Mitigation Action Plan Phase I

Lovell Yellowtail and Basin-Lovell Transmission Line Rebuild Project Big Horn and Carbon Counties, Montana and Big Horn County, Wyoming

MITIGATION ACTION IDENTIFIER	ON PARTY FOR IMPLEMENTING		LOCATION IF AVAILABLE/ STRUCTURE NUMBERS	PARTY RESPONSIBLE FOR MONITORING AND ENSURING COMPLIANCE
1	Construction Contractor	Standard Construction Project Practices will be implemented through Phases I of Project		Western Construction (during Construction Phase)
	Western Maintenance	construction and operation (Table 2.1-3 in the Final EA.)		Western Maintenance (During maintenance of facility)
		NPS – WESTERN INTERAGENCY AGREEMENT FOR BIGHORN CANYON NRA		
2	NPS, Western	The Interagency Agreement between United States Department Of Energy, Western Area Power Administration and United States Department Of The Interior, Bighorn Canyon National Recreation Area will be implemented.		NPS, Western
		STORM WATER PERMIT		
3	Construction Contractor	NPDES Construction Permit and SWPPP – Permit and Storm Water Pollution Prevention Plan prepared per Montana Department of Environmental Quality requirements.	Montana http://deq.mt.gov/wqinfo/mpdes/stormwaterconstruction.mcpx	Western Construction (during Construction Phase)
4	Construction Contractor	NPDES Construction Permit and SWPPP – Permit and Storm Water Pollution Prevention Plan prepared per Wyoming Department of Environmental Quality requirements	Wyoming http://deq.state.wy.us/wqd/WYPDES_Permitting/WYPDES_Storm_Water/stormwater.asp	Western Construction (during Construction Phase)
		SEED MIXTURES FOR REVEGETATION 1		
5	Construction Contractor	Seed Mixture 1CM (Appendix F7)	Structure Numbers: 19-1 to 20-3, 20-6 to 22-3, 24-1, 24-4 to 24-6, 25-2 to 25-6	Western Construction (during Construction Phase)
6	Construction Contractor	Seed Mixture 2CM (Appendix F8)	Structure Numbers: 24-1 to 24-4, 24-7 to 25-2, 25-7 to 25-8.	Western Construction (during Construction Phase)
7	Construction Contractor	Seed Mixture 3CM (Appendix F8)	Structure Numbers: 12-7 to 19-1, 20-4 to 20-6, 24-6 to 25-1	Western Construction (during Construction Phase)
8	Construction Contractor	Seed Mixture 1BW (Appendix F9)	Structure Numbers: 12-3 to 12-5; 13-6	Western Construction (during Construction Phase)

MITIGATION RESPONSIBLE PARTY FOR		MITIGATION ACTION	LOCATION IF AVAILABLE/ STRUCTURE NUMBERS	PARTY RESPONSIBLE FOR
ACTION IDENTIFIER	IMPLEMENTING			MONITORING AND ENSURING COMPLIANCE
9	Construction Contractor	Seed Mixture 2BW (Appendix F10)	Structure numbers: 10-7 to 11-6	Western Construction (during Construction Phase)
10	Construction Contractor	Seed Mixture 3BW (Appendix F11)	Structure Numbers: 11-6 to 11-8; 12-4 to 13-2; 13-4 to 14-2; 14-5 to 14-7	Western Construction (during Construction Phase)
11	Construction Contractor	Seed Mixture 4BW (Appendix F11)	Vegetated wetlands	Western Construction (during Construction Phase)
		NATIONWIDE 12 PERMIT		
12	Western Construction Contractor	The Nationwide12 Permit from the U.S. Army Corps of Engineers may apply to Phase I to undertake activities in regulated areas. Construction must comply with the requirements of the Permit. If the permit conditions cannot be complied with an individual permit would likely be required.	Army Corps of Engineers discharge into Waters of the U.S. – See Map Table 1 (attached)	Western Construction (during Construction Phase)
13	Western	Section 401 Certification for Nationwide 12 Permit Wyoming—This may apply because there may be a need to construct within regulated areas (WUS). This certification must be reviewed to see if it is applicable.	In Wyoming where Nationwide Permit 12 applies http://www.nwo.usace.army.mil/html/od-rwy/wdeq32007.pdf	Western Construction (during Construction Phase)
14	Western	Section 401 Certification for Nationwide 12 Permit Montana—This may apply because there may be a need to construct within regulated areas (WUS). This certification must be reviewed to see if it is applicable.	In Montana where Nationwide Permit 12 applies http://deq.mt.gov/permits.mcpx Montana cert applies if less than 12 streams are crossed or the work is done when there is no water in the stream. Otherwise the project is not certified and a separate cert must be obtained from MDEQ.	Western Construction (during Construction Phase)
15	Construction	TURBIDITY PERMIT Obtain permits for short-term activity (i.e.	Montana site link broken, e-mail sent to MDEQ.	Wastern Construction (during
15	Construction Contractor	installation of culverts) that may result in state surface water quality standard violations. 318 Authorization (Short-term water quality standard for turbidity) Montana		Western Construction (during Construction Phase)
16	Construction Contactor	Obtain permits for short-term activity (i.e. installation of culverts) that may result in state surface water quality standards violations. Short Term turbidity waiver Wyoming	Wyoming required for work in "live" waters. Not required if waterway is dry during the time of the construction. See following link for application for temporary turbidity increase; http://deq.state.wy.us/wqd/watershed/Downloads/401/9-0855-TURBIDITY%20WAIVER%20APP.pdf Application instructions can be found at this link: http://deq.state.wy.us/wqd/watershed/Downloads/401/2-1907-doc.pdf	Western Construction (during Construction Phase)

