APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October 28, 2019

В.	Channels D1, D2, D5, D6, D7 and Midas Creek
⊠ diff	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Nevada County/parish/borough: Elko County Center coordinates of site (lat/long in degree decimal format): Lat. 41.23476°, Long116.77407° Universal Transverse Mercator: 11 518933.3 4564843.51 Name of nearest waterbody: Midas Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Rye Patch Reservoir Name of watershed or Hydrologic Unit Code (HUC): Rock, 16040106 Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a erent JD form: Wetlands Spring 5 and Spring 7, Channels D3, D4, D8, D9, D10, D11, D12 and Squaw Creek are sumented on a separate JD form.
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☑ Office (Desk) Determination. Date: October 28, 2019 ☐ Field Determination. Date(s):
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	ere Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) he review area. [Required] Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	ere Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area.
	 Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): ¹

a.	indicate presence of waters of 0.5. In review area (check all that apply):
	TNWs, including territorial seas
	Wetlands adjacent to TNWs
	Relatively permanent waters ² (RPWs) that flow directly or indirectly into TNWs
	Non-RPWs that flow directly or indirectly into TNWs
	☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
	Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
	Impoundments of jurisdictional waters
	☐ Isolated (interstate or intrastate) waters, including isolated wetlands
	· · · · · · · · · · · · · · · · · · ·

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 22,092 linear feet, 1-3 feet wide, and/or 0.75 acres. Wetlands: N/A acres.

c. Limits (boundaries) of jurisdiction based on: Established by OHWM

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

☑ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 888 **Square miles**Drainage area: 259,200 acres
Average annual rainfall: 12.45 inches
Average annual snowfall: 40 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are **30 (or more)** river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 30 (or more) aerial (straight) miles from TNW.

Project waters are 1 (or less) aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: No

Identify flow route to TNW⁵: D1 and D2 drain directly to Midas Creek an RPW. D5 and D6 Drain directly to D7, D7 drains directly to Midas Creek. Midas Creek drains directly to the Humboldt River which flows directly into Rye Patch Reservoir (TNW) at a distance of approximately 120 miles.

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Trib	•	⊠ Natural □ Artificial (man-made). Explain: □ Manipulated (man-altered). Ex	φlain:	
	utary properti Average width Average dept Average side	h: 2 feet	mate):	
	nary tributary s ☑ Silts ☐ Cobbles ☐ Bedrock ☐ Other. Exp	substrate composition (check all the Sands Gravel Vegetation. Type/% o		☐ Concrete ☐ Muck
Pres Tribu	ence of run/rituation	n/stability [e.g., highly eroding, slou ffle/pool complexes. Explain: No y: Meandering (approximate average slope): 1 %		iks]. Explain: eroding
Estir Describe annual precip	 utary provides mate average flow regime: itation ranges		ntirely on	2-5 snowpack in the surounding Mountains. Mean onger-term variations in annual precipitation
Othe	er information	on duration and volume:		
Surfa	ace flow is: di	screte. Characteristics: In respor	se to pre	cipitation, no evidence of baseflows.
		Jnknown . Explain findings: ner) test performed:		
		check all indicators that apply): natural line impressed on the bank es in the character of soil g tion matted down, bent, or absent er disturbed or washed away ent deposition staining	⊠ dest ⊠ the p ⊠ sedin ⊠ scou □ multi	presence of litter and debris ruction of terrestrial vegetation presence of wrack line ment sorting ir iple observed or predicted flow events pt change in plant community
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):			extent of CWA jurisdiction (check all that
	High Tide ☐ oil or so ☐ fine sho		☐ s ☐ p	n High Water Mark indicated by: urvey to available datum; hysical markings; egetation lines/changes in vegetation types.
(iii) Chemical Characteristics: Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Identify specific pollutants, if known:				

