

Cathodic Protection Test Stations:

The installation of the Cathodic Protection Test Stations (CPTS) includes the use of one backhoe and one crew truck. A dump truck would only be required when the pipe is located in a rocky formation to provide sand to re-cover the pipeline. The location of a typical CPTS is directly above the pipe and would be accessed by existing access roads. CPTS stations will be located approximately one per mile along a pipeline, except that no CPTS would be installed on EAFB. When possible, minimum vegetation removal is required. Two to four CPTS can be installed per day. The pipe is exposed by the use of the backhoe to a point where an employee can connect a standard wire set to the pipe. Trench opening size is based on regulations of the California Occupational Safety and Health Administration. The area of temporary ground disturbance would be approximately 100 square feet per installation. The pipe would then be covered leaving the wires exposed. The wire is placed in a two-inch tube that is exposed two feet above the ground and capped. Installation of CPTs would be performed during initial

conversion of the pipeline and would result in less than 0.5 acres of disturbance. No CPTSS would be installed on EAFB.

Belowground Upgrades and Maintenance

Pipeline Tie-ins:

Replacement, upgrade or maintenance of pipeline tie-ins would involve the same construction and restoration techniques used for any pipeline replacement installation. A pipeline tie in would be up to a 300-foot segment of pipe that would connect a new pump station into the existing pipeline. There will be a total of three tie-ins on public lands performed. The tie-in would be installed immediately adjacent to the metering/pumping facility that is being constructed on private land. All project maintenance activities related to these tie-ins would be limited to an approximate 1.4-acre pre-marked work area within which all vehicles and equipment would remain. If work related to maintaining or replacing a tie-in is required, approximately 20 to 30 people would be required onsite to perform this work. Heavy equipment may be required for tie-in replacement work.

Pipeline Segment Replacement and Pipeline Coating Inspections:

Pipeline segment replacement would require the same type of equipment and materials as valve work, including restoration work following backfill. During initial conversion of the pipeline to water conveyance, two pipeline segments are expected to be replaced. Crew sizes for installation or replacement of pipe will depend on the length of pipe being laid down. A typical replacement would take approximately 50 workers. Equipment used for pipeline segment replacements would be identical to those used in valve installations/replacements.

During annual maintenance activities, inspection of segments of pipeline may be necessary in certain areas to ensure that pipeline coatings are intact. Initial inspection of a pipeline segment would be made using a backhoe to excavate small “test” or “bell” holes along the pipeline segment to expose the pipe. This activity typically would involve pick-up trucks, a flatbed truck/trailer or dump truck with trailer, a backhoe, a trailer-mounted compressor, barricades, and plastic fencing. Pipe inspections would require two to four employees, would last for approximately two to five days, and would disturb 200 to 2,000 square feet of pipeline ROW per year. Should initial test indicate that the outer pipe coating requires replacement, the entire affected line segment would be exposed and repaired or replaced to prevent leaks caused by pipe deterioration. As an alternative to replacement of line segments that have damaged coatings, FGMWC may decide to install anode flex on the affected pipeline segment. Anode flex is a cathodic protection device that is installed by trenching next to the pipeline and installing a cathodic lead anode wire over the length of the pipeline needing cathodic protection. Anode flex can be installed parallel to the pipeline from several thousand feet to several miles. It is typically buried to a depth of 4 to 8 feet deep using a narrow blade. The surface disturbance is very minimal. Equipment required to install the anode flex is a water truck and trailer and several utility trucks. A typical pipeline repair lasts approximately 20 days, depending on the technique used for repair, and results in similar temporary disturbances described for pipeline segment replacement during initial conversion. All work areas associated with pipeline inspections and pipeline segment replacements would be within the previously disturbed ROW.

FGMWC anticipates that only one segment of pipe will need to be repaired or replaced during the first 5 years of maintenance. Significant replacement is not anticipated to be required due to the continued use of cathodic protection along the full alignment of the pipeline and the current condition of the pipe which is anticipated to have an additional 50 years of remaining service life.

Installation of Magnesium Anodes.