MITIGATION ACTION IDENTIFIER	RESPONSIBLE PARTY FOR IMPLEMENTING	MITIGATION ACTION	LOCATION IF AVAILABLE/ STRUCTURE NUMBERS	PARTY RESPONSIBLE FOR MONITORING AND ENSURING COMPLIANCE
		EASEMENTS AND ROAD CROSSING PERMITS		
17	Western	Easement grants through BLM land and road crossing permits will be obtained from appropriate agencies.	Easement Grants for BLM Lands - Structures 0-6 to 2.5, 5-3 to 8.6, 9.7 to 11.1, 12.3 to 14.7 on LV-YT.	Western Construction (during Construction Phase)
18	Construction Contractor	Noxious weed inventory and control on NPS lands per Western's agreement with NPS—Bighorn Canyon National Recreation Area	National Park Service land in Bighorn Canyon National Recreation Area.	Western, NPS
19	Construction Contractor	Post Construction Noxious weed control on lands other than NPS		Western, Construction Contractor
20	Construction Contractor	Raptor nests would be inventoried prior to construction and steps would be taken to prevent disruption of occupied nests during breeding season.	No raptors found on Phase 1 during initial field survey for EA.	Western
21	Western, Construction Contractor	The construction activities shall not disturb nests of birds that may be encountered. If this is not possible, the construction contractor or Western's construction inspector must notify the Regional Office Environmental Manager so the appropriate coordination with wildlife agencies occurs.	Locations of encountered active bird nests along construction corridor.	Western Construction (during Construction Phase)
		CULTURAL		

MITIGATION	RESPONSIBLE	MITIGATION ACTION	LOCATION IF AVAILABLE/ STRUCTURE NUMBERS	PARTY RESPONSIBLE FOR
ACTION	PARTY FOR			MONITORING AND
IDENTIFIER	IMPLEMENTING			ENSURING COMPLIANCE
22	Western,, Construction Contractor	For compliance with Section 106 of the National Historic Preservation Act, Western will continue to consult with and coordinate with the NPS Bighorn Canyon National Recreation Area, the Crow Nation, the Bureau of Land Management Billings Field Office, the Montana State Historic Preservation Office (SHPO), the Wyoming SHPO, the Bureau of Reclamation Montana Area Office, and the Montana Department of Environmental Quality. Western will continue consultation with the Northern Cheyenne, the Eastern Shoshone, and the Northern Arapaho. For sites potentially affected by each phase of construction, Western will prepare site treatment plans, and memorandums of agreement in coordination with the appropriate land managing agency, the Crow Nation and the Montana and Wyoming SHPOs. The coordination and consultation will continue through the end of each phase of construction. Commitments identified in the site treatment plans and memorandums of agreement will mitigate effects to historic properties within the area of potential effect.	A map of avoidance areas will be provided as to the appropriate construction inspectors monitors as consultation and coordination is completed.	Western Engineering Construction, NPS per agreement with Western.
		Impacts to NRHP-eligible cultural sites caused by construction shall be avoided. Ground disturbing activities would occur outside of the boundaries of Historic Properties. If project-related ground disturbance is planned within 100 feet of a site, an archaeological monitor would be present to ensure that the site is not impacted during construction and that unexpected discoveries are identified immediately and are properly protected, documented, and reported. Western will provide a map or will mark avoidance areas that must be avoided by construction activities.		
22	Wastom Canatanati			Wastern Engineering
23	Western, Construction	To minimize visual impacts conductors will be		Western Engineering
	Contractor	non-specular for Phase I of the project		Construction.

