APPENDIX B

Cultural Resources Impact Table and Cultural Resources Evaluation Report

The following provides a list of project components resulting in potential impacts to historical and archaeological resources. This list is adopted from *Table 4.0-1, Pipeline ID in Archaeolgocial Site Vicinities,* as presented in the Cultural Resources Evaluation.

Cultural Resources Impact Table

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B01	B01070.00-B01071.00		x	SDI-5779		x
B01	B01111.A0-B01111.B0		x	SDI-5785H	x	
B01	B01076.00-B01079.00		x	SDI-5787H		x
B01	B01074.00-B01075.00	x		SDI-5787H		x
B01	B01070.00-B01071.00		x	SDI-5787H		x
B01	B01108.00-B01109.00		x	SDI-5787H		x
B01	B01118.00-B01119.00		x	SDI-5792		x
B01	B01017.00-B01018.00		x	SDI-5792		x
B01	B01111.A0-B01111.B0		x	SDI-5792		x
B01	B01016.00-B01017.00		x	SDI-5792		x
B01	B01015.00-B01016.00		x	SDI-5792		x
B01	B01076.00-B01079.00		x	SDI-5792		x
B01	B01074.00-B01075.00		x	SDI-5792		x
B01	B01118.00-B01119.00		x	SDI-5792		x
B01	B01070.00-B01071.00		x	SDI-5792		x
B01	B01117.00-B01118.00		x	SDI-5792		x
B01	B01031.E0-B01031.F0	x		SDI-5792		x
B01	B01108.00-B01109.00		x	SDI-5792		x
B01	B01037.00-B01038.00		x	SDI-5792		x
B01	B01036.00-B01037.00		x	SDI-5792		x
B01	B01035.00-B01036.00	x		SDI-5792		x
B01	B01034.00-B01035.00	x		SDI-5792		x
B01	B01032.00-B01033.00	x		SDI-5792		x
B01	B01028.00-B01030.00		x	SDI-5792		x
B01	B01013.00-B01014.00		x	SDI-5792		x
B01	B01011.00-B01013.00		x	SDI-5792		x
B01	B01009.00-B01010.00	x		SDI-5792		x
B01	B01113.B0-B01113.C0		x	SDI-5792		x
B01	B01007.00-B01010.00	x		SDI-5792		x
B01	B01006.00-B01007.00	x		SDI-5792		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B01	B01005.00-B01006.00		x	SDI-5792		x
B01	B01003.00-B01004.00		x	SDI-5792		x
B01	B01001.00-B01003.00		x	SDI-5792		x
B01	B01028.00-B01030.00		x	SDI-8091	x	
B01	B01031.E0-B01031.F0	x		SDI-8092	x	
B01	B01032.00-B01033.00		x	SDI-8092	x	
B01	B01118.00-B01119.00	x		SDI-8735		x
B01	B01117.00-B01118.00		x	SDI-8735		x
B01	B01108.00-B01109.00		x	SDI-8735		x
B01	B01113.B0-B01113.C0		x	SDI-8735		x
B01	B01118.00-B01119.00		x	SDI-9582		x
B01	B01117.00-B01118.00		x	SDI-9582		x
B01-A-30	B01115.00-B01116.00	x		SDI-5792		x
B01-A-30	B01115.00-B01116.00		x	SDI-8735		x
B01-A-33	B01120.00-B01121.00		x	SDI-5792		x
B01-A-33	B01120.00-B01121.00		x	SDI-8735		x
B01-A-33	B01120.00-B01121.00	x		SDI-9582		x
B01-A-35	B01122.00-B01123.00		x	SDI-5791H	x	
B01-A-35	B01122.00-B01123.00	x		SDI-5792		x
B01-A-35	B01122.00-B01123.00	x		SDI-9582		x
B02	B02005.00-B02006.00		x	SDI-5792		x
B07/B01-D-1	B01073.00-B01074.00	x		SDI-5787H		x
B07/B01-D-1	B01073.00-B01074.00	x		SDI-5792		x
B08	B08051.00-B08052.00		x	I-401	x	
B08	B08030.00-B08032.00		x	I-401	x	
B08	B08021.00-B08028.00	x		I-402	x	
B08	B08019.00-B08020.00		x	I-402	x	
B08	B08022.00-B08024.00	x		I-402	x	