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

	(iv)		Riparian corridor. Characte Wetland fringe. Characteri Habitat for: ☐ Federally Listed specie ☐ Fish/spawn areas. Ex	es. Explain findings: plain findings: -sensitive species. Explain	n):	
2.	Cha	aract	eristics of wetlands adja	cent to non-TNW that flow	w directly or indirectly into	TNW
	(i) Physical Characteristics: (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:					
		(b)	General Flow Relationship Flow is: Pick List . Explain			
			Surface flow is: Pick List Characteristics:	ı		
			Subsurface flow: Pick Lis Dye (or other) test			
		(c)	Wetland Adjacency Deter ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hy ☐ Ecological connect ☐ Separated by berm	ydrologic connection. Expl ion. Explain:	ain:	
		(d)	Project waters are Pick L Flow is from: Pick List.	o TNW List river miles from TNW ist aerial (straight) miles fro ation of wetland as within the	om TNW.	
	(ii) Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:					
	(iii) Biological Characteristics. Wetland supports (check all that apply): Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings:					
3.	Cha	All ۱	wetland(s) being considere	djacent to the tributary (if d in the cumulative analysis total are being considered	s: Pick List	
		For	each wetland, specify the	following:		
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: D1, D2, D5, D6 and D7 on attached maps Appendix A Map 1 are ephemeral channels that flow into Midas Creek, a perennial RPW. These channels have a continuous OHWM and flow only in response to direct precipitation. During ephemeral flow events these channels flow and transport pollutants, including sediment, and floodwaters to the Rye Patch Reservoir, the downstream TNW through Midas Creek, which flows into the Humboldt River, which flows into Rye Patch Reservoir a TNW. D1, D2, D5, D6 and D7 did not have any flow at the time of the investigation by the consultant, all of these channels had evidence of at least ephemeral flows with the presence of OHWM indicators. Therefore, these drainages have a significant physical and chemical nexus with RPWs that flow into a TNW, as described above, since there is the ability for pollutants, including sediment, to flow from the drainages to a TNW.
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

۱.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet, wide, Or acres.
	Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs.
	☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
	☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply):
	☐ Tributary waters: linear feet wide. ☐ Other non-wetland waters: acres.
	Identify type(s) of waters:

3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. ☑ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C. The Channels labeled D1, D2, D5, D6 and D7 flow directly into Midas Creek. Midas Creek flows into the Humboldt River and eventually to the Rye Patch Reservoir a TNW.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: 16,753 linear feet, 1-3 feet wide. Other non-wetland waters: acres. Identify type(s) of waters:
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	□ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters.9 As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).
WA	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH ATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce. Which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
lde	ntify water body and summarize rationale supporting determination:
	vide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet, wide. Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.

E.

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

r.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. ☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: ☐ Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, wide. Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, wide. Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SE	CTION IV: DATA SOURCES.
A.	SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Aquatic Resources Delineation Report Midas Project SPK-2012-00408-NO. Appendix A, Map 1 and Appendix B, Maps 1-5, prepared by Stantec Consulting Services Inc. December 6, 2018. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Aquatic Resources Delineation Report Midas Project SPK-2012-00408-NO. Appendix F, prepared by Stantec Consulting Services Inc. December 6, 2018. ☐ Office concurs with data sheets/delineation report. ☐ Office does not concur with data sheets/delineation report. ☐ Data sheets prepared by the Corps: ☐ Corps navigable waters' study: ☐ U.S. Geological Survey Hydrologic Atlas: ☐ USGS NHD data.
	 USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: 1:24K; Oregon Canyon USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. National wetlands inventory map(s). Cite name: https://www.fws.gov/wetlands/Data/Mapper.html Accessed October 23, 2019
	 State/Local wetland inventory map(s): □ FEMA/FIRM maps: □ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) ☑ Photographs: □ Aerial (Name & Date): or ☑ Other (Name & Date): Aquatic Resources Delineation Report Midas Project SPK-2012-00408-NO. Appendix C, prepared by Stantec Consulting Services Inc. December 6, 2018.
	Previous determination(s). File no. and date of response letter: SPK-2012-00408-NO, dated June 18, 2013 Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

A separate JD Form includes the isolated waters and upland swales which includes D3, D4, D8, D9, D10, D11, D12 and Squaw Creek.