¹ Structure numbers refer to existing west line of LV-YT No.1 transmission line.

Mitigation Action Plan Phase II

Lovell Yellowtail and Basin-Lovell Transmission Line Rebuild Project Big Horn and Carbon Counties, Montana and Big Horn County, Wyoming

MITIGATION ACTION IDENTIFIER	RESPONSIBLE PARTY FOR IMPLEMENTING	MITIGATION ACTION	LOCATION IF AVAILABLE/ STRUCTURE NUMBERS	PARTY RESPONSIBLE FOR MONITORING AND ENSURING COMPLIANCE
1	Construction	Standard Construction Project Practices will		Western Construction (during
	Contractor	be implemented through Phases I of Project construction and operation (Table 2.1-3 in		Construction Phase)
	Western Maintenance	the Final EA.)		Western Maintenance (During maintenance of facility)
		STORM WATER PERMIT		3,
2	Construction Contractor	NPDES Construction Permit and SWPPP – Permit and Storm Water Pollution Prevention Plan prepared per Montana Department of Environmental Quality requirements.	Montana http://deq.mt.gov/wqinfo/mpdes/stormwaterconstruction.mcpx	Western Construction (during Construction Phase)
3	Construction Contractor	NPDES Construction Permit and SWPPP – Permit and Storm Water Pollution Prevention Plan prepared per Wyoming Department of Environmental Quality requirements	Wyoming http://deq.state.wy.us/wqd/WYPDES_Permitting/WYPDES_Storm_Water/stormwater.asp	Western Construction (during Construction Phase)
		SEED MIXTURES FOR REVEGETATION ¹		
4	Construction Contractor	Seed Mixture 1BM(Appendix F5)	Structure Numbers: 30-7 to 34-1, 34-7 to 34-9, 36-3 to 41-3, 41-7 to 46-3	Western Construction (during Construction Phase)
5	Construction Contractor	Seed Mixture 2BM (Appendix F6)	Structure Numbers: 34-2 to 34-7, 35-1 to 36-2, 41-4 to 41-6	Western Construction (during Construction Phase)
6	Construction Contractor	Seed Mixture 1CM (Appendix F7)	Structure Numbers: 26-6 to 27-1, 27-8 to 28-4, 28-8 to 30-4.	Western Construction (during Construction Phase)
7	Construction Contractor	Seed Mixture 2CM (Appendix F8)	Structure Numbers: 27-1 to 27-7, 30-5 to 30-7.	Western Construction (during Construction Phase)
8	Construction Contractor	Seed Mixture 1BW (Appendix F9)	Structure Numbers: 1-2 to 1-3, 1-6, 2-3 to 2-4, 5-3 to 6-3, 9-5 to 9-6, 10-3 to 10-4, 46-5 to 46-6, 50-2 to 50-5, 51- to 52-8, 55-7 to 56-6, 61-6 to 61-7, 62-7 to 64-1, 71-4 to 72-5, 73-4 to 74-2.	Western Construction (during Construction Phase)
9	Construction Contractor	Seed Mixture 2BW (Appendix F10)	Structure Numbers: 0-2, 1-3 to 1-4, 6-3 to 8-6, 8-7 to 9-5, 9-7 to 10-3, 10-7 to 11-6, 45-5 to 45-6, 50-5 to 51-5, 54-8 to 55-7, 57-4 to 57-6, 58-4 to 61-6, 64-7 to 67-1, 70-4 to 70-7, 72-6 to 73-3, 75-6 to 76-7, 80-4 to 83-7.	Western Construction (during Construction Phase)
10	Construction	Seed Mixture 3BW (Appendix F11)	Structure Numbers: 27-1 to 27-7, 30-5 to 30-7, 45-6 to 46-5, 46-6 to 50-2, 52-8 to 54-7, 57-7 to 58-3,	Western Construction (during