Should routine cathodic protection surveys reveal an isolated pipeline segment with low pipe-to-soil electrical potentials, magnesium anodes would be installed. In addition to pick-up trucks with equipment specific to the task, this activity would involve a flatbed truck/trailer or dump truck with trailer, and a backhoe. Installation of magnesium anodes, which are installed at the same depth as the pipeline, would require three workers for approximately one day. FGMWC anticipates that three to six such installations would be necessary each year. Each installation could affect about 20 square feet. These anodes would be co-located with AR/AV valve or BO locations. This activity could occur as a part of annual maintenance activities. Up to 60 magnesium anodes may need to be installed over the next 10 years.

Installation of Magnesium Anodes.

Deep well anodes are installed 200 to 600 feet below the surface. Installation requires a truck-mounted drilling rig and pick-up trucks with equipment specific to the task. An area approximately 30 feet by 60 feet would be permanently fenced with a 6-to-7-foot chain-link fence and electricity (either from an existing circuit or from a photovoltaic source) would be required for the anode. In addition to a three-man drilling crew, FGMWC anticipates that deep well anode installation would require four employees, last for approximately four to six days, and temporarily disturb approximately 1,000 to 5,000 square feet of pipeline ROW. This activity could occur as a part of annual maintenance activities. No more than five of these anodes will need to be replaced during the first 10 years of pipeline maintenance. The locations of new anodes will be provided to BLM prior to installation. No anodes would be installed on EAFB.

Class IV: Activities that may extend outside the pipeline ROW corridors

This class of activities could include any of the previously mentioned actions that would extend beyond the ROW, plus creation of staging or laydown areas and equipment stockpile and spoils-pile deposition areas, and therefore require additional authorizations for activities affecting federal lands. The extent of disturbance outside of the existing pipeline ROW would vary with the project and depend upon ROW width, topography, layout, and other factors. Typically, less than 0.5 acre outside of a pipeline ROW would be disturbed per activity.

Installation or Replacement of Horizontal Anodes

Should existing, shallow-depth CPUs prove incapable of maintaining desirable pipe-to-soil electrical potentials over a long pipeline segment, horizontal anodes would be installed. Horizontal anodes parallel the pipeline 400 to 800 feet from the ROW centerline and are installed at approximately the same depth as the pipeline. In addition to pickup trucks with equipment specific to the task, this activity would involve a welding truck, flatbed truck/trailer

or dump truck with trailer, a backhoe, a lowboy trailer, a tractor cat-loader, and water truck. Typically, horizontal anode installation would require five employees, take five to seven days, and disturb 1,000 to 5,000 square feet. This type of maintenance activity would be needed infrequently (less than once per year).

Class V: Unscheduled emergency repairs

FGMWC anticipates that fewer than 5 Class IV activities will need to be completed during the first 10 years of pipeline maintenance. These activities may include the installation of horizontal anodes described above in the Class IV category.

Emergency Repairs

To ensure public safety and service reliability and to protect the environment, emergency repairs may be necessary in the event of pipeline leaks or breaks, exposure of the pipeline due to erosion, and/or if access roads are severely damaged by storms. These activities would usually involve a backhoe and/or bulldozer, motor grader, and possibly other heavy earth-moving equipment. FGMWC anticipates that road repair activities would require two to five employees and three to five days to complete per incident. Pipeline leaks or breaks would involve equipment similar to those identified under the preceding *Pipeline Segment Replacement and Pipeline Coating Inspection* section. FGMWC anticipates that most emergency situations would affect less than 0.5 acres, although the actual area will depend on the nature of the emergency.

Emergency Leak Excavations

Following a leakage survey indicating escaping water, a portion of the pipe would be excavated for visual inspection and those areas on the surface that may have been impacted from the escaping water will be repaired. In addition to pickup trucks, this activity would typically involve a flatbed truck/trailer or dump truck with trailer, a water truck, a backhoe, a trailer-mounted compressor, barricades, and plastic fencing. Should workers find a leak, four additional trucks with welding machines would be required. FGMWC anticipates that pipe inspections would require four employees, last for approximately five days, and disturb 1,000 to 2,000 square feet of pipeline ROW. Once the below-ground work is completed and the area backfilled to match the surrounding surfaces, those surface areas that may have been impacted by escaping water from the initial leak will also be recontoured to match the pre-leak conditions in a similar manner as described above for backfilled areas. In instances where a leak was confirmed, four additional workers and four to five additional days beyond the initial excavation activities would be necessary to complete repairs.