Channels D1, D2, D5, D6 and D7 are ephemeral tributaries to Midas Creek. Channels D1 and D2 drain to Midas Creek a RPW and mapped (USGS) perennial stream. Channels D5 and D6 flow directly into Channel D7 which flows into Midas Creek. Midas creek flows directly to the Humboldt River, an RPW and mapped (USGS) Perennial River which flows directly into the Rye Patch Reservoir a navigable-in-fact water of the U.S. Each channel is documented on individual forms located in the *Aquatic Resources Delineation Report Midas Project SPK-2012-00408-NO* report submitted by Stantec Consulting Services Inc. dated December 6, 2018. These sheets include the general area conditions, physical characteristics, chemical characteristics, and

biological characteristics of each water evaluated so the responses provided in B and D of this document should be considered averages.

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October 28, 2019

DISTRICT OFFICE FILE NAME AND NUMBER: Sacramento District Midas Expansion Project SPK-2012-00408

Ь.	Wetlands Spring 5 and Spring 7, Channels D3, D4, D8, D9, D10, D11, D12 and Squaw Creek
	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Nevada County/parish/borough: Elko County City: Midas Center coordinates of site (lat/long in degree decimal format): Lat. 41.23476°, Long116.77407° Universal Transverse Mercator: 11 518933.3 4564843.51 Name of nearest waterbody: Squaw Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A Name of watershed or Hydrologic Unit Code (HUC): Rock, 16040106 ☐ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a erent JD form: Channels D1, D2, D5, D6, D7 and Midas Creek are documented on a separate JD form.
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: October 28, 2019 Field Determination. Date(s):
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	ere Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) he review area. [Required] Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	ere Are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area.
	1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters ² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters

b. Identify (estimate) size of waters of the U.S. in the review area:

☐ Isolated (interstate or intrastate) waters, including isolated wetlands

Non-wetland waters: linear feet, wide, and/or acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on:

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

Dotentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: Six upland swales (D3, D4, D8, D9, D10 and D11) that do not exhibit OHWM, two isolated stream channels (Squaw Creek and D12), one isolated settling pond constructed in uplands and two isolated wetlands (Spring 5 and Spring 7).

Channels D3, D4, D8, D9, D10 and D11 do not have any OHWM indicators present therefore they are not waters of the US.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

Spring 7, located in the southeast portion of the survey area supports 0.01 acres of wetlands. The only potential connection between the Spring 7 wetlands and waters of the US is D8 which does not exhibit OHWM indicators. The closest downstream jurisdictional water is approximately 2 miles from the Spring 7 wetlands. There is no evidence water from spring 7 can flow 2 miles downstream to reach the nearest jurisdictional water. Therefore, the Spring 7 wetland has no demonstrated physical, chemical, or biological connection to waters of the US since a discharge of pollutants in this area would remain isolated from other jurisdictional waters. Additionally any aquatic functions that this wetland may have would not benefit downstream jurisdictional waters. Spring 7 does not have an interstate commerce connection

Springs 5 support at total of 0.19 acres of wetlands. This spring feeds into Squaw Creek. Squaw Creek is located near the eastern boundary of the survey area and has an OHWM for 8,702 feet in the survey area before flowing offsite. Flows in Squaw Creek are perennial for much of the survey area beginning with Spring 5 and it continues to exhibit perennial flows from numerous seeps that emerge within the channel. As Squaw Creek exits the survey area it loses water to the substrate and flows becomes intermittent and eventually ephemeral. Approximately 6,000 feet east of the survey area Squaw Creek loses any OHWM indicators. The closest downstream jurisdictional water is Rock Creek, approximately 3 miles from the point where the OHWM indicators disappear. There is not a defined channel or swale that could connect Squaw Creek to Rock Creek. Therefore, Squaw Creek, D12, and Spring 5 wetlands have no demonstrated physical, chemical, or biological connection to waters of the US since a discharge of pollutants in this area would remain isolated from other jurisdictional waters. Additionally, any aquatic functions that these waters may have would not benefit jurisdictional waters. Neither Squaw Creek nor Spring 5 have an interstate commerce connection.