MITIGATION ACTION IDENTIFIER	RESPONSIBLE PARTY FOR IMPLEMENTING	MITIGATION ACTION	LOCATION IF AVAILABLE/ STRUCTURE NUMBERS	PARTY RESPONSIBLE FOR MONITORING AND ENSURING COMPLIANCE
	Contractor		64-2 to 64-6, 69-7 to 70-4, 70-7 to 71-6, 71-9 to 80-3, 83-7 to 84-3.	Construction Phase)
11	Construction	Seed Mixture 4BW (Appendix F11)	Any vegetated wetlands	Western Construction (during
	Contractor			Construction Phase)
		NATIONWIDE 12 PERMIT		
12	Western	The Nationwide 12 Permit from the U.S.	Army Corps of Engineers discharge into Waters of the U.S. Refer to Map Table 2 (attached)	Western Construction (during
	Construction	Army Corps of Engineers may apply to		Construction Phase)
	Contractor	Phase II to undertake activities in regulated		
		areas. Construction must comply with the		
		requirements of the Permit. If the permit		
		conditions cannot be complied with an		
10	***	individual permit would likely be required.	V W	
13	Western	Section 401 Certification for Nationwide 12	In Wyoming where Nationwide Permit 12 applies	Western Construction (during
		Permit Wyoming—This may apply because		Construction Phase)
		there may be a need to construct within	http://www.nwo.usace.army.mil/html/od-rwy/wdeq32007.pdf	
		regulated areas. This certification must be		
1.4	XX	reviewed to see if it is applicable.	T.M. (1 N.C. 11 D. 1/10 11 10 1/11 (1 1/1 1/11 1/11 1/11	W . C
14	Western	Section 401 Certification for Nationwide 12	In Montana where Nationwide Permit 12 applies http://deq.mt.gov/permits.mcpx Montana cert	Western Construction (during
		Permit Montana-This may apply because	applies if less than 12 streams are crossed or the work is done when there is no water in the stream.	Construction Phase)
		there may be a need to construct within regulated areas. This certification must be	Otherwise the project is not certified and a separate cert must be obtained from MDEQ.	
		reviewed to see if it is applicable. TURBIDITY PERMIT		
15	Construction	Obtain permits for short-term activity (i.e.	Montana site link broken, e-mail sent to MDEQ.	Western Construction (during
13	Contractor	installation of culverts) that may result in	Montana site link broken, e-man sent to MDEQ.	Construction Phase)
	Contractor	state surface water quality standard		Construction Filase)
		violations. 318 Authorization (Short-term		
		water quality standard for turbidity) Montana		
16	Construction	Obtain permits for short-term activity (i.e.	Wyoming required for work in "live" waters. Not required if waterway is dry during the time of the	Western Construction (during
10	Contactor	installation of culverts) that may result in	construction. See following link for application for temporary turbidity increase;	Construction Phase)
	Contactor	state surface water quality standards	http://deq.state.wy.us/wqd/watershed/Downloads/401/9-0855-	Construction i hase)
		violations. Short Term turbidity waiver	TURBIDITY%20WAIVER%20APP.pdf	
		Wyoming	TORDIDIT 1/020 WIN VERC/020M1.pdf	
			Application instructions can be found at this link:	
			http://deq.state.wy.us/wqd/watershed/Downloads/401/2-1907-doc.pdf	
		EASEMENTS AND ROAD CROSSING		
		PERMITS		
17	Western	Easement grants through BLM land and road	Easement Grants for BLM lands- Structures 0-6 to 2.5, 5-3 to 8.6, 9.7 to 11.1, 12.3 to 14.7 on LV-	Western Construction (during
		crossing permits will be obtained from	YT.	Construction Phase)
		appropriate agencies.		, ·