B08	B08030.00-B08032.00	x		I-402	x	
B08	B08013.00-B08014.00		x	I-403	x	
B08	B08043.00-B08048.00		x	P-018224		x
B08	B08051.00-B08052.00	x		P-018224		x
B08	B08070.00-B08071.00		x	P-018224		x
B08	B08064.00-B08066.00		x	P-018224		x
B08	B08062.00-B08063.00		x	P-018224		x
B08	B08030.00-B08032.00	x		SDI-12,520 H	x	
B08	B08018.00-B08019.00		x	SDI-12,521	x	
B08	B08018.A0-B08018.B0	x		SDI-12,521	x	
B08	B08011.00-B08012.00		x	SDI-12,521	x	
B08	B08043.00-B08048.00	x		SDI-13,009	x	

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B08	B08051.00-B08052.00	x		SDI-13,009	x	
B09	B09088.00-B09089.00	x		I-402	x	
B12	B12003.W0-B12003.X0		x	P-025154		x
B12	B12030.00-B12031.C0		x	SDI-11,037		x
B14	B14282.00-B14300.00	x		SDI-8250 A		x
B14	B14282.00-B14300.00	x		SDI-8250 B		x
B14	B14301.00-B14302.00	x		SDI-8250 C		x
B14	B14282.00-B14300.00	x		SDI-8250 C		x
B14-A-30	B14298.00-B14299.00	x		SDI-8250 C		x
B15	B15051.00-B15052.00		x	P-024185		x
B15	B15070.00-B15071.00		x	P-024185		x
B15	B15066.00-B15067.00		x	P-024185		x
B15	B15054.00-B15055.00		x	P-024185		x
B15	B15063.00-B15064.00	x		P-024185		x
B15	B15059.00-B15062.00		x	P-024185		x
B15	B15264.00-B15265.00	x		SDI-5634		x
B15	B15270.00-B15278.00	x		SDI-5634		x
B15	B15258.00-B15259.00	x		SDI-5634		x
B15	B15253.00-B15254.00		x	SDI-5634		x
B15	B15247.00-B15251.00		x	SDI-5634		x
B15	B15260.00-B15263.00	x		SDI-5634		x
B15	BTPFM01-BTPFM02	x		SDI-5635		x
B15	BTP001.00-BTP002.00		x	SDI-5637		x
B15	BTPFM01-BTPFM02		x	SDI-5637		x
B15	B15308.00-B15307.00		x	SDI-5779		x
B15	B15306.00-B15305.00		x	SDI-5779		x
B15	B15329.00-B15330.00	x		SDI-5788H		x
B15	B15321.00-B15322.00		x	SDI-5788H		x
B15	B15318.00-B15329.00		x	SDI-5788H		x
B15	B15303.00-B15304.00		x	SDI-5788H		x
B15	B15312.00-B15313.00		x	SDI-5788H		x
B15	B15287.00-B15288.00		x	SDI-5788H		x
B15	B15328.A0-B15328.B0		x	SDI-5788H		x
B15	B15328.E0-B15328.F0		x	SDI-5788H		x
B15	BTPFM01-BTPFM02		x	SDI-5789H, A		x
B15	BTPFM01-BTPFM02		x	SDI-5791H	x	
B15	B15002.00-B15009.00	x		SDI-5792		x
B15	B15329.00-B15330.00		x	SDI-5792		x
B15	B15321.00-B15322.00		x	SDI-5792		x
B15	B15318.00-B15329.00	x		SDI-5792		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B15	B15303.00-B15304.00	x		SDI-5792		x
B15	B15324.00-B15325.00		x	SDI-5792		x
B15	B15314.00-B15315.00		x	SDI-5792		x
B15	B15312.00-B15313.00		x	SDI-5792		x
B15	B15308.00-B15307.00		x	SDI-5792		x
B15	B15306.00-B15305.00	x		SDI-5792		x
B15	B15297.00-B15298.00		x	SDI-5792		x
B15	B15287.00-B15288.00	x		SDI-5792		x
B15	B15285.00-B15286.00		x	SDI-5792		x
B15	B15241.00-B15242.00	x		SDI-5792		x
B15	B15045.00-B15050.00		x	SDI-5792		x
B15	B15328.A0-B15328.B0	x		SDI-5792		x
B15	B15328.E0-B15328.F0	x		SDI-5792		x
B15	B15010.B0-B15010.C0	x		SDI-5792		x
B15	B15001.B0-B15001.C0	x		SDI-5792		x
B15	B15070.00-B15071.00		x	SDI-5792		x
B15	B15010.00-B15011.00	x		SDI-5792		x