D12 is an ephemeral drainage located in the eastern central portion of the survey area and has indicators of OHWM present that continue for 206 feet until it converges with Squaw Creek. D12 does not have an interstate commerce connection

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i)	General Area Conditions: Watershed size: 888 Square miles Drainage area: 259,200 acres Average annual rainfall: 12.45 inches Average annual snowfall: 40 inches					
(ii)	Physical Characteristics: (a) Relationship with TNW: Tributary flows directly into TNW. Tributary flows through tributaries before entering TNW.					
	Project waters are Pick List river miles from TNW. Project waters are Pick List river miles from RPW. Project waters are Pick List aerial (straight) miles from TNW. Project waters are Pick List aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No					
		Identify flow route to TNW ⁵ : Tributary stream order, if known:				
	(b) General Tributary Characteristics (check all that apply): Tributary is: ☐ Natural ☐ Artificial (man-made). Explain: ☐ Manipulated (man-altered). Explain:					
		Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes:				
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:				
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Tributary gradient (approximate average slope): %				
		<u>Flow:</u> Tributary provides for: Estimate average number of flow events in review area/year: cribe flow regime:				
		Other information on duration and volume:				
Surface flow is: Characteristics: Subsurface flow: Explain findings: Dye (or other) test performed:						

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is

	☐ clear, natural line impressed on the bank ☐ changes in the character of soil ☐ shelving ☐ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining ☐ other (list): ☐ Discontinuous OHWM. Explain:	 the presence of litter and debris destruction of terrestrial vegetation the presence of wrack line sediment sorting scour multiple observed or predicted flow events abrupt change in plant community
	If factors other than the OHWM were used to determine	ne lateral extent of CWA jurisdiction (check all that
	apply): High Tide Line indicated by: oil or scum line along shore objects fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list):	 Mean High Water Mark indicated by: □ survey to available datum; □ physical markings; □ vegetation lines/changes in vegetation types.
` ´ Char ch	mical Characteristics: racterize tributary (e.g., water color is clear, discolore laracteristics, etc.). Explain: tify specific pollutants, if known:	d, oily film; water quality; general watershed
	ogical Characteristics. Channel supports (check Riparian corridor. Characteristics (type, average width Vetland fringe. Characteristics: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain Aquatic/wildlife diversity. Explain findings:	n):
Characte	eristics of wetlands adjacent to non-TNW that flow	v directly or indirectly into TNW
(a)	sical Characteristics: General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries.	Explain:
, ,	General Flow Relationship with Non-TNW: Flow is: Pick List. Explain:	
;	Surface flow is: Pick List Characteristics:	
;	Subsurface flow: Pick List . Explain findings: Dye (or other) test performed:	
(c) <u>'</u>	Wetland Adjacency Determination with Non-TNW: ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydrologic connection. Expla ☐ Ecological connection. Explain: ☐ Separated by berm/barrier. Explain:	ain:
	<u>Proximity (Relationship) to TNW</u> Project wetlands are Pick List river miles from TNW. Project waters are Pick List aerial (straight) miles fro	

2.

Flow is from: Pick List.

Estimate approximate location of wetland as within the Pick List floodplain.

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

	Fish/spawn areas. E	teristics (type, average cover. Explain: ecies. Explain findings: Explain findings: Illy-sensitive species. E	width):	
3.	Characteristics of all wetlands All wetland(s) being conside Approximately acres	ered in the cumulative a	• •	
	For each wetland, specify the	ne following:		
	Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: ☐ TNWs: linear feet, wide, Or acres. ☐ Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet wide. Other non-wetland waters: acres. Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: linear feet, wide. Other non-wetland waters: acres. Identify type(s) of waters:
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	□ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters.9 As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).

 $^{^8\}mbox{See}$ Footnote # 3. 9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