MITIGATION	RESPONSIBLE MITIGATION ACTION		LOCATION IF AVAILABLE/ STRUCTURE NUMBERS	PARTY RESPONSIBLE FOR
ACTION IDENTIFIER	PARTY FOR IMPLEMENTING			MONITORING AND ENSURING COMPLIANCE
		NOXIOUS WEEDS		
18	Construction Contractor	Noxious weed inventory and control on NPS lands per Western's agreement with NPS—Bighorn Canyon National Recreation Area	National Park Service land in Bighorn Canyon National Recreation Area	Western, NPS
19	Construction Contractor	Post Construction Noxious weed control on lands other than NPS		Western, Construction Contractor
		WILDLIFE		
20	Construction Contractor	Raptor nests would be inventoried prior to construction and steps would be taken to prevent disruption of occupied nests during breeding season. If necessary burrowing owls studies would be completed to ensure burrowing owls would not be impacted during construction.	Raptor Nests - All suitable nesting habitats within the ROW. Active Prairie Dog Towns – BA-LV Structure Numbers: 72-4 to 72-6, 80-3 to 80-6	Western
21	Western, Construction Contractor	The construction activities shall not disturb nests of birds that may be encountered. If this is not possible, the construction contractor or Western's construction inspector must notify the Regional Office Environmental Manager so the appropriate coordination with wildlife agencies occurs.	Locations of encountered active bird nests along construction corridor.	Western Construction (during Construction Phase)
22	Construction Contractor	To minimize the risk of increased energy expenditures by pronghorn Western, or its contractor, would not construct in pronghorn crucial winter range from mid-December through February and in fawning areas from mid-May through mid-June.	Approximately between structure numbers 47-5 to 53-6 BA-LV line.	Western Construction (during Construction Phase)
		CULTURAL		
23	Western, Construction Contractor	For compliance with Section 106 of the National Historic Preservation Act, Western will continue to consult with and coordinate with the NPS Bighorn Canyon National Recreation Area, the Crow Nation, the Bureau of Land Management Billings Field Office, the Montana State Historic Preservation Office (SHPO), the Wyoming SHPO, the Bureau of Reclamation Montana Area Office, and the Montana Department of Environmental Quality. Western will	A map of avoidance areas will be provided as to the appropriate construction inspectors monitors as consultation and coordination is completed.	Western Engineering Construction

MITIGATION			LOCATION IF AVAILABLE/ STRUCTURE NUMBERS	PARTY RESPONSIBLE FOR
ACTION	PARTY FOR			MONITORING AND
IDENTIFIER	IMPLEMENTING			ENSURING COMPLIANCE
		continue consultation with the Northern		
		Cheyenne, the Eastern Shoshone, and the		
		Northern Arapaho. For sites potentially		
		affected by each phase of construction,		
		Western will prepare site treatment plans,		
		and memorandums of agreement in		
		coordination with the appropriate land		
		managing agency, the Crow Nation and the		
		Montana and Wyoming SHPOs. The		
		coordination and consultation will continue		
		through the end of each phase of		
		construction. Commitments identified in the		
		site treatment plans and memorandums of		
		agreement will mitigate effects to historic		
		properties within the area of potential effect.		
		Impacts to NRHP-eligible cultural sites		
		caused by construction shall be avoided.		
		Ground disturbing activities would occur		
		outside of the boundaries of Historic		
		Properties. If project-related ground		
		disturbance is planned within 100 feet of a		
		site, an archaeological monitor would be		
		present to ensure that the site is not impacted		
		during construction and that unexpected		
		discoveries are identified immediately and		
		are properly protected, documented, and		
		reported. Western will provide a map or will		
		mark avoidance areas that must be avoided		
		by construction activities. VISUAL		
24	Western, Construction	To minimize visual impacts conductors will		Western Engineering Construction.
	Contractor	be non-specular for Phase I of the project		Zigineering construction
		FLOODPLAINS AND WETLANDS		
25	Construction	"Special Hazard Flood Zones" Floodplain	See attached MAP Table 2.	Western Construction (during
	Contractor	Assessment, Wetland Assessment, and		Construction Phase)
		Statement of Findings were completed and		,
		delivered to Big Horn County May 1, 2011		
		to meet requirements of Big Horn County		
		Flood Damage Prevention Regulation.		
		PALEONTOLOGY		

MITIGATION ACTION	RESPONSIBLE PARTY FOR	MITIGATION ACTION		PARTY RESPONSIBLE FOR MONITORING AND
	IMPLEMENTING			ENSURING COMPLIANCE
26		Western would monitor structure locations	Structures 45-5 to 51-8 except 45-5,47-4,50-5,50-6	Western Construction (during
	Contractor	on Wildwood Formation once locations are determined for potential presence of fossils.		Construction Phase)

¹ Structure numbers refer to existing west line of LV-YT No.1 transmission line.