C. Access

No new or expanded access will be needed for operation and maintenance. The existing pipeline will continue to be accessed from public roads. No public access is allowed on EAFB land. Any maintenance or inspection crew access on EAFB land would be required to obtain approval from EAFB through base access approval process. Non US citizens are not permitted on EAFB land. If any photography is required on EAFB land, a formal request must be submitted to EAFB at least 30 days in advance. All photos must be reviewed and approved prior to use in any form (in reports, slides, etc.)

FGMWC will be responsible for road and gate maintenance necessary for related activities of the pipeline facility following practices described in the appropriate Resource Management Plans, road restoration, and damage to other natural resource features resulting from routine, emergency and major maintenance activities, and other use and occupancy of the ROW. This responsibility also extends to damage caused by unknown parties, at locations where FGMWC has maintenance responsibilities. Road maintenance shall be commensurate with FGMWC use and includes road surface replacement, drainage structures, and other road improvements. Structures or facilities such as bridges, gates, guard rails, fences and signs which are damaged as a result of FGMWC operation and maintenance activities shall be repaired or replaced to the satisfaction of BLM on BLM-manage lands and by EAFB on EAFB lands.

Damage will be repaired as soon as weather, ground, and scheduling conditions permit. Immediate temporary erosion control (e.g., filter fence, straw bales, slash filter windows) will be conducted where soil displacement or sedimentation by erosion is likely.

D. Pipe/Pump Removal or Addition

Pump stations will be constructed to convert the pipeline to convey water in Reach 1 and Reach 2. No additional pumps would be required as part of pipeline maintenance.

Any pipe or appurtenance that is replaced shall either be removed from public lands as soon as replacement is complete or abandoned in place only if approved by BLM. If abandoned in place, the pipe shall be treated in a manner acceptable to the BLM Authorized Officer for activities on BLM-managed lands and by EAFB on EAFB lands.

E. Will All Maintenance Activities be Confined Within the ROW?

Maintenance activities are expected to be confined within the ROW, including the pipeline corridor and limited adjacent lands containing ancillary facilities, such as pump stations. For Class IV maintenance activities, discussed above, authorization would be obtained as appropriate for activities that may extend outside of the ROW and affect federal lands.

F. Safety

Consistent with 43 CFR 2805.12, FGMWC will comply with applicable requirements to control and to prevent damage to public health and safety in the performance of maintenance activities on the pipeline and related facilities. Facilities will be designed to minimize public safety risks. Signage will identify areas of restricted access.

1. Traffic Control

All maintenance work where members of the public may be recreating shall be signed according to the *Manual on Uniform Traffic Control Devices for Streets and Highways* (U.S. Department of Transportation, Federal Highway Administration, 1988) and applicable Department of Transportation (“DOT”) standards as well as the requirements of the State of California.

2. *Accident Reports*

During BLM office hours, FGMWC shall notify BLM, as soon as practicable, that an accident occurred during the performance of operation and maintenance, to either FGMWC employees, a member of the public, or to the environment. After hours, and on weekends, the appropriate sheriff's office will be notified, and BLM will be notified the next normal workday. EAFB will be notified for accidents on EAFB lands. FGMWC will provide a copy of the accident report to BLM and EAFB.

G. *Industrial Wastes and Toxic Substances*

The Northern Pipeline will convey water, a non-hazardous substance. Under normal operations, the only industrial wastes and toxic substances generated or stored on the ROW would include fuel for maintenance vehicles and equipment.

1. *Waste Disposal*

All forms of refuse and waste produced from activities of employees, agents, or contractors along the right of way will be collected and disposed of in a designated landfill or appropriate waste disposal site. On-site waste collection containers shall be raven-proof.

Refuse and waste is defined as any discarded material, trash, garbage, packing material, containers, waste petroleum products, broken equipment, used parts, excess construction materials including waste rock and excess excavation, or human waste.