E.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10		
	 □ which are or could be used by interstate or foreign travelers for recreational or other purposes. □ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. □ which are or could be used for industrial purposes by industries in interstate commerce. □ Interstate isolated waters. Explain: □ Other factors. Explain: □ Other factors. Explain: □ Other factors. □ Other factors.		
	Identify water body and summarize rationale supporting determination:		
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet, wide. Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.		
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. ☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: ☐ Other: (explain, if not covered above):		
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): 8,910 linear feet, 1-3 wide. Lakes/ponds: acres. Other non-wetland waters: 68 acres. List type of aquatic resource: settling pond constructed in uplands Wetlands: 0.2 acres.		
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, wide. Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.		
SECTION IV: DATA SOURCES.			
A.	SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Aquatic Resources Delineation Report Midas Project SPK-2012-00408-NO. Appendix A, Map 1 and Appendix B, Maps 1-5, prepared by Stantec Consulting Services Inc. December 6, 2018.		
	 □ Data sheets prepared/submitted by or on behalf of the applicant/consultant. Aquatic Resources Delineation Report Midas Project SPK-2012-00408-NO. Appendix F, prepared by Stantec Consulting Services Inc. December 6, 2018. □ Office concurs with data sheets/delineation report. □ Office does not concur with data sheets/delineation report. □ Data sheets prepared by the Corps: □ Corps navigable waters' study: □ U.S. Geological Survey Hydrologic Atlas: □ USGS NHD data. □ USGS 8 and 12 digit HUC maps. 		
	 ☑ U.S. Geological Survey map(s). Cite scale & quad name: 1:24K; Oregon Canyon ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. 		

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

\boxtimes	National wetlands inventory map(s). Cite name: https://www.fws.gov/wetlands/Data/Mapper.html . Accessed October
	23, 2019
	State/Local wetland inventory map(s):
	FEMA/FIRM maps:
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\boxtimes	Photographs: Aerial (Name & Date):
	or ☑ Other (Name & Date): Aquatic Resources Delineation Report Midas Project SPK-2012-00408-NO.
	Appendix C, prepared by Stantec Consulting Services Inc. December 6, 2018.
\boxtimes	Previous determination(s). File no. and date of response letter: SPK-2012-00408-NO, dated June 18, 2013
	Applicable/supporting case law:
	Applicable/supporting scientific literature:
ΠĪ.	Other information (please specify):
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B. ADDITIONAL COMMENTS TO SUPPORT JD:

A separate JD Form includes Channels D1, D2, D5, D6 and D7 and Midas Creek.

Channels D3, D4, D8, D9, D10, and D11 are upland swales that do not exhibit OHWM.

Drainage 12 is located in the eastern central portion of the survey area and has indicators of OHWM present that continue for 208 feet until it converges with Squaw Creek. Squaw Creek is located near the eastern boundary of the survey area and has an OHWM for 8,702 feet in the survey area before flowing offsite. Drainage 12 does not have an interstate commerce connection.

Spring 5 supports at total of 0.19 acres of isolated wetlands. This spring and wetland feeds into Squaw Creek, which flows for Approximately 6,000 feet east of the survey area Squaw Creek loses any OHWM indicators. The closest downstream jurisdictional water is Rock Creek, approximately 3 miles from the point where the OHWM indicators disappear. There is no known connection between Squaw Creek and Rock Creek. Therefore, Squaw Creek, Drainage 12, and Spring 5 wetland have no demonstrated physical, chemical, or biological connection to waters of the US since a discharge of pollutants in this area would remain isolated from other jurisdictional waters. Additionally, any aquatic functions that these waters may have would not likely benefit jurisdictional waters. Neither Squaw Creek nor Spring 5 wetland have an interstate commerce connection.

Spring 7, located in the southeast portion of the survey area supports 0.01 acre of wetlands. The only potential connection between the Spring 7 wetlands and waters of the US is D8 which does not exhibit OHWM indicators. The closest downstream jurisdictional water is approximately 2 miles from Spring 7 wetland. Therefore, Spring 7 wetland has no demonstrated physical, chemical, or biological connection to waters of the US since a discharge of pollutants in this area would remain isolated from other jurisdictional waters. Additionally any aquatic functions that this wetland may have would not likely benefit jurisdictional waters. Spring 7 does not have an interstate commerce connection.

None of the features documented on this form have a connection to the Humboldt River, an RPW and mapped (USGS) Perennial River which flows directly into the Rye Patch Reservoir a navigable-in-fact water of the U.S. Each channel and wetland is documented on individual forms located in the *Aquatic Resources Delineation Report Midas Project SPK-2012-00408-NO* report submitted by Stantec Consulting Services Inc. dated December 6, 2018. These sheets include the general area conditions, physical characteristics, chemical characteristics, and biological characteristics of each water evaluated so the responses provided in B and D of this document should be considered averages.