MAP TABLE 1: Access Road Concerns for Phase I

Drainage Name	Phase of Project	Structure Nos.	Drainage Type	Wetlands	WUS	Issue	Action Required
Lovell - Yellowtail							-
Unnamed tributary to Crooked Creek	Phase I	11-4 to 11-5	ephemeral	no	no	Drainage cut across road	4 ft. culvert required with 66 sq. ft. fill.
Unnamed tributary to Crooked Creek	Phase I	11-7 to 11-8	ephemeral	no	yes	Drainage cut across road	2 ft. culvert required with 30 sq. ft. fill in WUS.
Road Borrow Ditch	Phase I	12-7 to 12-8	ephemeral	no	no	Drainage cut across road	3 ft. culvert required with 90 sq. ft. fill.
Unnamed Tributary to Crooked Creek	Phase I	14-4 to 14-5	ephemeral	no	no	Drainage cut across road	4 ft. culvert required with 66 sq. ft. fill.
Layout Creek	Phase I	20-3 to 20-4	perennial	no	yes	Drainage cut across road	Rock fill crossing with 50 sq. ft. rip rap.

MAP TABLE 2: Access Road Concerns for Phase II

Drainage Name	Phase of Project	Structure Nos.	Drainage Type	Wetlands	WUS	Issue	Action Required
Basin-Lovell			× •				
Tributary to South Fork Elk Creek	Phase II	46-1 to 46-2	ephemeral	no	yes	drainage cut across road	3 ft. culvert required with 60 sq. ft. of fill in WUS.
Elk Creek	Phase II	47-4 to 47-5	ephemeral	no	yes	drainage cut across access road	low water crossing requiring lay back of steep banks above average high water line and 600 sq. ft. of rock and gravel fill in WUS.
Unnamed Ditch	Phase II	56-7 to 56-8	irrigation ditch connected by wetlands to Greybull River	yes	yes	ditch cut and wetlands across road	low water crossing requiring 400 sq. ft. of rock and gravel fill in WUS and wetlands.
NA – (above the average high water line of the Greybull River)	Phase II	56-8 to 57-1	wetland connection between ditch and Greybull River	yes	yes	wetlands between ditch and river; soft, unstable ground	unstable/soft surface requiring placement of Geomat and ~2800 sq. ft. of road base.
Tributary to Bighorn River	Phase II	74-3 to 74-4	ephemeral	no	yes	drainage cut across road	4.5 ft. culvert with wing on west side required with 150 sq. ft. of fill. Rock crossing may be used instead, requiring 150 sq. ft. rip rap.
Tributary to Bighorn River	Phase II	75-4 to 75-5	ephemeral	no	yes	drainage cut across road	low water rock crossing requiring 200 sq. ft. of rip rap
Tributary to Bighorn River	Phase II	76-2 to 76-3	ephemeral	no	yes	drainage cut across road	3 ft. culvert required with 80 sq. ft. of fill in WUS.

Drainage Name	Phase of Project	Structure Nos.	Drainage Type	Wetlands	WUS	Issue	Action Required
Tributary to Sand Draw	Phase II	78-7 to 78-8	ephemeral	no	yes	drainage headcutting into road	2 ft. culvert required with 45 sq. ft. of fill in WUS.
Tributary to Sand Draw	Phase II	81-5 to 81-6	ephemeral	no	yes	drainage cut across road	Low water rock crossing requiring 200 sq. ft. rip rap.
Lovell - Yellowtail							
Tributary to Sand Draw	Phase II	1-4 to 1-5	ephemeral	no	no	Drainage cut across road	2 ft. culvert required with 50 sq. ft. fill.
Sunlight Canal	Phase II	3-2 to 3-3	canal	yes	yes?	access road crosses canal	No culvert will be installed. No access over canal.
Tributary to Deadman Creek	Phase II	27-8 to 28-1	ephemeral	no	no	Drainage cut across road	2 ft. culvert required with 40 sq. ft. fill.
Rotten Creek	Phase II	NA	ephemeral	no	yes	Existing culvert needs stabilization	Additional fill needed to stabilize culvert (50 sq. ft. fill).
Tributary to Grapevine Creek	Phase II	42-8 to 43-1	perennial	yes	yes?	Unimproved wetland crossing	Rock fill wet crossing to be constructed (200 sq. ft. rip rap)