



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

January 8, 2019

MEMORANDUM FOR RECORD

SUBJECT: MFR for determination of presence of jurisdictional waters within the Yellow Pine Solar Project (Regulatory Division SPK-2016-00121)

1. **Background:** An Approved Jurisdictional Determination for the 4,649 acre Yellow Pine Solar Project site was requested on December 7, 2018. The project area, which is comprised of Bureau of Land Management-administered lands within Townships 21 and 22 South, Range 55 East, approximately 10 miles southeast of Pahrump Nevada, is located within the Pahrump Valley. Guidance regarding tributaries to interstate waters indicates that tributaries to these waters will be assessed to determine if more than a speculative or insubstantial physical, biological, and/or chemical connection to the interstate reach of the channel in question exists using the criteria used to define the significant nexus standard. The current approved jurisdictional determination form does not address interstate waters or their tributaries, hence an MFR was deemed an appropriate method for evaluating the potential significant nexus to interstate waters.
2. **Location:** Within the boundaries of the Yellow Pine Solar Project Area. The approximately 4,649 acre project site is located at Latitude 36.0625°, Longitude - 115.8005°, 10 miles southeast of Pahrump, in Clark County, Nevada (enclosure 1). The channels within the project area, identified as Washes 1-7, flow into a dry lakebed on the California side of the interstate border, and are the subject of this MFR.
3. **Site Conditions:** The Pahrump Valley region of Nevada near Pahrump receives approximately 4-8 inches of annual precipitation. The project area is located within an area of desert mountain terrain, with the dominant vegetation being shrubs and grasses. The soils range from gravelly to sandy loam, with a high degree of permeability. The California Basin, the primary drainage in the watershed, is an isolated, dry lakebed. It is not a TNW, nor does it connect to a TNW. It does, however, drain several interstate channels adjacent to the project site, where the waters cross the California/Nevada state line 9 miles downstream of the project area. As such, these drainages would be interstate waters in the reaches at which they cross state lines, and would therefore be considered jurisdictional waters subject to Section 404 of the Clean Water Act.

Within the project area there are no wetlands. The 12 ephemeral drainages within the survey boundary that are the subject of this MFR vary in stream order from first to fourth.

4. **Basis for Jurisdictional Determination:** The applicant provided a delineation report to the Corps on December 7, 2018. Conditions within the site were determined to be typical for the time of year in which the data was collected.

The drainages associated with this MFR are being evaluated for a significant nexus to interstate ephemeral drainages.

Wash 1: Wash 1 enters the northwestern edge of the site as a first order ephemeral channel, and continues off the project site, where it reaches a point of confluence with Wash 2, creating a second order channel. The second order channel continues for approximately 6 miles before it crosses the California/Nevada state line. Wash 1 has an Ordinary High Water Mark (OHWM) and bed and bank features for 4,836 linear feet within the project area – the OHWM continues through the second order channel and crosses the state line.

Wash 2: Wash 2 enters the northwestern edge of the site as a first order ephemeral channel, and continues off the project site, where it reaches a point of confluence with Wash 1, creating a second order channel. The second order channel continues for approximately 6 miles before it crosses the California/Nevada state line. Wash 2 has an OHWM and bed and bank features for 6,862 linear feet within the project area – the OHWM continues through the second order channel and crosses the state line .

Wash 3: Wash 3 enters the northwestern edge of the site as a first order ephemeral channel, and continues off the project site where it diverges and meets with two separate second order channels. Both second order channels continue for approximately 6 miles before they cross the California/Nevada state line. Wash 3 has an OHWM and bed and bank features for 8,941 linear feet within the project area – the OHWM continues through the second order channels and crosses the state line.

Wash 4: Wash 4 originates in the southwestern corner of the site as a first order ephemeral channel, and continues off the project site, where it reaches a point of confluence with Wash 4a, creating a second order channel. The second order channel continues for approximately 5 miles before it crosses the California/Nevada state line. Wash 4 has an OHWM and bed and bank features for 3,865 linear feet within the project area – the OHWM continues through the second order channel and crosses the state line.

Wash 4a: Wash 4a originates in the southwestern corner of the site as a first order ephemeral channel, and continues off the project site where it reaches a point of confluence with Wash 4, creating a second order channel. The second order channel continues for approximately 5 miles before it crosses the California/Nevada state line. Wash 4a has an OHWM and bed and bank features for 1,146 linear feet within the project area – the OHWM continues through the second order channel and crosses the state line.