B15	B15004.00-B15005.00		x	SDI-5792		x
B15	B15001.00-B15002.00	x		SDI-5792		x
B15	BTPFM01-BTPFM02	x		SDI-5792		x
B15	BTPFM01-BTPFM02	x		SDI-8347	x	
B15	B15116.00-B15117.00	x		SDI-9503	x	
B15	B15127.00-B15128.00		x	SDI-9503	x	
B15	B15114.00-B15127.00	x		SDI-9503	x	
B15/V33-D-1	V33137.00-V33140.00			SDI-5779		x
B15/V33-D-1	V33142.00-V33143.00	x		SDI-5779		x
B15/V33-D-1	V33136.00-V33137.00		x	SDI-5790H		x
B15/V33-D-1	V33136.00-V33137.00	x		SDI-5792		x
B15-A-3	B15109.00-B15110.00		x	SDI-5792		x
B15-A-4	B15110.00-B15111.00		x	SDI-5792		x
B15-A-5	B15111.00-B15112.00	x		SDI-5792		x
B15-A-9	B15238.00-B15239.00		x	SDI-5792		x
OV2	OV2025.A0-OV2025.B0	x		SDI-637	x	
OV5	OV5037.00-OV5039.00		x	P-024949		x
OV5	OV5151.00-OV5152.00		x	SDI-13,182		x
OV5	OV5149.00-OV5150.00		x	SDI-13,182		x
OV5	OV5080.00-OV5081.00		x	SDI-14,730H		x
OV5	OV5149.00-OV5150.00	x		SDI-5992		x
OV5	OV5124.00-OV5125.00		x	SDI-6091	x	
OV5	OV5132.00-OV5133.00	x		SDI-6091	x	

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
OV5	OV5143.00-OV5144.00	x		SDI-8241	x	
OV5	OV5141.00-OV5142.00		x	SDI-8241	x	
V01	V01005.00-V01006.00		x	P-025143		x
V01	V01021.B0-V01021.C0		x	P-025143		x
V01	V01021.00-V01022.00		x	P-025143		x
V02	V02091.00-V02092.00		x	P-025144		x
V02	V02085.00-V02097.00	x		P-025144		x
V02	V02095.00-V02096.00		x	P-025144		x
V02	V02082.00-V02083.A0		x	P-025144		x
V02	V02082.00-V02083.A0		x	P-025145		x
V02	V02082.00-V02083.A0		x	P-025146		x
V02	V02082.00-V02083.A0		x	P-025147		x
V02	V02082.00-V02083.A0		x	P-025148		x
V02-D-2	V02080.00-V02081.00		x	P-025144		x
V03	V03166.00-V03167.00	x		P-025145		x
V03	V03164.00-V03165.00		x	P-025145		x
V03	V03154.00-V03155.00		x	P-025145		x
V03	V03166.00-V03167.00	x		P-025146		x
V03	V03164.00-V03165.00		x	P-025146		x
V03	V03166.00-V03167.00	x		P-025147		x
V03	V03164.00-V03165.00		x	P-025147		x
V03	V03185.G0-V03185.00		x	P-025148		x
V03	V03180.00-V03181.00	x		P-025149		x
V03	V03174.A0-V03174.B0		x	P-025150		x
V03	V03185.B0-V03185.D0		x	P-025150		x
V03	V03180.00-V03181.00	x		P-025150		x
V03-A-10	V03172.00-V03173.00		x	P-025149		x
V03-A-10	V03172.00-V03173.00		x	P-025150		x
V03-A-10	V03172.00-V03173.00	x		SDI-8246	x	
V03-A-13	V03175.00-V03176.00		x	P-025149		x
V03-A-13	V03175.00-V03176.00		x	P-025150		x
V03-A-13	V03175.00-V03176.00	x		SDI-16,502	x	
V03-A-13	V03175.00-V03176.00	x		SDI-639	x	
V03-A-19	V03183.00-V03184.00		x	P-025148		x
V03-A-19	V03183.00-V03184.00		x	P-025149		x
V03-A-19	V03183.00-V03184.00		x	P-025150		x
V03-A-82	V03166.B0-V03166.00		x	P-025145		x
V03-A-82	V03166.B0-V03166.00		x	P-025146		x
V03-A-82	V03166.B0-V03166.00		x	P-025147		x
V03-A-82	V03166.B0-V03166.00		x	P-025148		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V04	V04080.00-V04081.00		x	P-025151		x
V04	V04076.00-V04077.00		x	P-025151		x
V04	V04071.00-V04072.00		x	P-025151		x