2. *Fuels and Lubricants*

Maintenance equipment will not be refueled or maintained within stream or drainage channels, wetlands, or floodplains. No equipment will be re-fueled within 300 feet of any wetland or waterway without prior approval of BLM.² All equipment will be regularly inspected for leaks. Any significant leaks detected will be promptly corrected. During fueling operations, personnel will prevent overfill of equipment. Absorbent materials will be kept at the work site to clean up and contain spills. Vehicles and equipment with leaks will have drip pans, heavy plastic sheeting or other containment devices placed on the ground beneath them as a preventative measure to contain any potential spills, and the vehicle or equipment will not be used until the leak is corrected.

3. *Prevention of Oil Spills and Contamination*

FGMWC shall not dispose of any oil, oil products or petroleum containers on public lands. Appropriate preventive measures shall be taken to ensure that any such spill of oil or oil products does not enter any stream or other waters of the United States. Under the Spill Prevention and Response Plan, FGMWC shall notify BLM if a spill does occur and cleanup will be in accordance with all applicable laws.

² FGMWC is not aware of any wetlands or waterways within the ROW.

H. Inspection and Maintenance Schedules

Inspections and maintenance of the pipeline will be conducted on the ground. The existing pipeline will continue to be accessed from public roads.

1. Routine Maintenance

Routine inspections and maintenance of local pipeline conditions will generally occur over a period of several days on a quarterly basis to assure that outside circumstances do not interfere with the safe transmission of water through the pipes and that the structural integrity of the line is maintained. Activities may include, but are not limited to, tree trimming as they grow over the ROW area,³ weed abatement and any small-scale work necessary to protect any FGMWC facilities.

The pump stations will be equipped with pressure and flow sensors that will immediately indicate a major system failure or break. The system will begin an automatic shutdown process to isolate the affected area. Personnel will be promptly mobilized to evaluate and repair any failure.

Routine maintenance activities are generally accomplished by a small number of locally based employees or contractors using hand tools and chainsaws, on an as needed basis to remove problem vegetation. Additional activities may include the use of trucks, a backhoe or other small equipment to replace or repair portions of associated structures on an as needed basis. Typical equipment used for routine maintenance may include backhoes, graders, dump trucks, chipper/shredder machines, dozers, cranes, reach lifts, welding trucks, and water trucks for dust control. Weed abatement will comply with BLM and EAFB guidance pursuant to the Invasive Plant Management Plan.

2. Major Maintenance

Major maintenance activities include major ROW clearing or other operations using heavy equipment for new installations, line relocations, road construction, etc. Typical equipment used for major maintenance activities may include backhoes, trackhoes, graders, welding trucks, belly dumps, cranes, reach lifts, boring equipment, and water trucks for dust control.

If major maintenance activities are planned, FGMWC will provide BLM or EAFB with a periodic work progress schedule so that BLM and EAFB inspections can proceed at a regular pace with the work being performed. However, no major maintenance is anticipated at this time. Separate authorization would be required for major maintenance, including complex work activities on a larger scale that can be planned in advance, requires prior notification to and coordination with BLM and EAFB, and may require environmental analysis prior to the commencement of work.

When major maintenance activities (as defined above) are planned on EAFB land, FGMWC will submit a Department of the Air Force (DAF) Form 813 at least 60 days prior to the scheduled activity, for additional environmental analysis of the proposed major maintenance activity.

³ The ROW is sparsely vegetated and tree trimming is anticipated to be minimal.

EAFB will provide FGMWC with a set of Environmental Management Measures, that shall be complied with prior to and/or during the proposed activity

3. *Emergency Maintenance*

Emergency maintenance involves unexpected work usually created by natural events such as erosion, windstorms, snowstorms, fire or flood that interrupt transmission of water through the pipeline. This often involves a potential risk to life or property or a higher level or complexity of maintenance that cannot be considered routine and requires work that must be accomplished in an expedient manner in order to ensure damage to FGMWC facilities is repaired and to remove safety hazards. This may involve replacement of multiple sections of pipe and appurtenances and/or the removal of vegetation. Nighttime work would be avoided when feasible. FGMWC will notify EAFB Environmental Management personnel for each emergency event on EAFB land.