Wash 5: Wash 5 originates within the northeastern corner of the site as a first order ephemeral channel, and continues off the project site where it reaches a point of confluence with an unnamed second order channel (the channel formed by the confluence of 4 and 4a). After this point of confluence, the channel continues for approximately 5 miles before it crosses the California/Nevada state line as a second order channel. Wash 5 has an OHWM and bed and bank features for 13,003 linear feet within the project site – the OHWM continues through the second order channel and crosses the state line.

Wash 5a: Wash 5a is portion of channel created where Wash 5 braids around an eyot and reconnects within the project site. This first order channel continues offsite, where it reaches a point of confluence with an unnamed second order channel. After this point of confluence, the channel continues for approximately 5 miles before it crosses the California/Nevada state line as a second order channel. Wash 5a has an OHWM and bed and bank features for 1,234 linear feet within the survey area – the OHWM continues through the second order channel and crosses the state line.

Wash 6: Wash 6 enters the northeastern edge of the site as a first order ephemeral channel. Within the survey area, Wash 6 reaches a point of confluence with Wash 6c, and 6b, and 6a further downstream. It leaves the survey area as a second order channel, and continues for approximately 5 miles before it crosses the California/Nevada state line. Wash 6 has an OHWM and bed and bank features for 17,187 linear feet within the survey area – the OHWM continues through the second order channel and crosses the state line.

Wash 6a: Wash 6a enters the northeastern edge of the site as a first order ephemeral channel. Within the survey area, Wash 6a reaches a point of confluence with Wash 6, a second order stream at this point. After flowing out of the southern edge of the site, the unnamed wash continues for approximately 5 miles before it crosses the California/Nevada state line as a second order channel. Wash 6a has an OHWM and bed and bank features for 8,045 linear feet within the survey area – the OHWM continues through the second order channel and crosses the state line.

Wash 6b: Wash 6b enters the northeastern edge of the site as a first order ephemeral channel. Within the survey area, Wash 6b reaches a point of confluence with Wash 6, a second order stream at this point. After flowing out of the southern edge of the site, the unnamed wash continues for approximately 5 miles before it crosses the California/Nevada state line as a second order channel. Wash 6b has an OHWM and bed and bank features for 6,783 linear feet within the survey area – the OHWM continues through the second order channel and crosses the state line.

Wash 6c: Wash 6c enters the northeastern edge of the site as a first order ephemeral channel. Within the survey area, Wash 6c reaches a point of confluence with Wash 6, another first order stream at this point. The confluence of Wash 6 and 6c form an unnamed second order stream. After flowing out of the southern edge of the site, the unnamed wash continues for approximately 5 miles before it crosses the California/Nevada state line as a second order channel. Wash 6c has an OHWM

and bed and bank features for 2,656 linear feet within the survey area – the OHWM continues through the second order channel and crosses the state line.

Wash 7: Wash 7 enters the northeastern edge of the site as a first order ephemeral channel. Upon exiting the southern edge of the survey area, it continues for approximately 5 miles before it crosses the California/Nevada state line as a first order channel. Wash 7 has an OHWM and bed and bank features for 15,252 linear feet within the project area – this OHWM continues as Wash 7 crosses the state line as a first order channel. Within the project area, Wash 7 is an interstate water.

While storm events that result in water flows within these channels between Nevada and California are infrequent, they are of such an intensity that they have created continuing OHWM and bed and bank features throughout the entirety of the subject drainages, connecting them to the unnamed interstate channels. Though the tributaries within the project area are ephemeral, and as such, do not support or have suitable habitat for aquatic species, during major storm events there is the capacity to transfer nutrients and organic carbon to support downstream food webs. These drainages, where there is a connection, also have the capacity to carry pollutants, sediments, or flood waters to the interstate waters. Further, the federally endangered desert tortoise's range covers this region and Washes 4 and 5 may be conducive for use for tortoise burrows.

In summary, Wash 7 is an interstate water and Washes 1, 2, 3, 4, 4a, 5, 5a, 6, 6a, 6b and 6c within the project area have been determined to have more than a speculative or insubstantial nexus on the chemical, physical and/or biological integrity of the unnamed interstate drainages. These drainages are (a)(5) jurisdictional waters in those locations where OHWMs are exhibited within the project area (enclosure 2).



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Enclosures