V04	V04020.00-V04021.00		x	P-025152		x
V04	V04028.D0-V04028.00	x		P-025153		x
V04	V04028.D0-V04028.00		x	P-025154		x
V04-A-30	V04019.00-V04023.00	x		P-025152		x
V04-A-49	V04068.00-V04069.00		x	P-025151		x
V05	V05088.00-V05092.00		x	P-025154		x
V05-A-25	V05098.00-V05099.00		x	P-025153		x
V05-A-52	V05100.00-V05101.00		x	P-025154		x
V06-A-14	V06008.00-V06009.00		x	SDI-645	x	
V08	V08072.C0-V08072.A0	x		SDI-14,324H		x
V08	V08072.CB-V08072.CD	x		SDI-14,324H		x
V09	V09035.00-V09046.00		x	SDI-14,323H		x
V10	V10010.00-V10011.00		x	SDI-5345	x	
V10	V10020.00-V10021.00		x	SDI-5345	x	
V11	V11004.00-V11005.00		x	SDI-11,630	x	
V12	V12064.00-V12065.00		x	SDI-650	x	
V12	V12045.A0-V12045.B0	x		SDI-652	x	
V12	V12019.00-V12020.00		x	SDI-653	x	
V12-A-23	V12051.00-V12053.00		x	SDI-651		x
V13	V13040.00-V13041.00		x	SDI-651		x
V13-B-34	V13011.00-V13013.00		x	SDI-652	x	
V13-B-38	V13043.00-V13044.00		x	SDI-651		x
V14	V14103.C0-V14103.D0	x		SDI-654	x	
V14	V14103.D0-V14103.00	x		SDI-654	x	
V15-A-6	V15111.00-V15112.00		x	SDI-653	x	
V15-A-7	V15112.00-V16050.00		x	SDI-653	x	
V16	V16042.00-V16043.00	x		SDI-17,786		x
V16	V16043.00-V16044.00	x		SDI-17,786		x
V16	V16042.00-V16043.00		x	SDI-655	x	
V17-A-20	V17057.00-V17058.00		x	SDI-656	x	
V17-A-20	V17057.00-V17058.00		x	SDI-657	x	
V18-A-11	V18011.00-V18012.00		x	SDI-658	x	
V19-A-19	V19026.00-V19027.00		x	SDI-659	x	
V19-B-10	V19114.00-V19115.00		x	SDI-17,779		x
V20	V20007.00-V20013.00	x		SDI-660		x
V20	V20001.00-V20002.00	x		SDI-660		x
V20-A-2	V20014.00-V20015.00		x	SDI-660		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V21	V21188.B0-V21188.C0	x		SDI-648	x	
V21	V21188.B0-V21188.C0	x		SDI-649	x	
V21	V16050.00-V21192.00		x	SDI-653	x	
V21	V21045.00-V21058.00		x	SDI-661	x	
V21	V21056.00-V21057.00		x	SDI-661	x	
V21/V22-D-1	V22148.00-V22149.00		x	SDI-650	x	
V22	V22123.00-V22124.00		x	SDI-647	x	
V22-A-7	V22128.00-V22129.00	x		SDI-647	x	
V25-A-12	V25050.00-V25051.00		x	SDI-5785H	x	
V28	V28095.00-V28097.00	x		SDI-646	x	
V28-B-10	V28144.00-V28145.00		x	SDI-646	x	
V29	V29043.B0-V29043.C0		x	SDI-646	x	
V30	V30048.00-V30049.00	x		SDI-11,629	x	
V30	V30050.B0-V30050.C0	x		SDI-11,629	x	
V30	V30044.00-V30050.00	x		SDI-11,629	x	
V30	V30051.A0-V30051.B0	x		SDI-11,629	x	
V32	V32006.00-V32007.00		x	P-025154		x
V32	V32114.00-V32115.00		x	SDI-638 A		x
V32	V32120.00-V32121.00	x		SDI-638 B		x
V32	V32021.00-V32022.00	x		SDI-643	x	
V32	V32019.00-V32020.00	x		SDI-643	x	
V32	V32018.00-V32020.00	x		SDI-643	x	
V32	V32029.00-V32030.00		x	SDI-644	x	
V32	V32002.00-V32003.00		x	SDI-644	x	
V32-A-8	V32118.00-V32119.00	x		SDI-638 B		x
V32T	V32T060.00-V32T059.00		x	P-025143		x
V32T	V32T059.00-V32T058.00		x	P-025143		x
V32T	V32T065.00-V32T064.00		x	P-025144		x
V32T	V32T064.00-V32T063.00		x	P-025144		x
V32T	V32T067.00-V32T066.00		x	P-025145		x
V32T	V32T066.00-V32T065.00		x	P-025145		x