I. Work Schedules

Work schedules during the operation and maintenance (O&M) of the pipeline would vary depending upon the O&M activity being performed; generally, O&M activities would be performed from 7:00 a.m. and 7:00 p.m., Monday through Saturday; however, at limited times some O&M activities along the pipeline may be required or finished after these hours, and on Sundays.

A typical maintenance work crew consists of one SUV or truck and a crew of two to three staff. Numbers of workers will depend upon the work being done and will involve appropriate staff for the task. Maintenance workforce will consist of FGMWC employees and contractors and will be housed at existing facilities such as workforce housing at the Cadiz property, hotels or organized campgrounds. If publicly managed campgrounds are used, FGMWC will obtain approval for such use prior to the usage. No maintenance camps (living facilities) will be developed on public lands.

J. Fire Control

FGMWC will take appropriate fire prevention and suppression measures in conjunction with its maintenance activities on the ROW. FGMWC shall comply with local, state, and federal Forest Fire Regulations and guidelines. Failure to comply may result in a temporary shutdown of all non-compliant maintenance activities until compliance is attained. Prior to the start of each job an assessment will be made to determine safe access to the site to ensure no fire hazards are created while accessing the site and at the site. Before the start of work each day, the area will be assessed for any fire hazards, and any findings will be communicated to the crew during the tailgate safety meeting. During cutting and grinding activities there will be designated employees with fire extinguishers for fire watch, immediately adjacent to the work site. The water truck designated for dust control will be on site during any heat generating activities and will be utilized for fire emergencies. All onsite powered equipment will meet applicable requirements for spark arresting exhaust systems.

K. Contingency Planning

Efficient and accurate communications during routine maintenance is essential. The BLM Authorized Officer (“AO”) is the primary contact for all activities. Prior to routine maintenance activities on any portion of public lands, a FGMWC Representative will notify the AO. The AO shall also be the contact in emergency maintenance situations during BLM office hours. However, when the AO cannot be reached, FGMWC will contact the local BLM representative where the emergency exists. When an emergency arises after hours and/or on weekends, the AO will be notified the next normal workday.

If an unplanned release of water occurs from the pipeline or any of the pump station sites, the pumps would be shut off to minimize the amount of water released. Once the emergency is mitigated, the Regional Water Quality Control Board will be notified of the unpermitted spill and the appropriate reporting steps will take place to determine what, if any, corrective measures will need to take place.

IX. THIRD-PARTY MONITORING

FGMWC will fund a BLM third-party compliance monitoring program during the construction phase of the Project. Under this program, a third-party contractor is selected by, managed by, and reports solely to BLM staff to ensure the Project complies with all applicable requirements during construction. The contractor will track all environmental compliance progress, report any noncompliance issues to BLM and EAFB for work on EAFB lands, and work with FGMWC and, as necessary, BLM and other agencies to achieve resolution of noncompliance issues, should they arise. In addition to this program, FGMWC staff will conduct compliance inspections and implement all the requirements described in the ROW grant, this POD, and any other decision requirements, mitigation, and other environmental protection measures required for the Project, during all phases of construction, operation and decommissioning, as necessary.

FGMWC will endeavor to identify and designate tribal representatives to participate in Project-related construction including as tribal monitors during construction. Tribal monitoring would allow local tribes to provide direct input at the initiation of and during construction activities and monitor all efforts to avoid impacts to any cultural resources.

X. TERMINATION AND REHABILITATION

At the end of the ROW term, decommissioning, restoration, and reclamation will be completed by the Applicant in compliance with all applicable federal, state, and local requirements in effect at the time. A Reclamation Cost Estimate is currently on file at BLM in connection with the Northern Pipeline ROW grant under the Mineral Leasing Act of 1920. An updated Reclamation Cost Estimate including the facilities approved under the FLPMA will be submitted by the Applicant to BLM and EAFB as soon as practicable.

At the end of the ROW term, if the ROW is not renewed, all of the pump stations and surface features would be dismantled and equipment recycled or disposed of off-site. All building

materials and fencing would be removed. To minimize ground disturbance and impacts to vegetation, it is expected that the existing pipeline will be cleaned and abandoned in place.