V32T	V32T067.00-V32T066.00	x		P-025148		x
V32T	V32T073.00-V32T072.00		x	P-025149		x
V32T	V32T069.00-V32T068.00		x	P-025149		x
V32T	V32T082.00-V32T081.00		x	P-025152		x
V32T	V32T083.00-V32T083.A0		x	P-025153		x
V32T	V32T082.00-V32T081.00		x	P-025153		x
V32T	V32T083.00-V32T083.A0		x	P-025154		x
V32T	V32T082.00-V32T081.00		x	P-025154		x
V32T	FM		x	SDI-5783H		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V32T	FM		x	SDI-5793		x
V32T	EE		x	SDI-5793		x
V32T	V32T076.00-V32T075.00		x	SDI-640	x	
V32T	V32T076.00-V32T075.00		x	SDI-641	x	
V32T-D-1	V32T084.00-V32T083.00		x	P-025154		x
V33	V33165.00-V33166.00		x	SDI-5635		x
V33	V33163.00-V33164.00	x		SDI-5635		x
V33	V33160.00-V33161.00		x	SDI-5635		x
V33	V33163.00-V33164.00		x	SDI-5636	x	
V33	V33160.00-V33161.00	x		SDI-5636	x	
V33	V33163.00-V33164.00		x	SDI-5637		x
V33	V33160.00-V33161.00		x	SDI-5637		x
V33	V33086.00-V33087.00	x		SDI-5775		x
V33	V33082.00-V33083.00		x	SDI-5775		x
V33	V33010.00-V33011.00		x	SDI-5775		x
V33	V33105.00-V33106.00		x	SDI-5775		x
V33	V33100.00-V33101.00		x	SDI-5775		x
V33	V33099.00-V33102.00	x		SDI-5775		x
V33	V33092.00-V33103.00	x		SDI-5775		x
V33	V33082.00-V33083.00		x	SDI-5776		x
V33	V33013.00-V33118.00		x	SDI-5776		x
V33	V33010.00-V33011.00		x	SDI-5776		x
V33	V33121.00-V33123.00		x	SDI-5776		x
V33	V33107.00-V33108.00		x	SDI-5776		x
V33	V33105.00-V33106.00	x		SDI-5776		x
V33	V33100.00-V33101.00		x	SDI-5776		x
V33	V33099.00-V33102.00		x	SDI-5776		x
V33	V33092.00-V33103.00		x	SDI-5776		x
V33	V33121.00-V33123.00		x	SDI-5777		x
V33	V33109.00-V33110.00		x	SDI-5777		x
V33	V33107.00-V33108.00		x	SDI-5777		x
V33	V33105.00-V33106.00		x	SDI-5777		x
V33	V33100.00-V33101.00		x	SDI-5777		x
V33	V33099.00-V33102.00		x	SDI-5777		x
V33	V33092.00-V33103.00		x	SDI-5777		x
V33	V33130.00-V33131.00		x	SDI-5778 A	x	
V33	V33057.00-V33080.00		x	SDI-5778 A	x	
V33	V33069.C0-V33069.E0		x	SDI-5778 A	x	
V33	V33069.00-V33080.A0		x	SDI-5778 A	x	
V33	V33080.C0-V33080.D0	x		SDI-5778 A	x	

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V33	V33036.00-V33037.00		x	SDI-5778 B	x	
V33	V33144.00-V33146.00		x	SDI-5779		x
V33	V33057.00-V33080.00		x	SDI-5779		x
V33	V33076.00-V33077.00		x	SDI-5779		x
V33	V33069.00-V33080.A0		x	SDI-5779		x
V33	V33149.00-V33150.00		x	SDI-5781H		x
V33	V33148.00-V33149.00	x		SDI-5781H		x
V33	V33146.00-V33148.00		x	SDI-5781H		x
V33	V33169.00-V33171.00		x	SDI-5788H		x
V33	V33165.00-V33166.00	x		SDI-5789H, A		x
V33	EE	x		SDI-5789H, A		x
V33	V33165.00-V33166.00	x		SDI-5789H, B		x
V33	EE	x		SDI-5789H, B		x
V33	EE		x	SDI-5791H	x	
V33	V33169.00-V33171.00		x	SDI-5792		x
V33	V33165.00-V33166.00	x		SDI-5792		x
V33	V33156.00-V33173.00		x	SDI-5792		x
V33	EE	x		SDI-5792		x
V33	V33072.B0-V33072.00		x	SDI-5792		x
V33	V33076.00-V33077.00		x	SDI-5792		x
V33	V33086.00-V33087.00		x	SDI-5793		x
V33	V33082.00-V33083.00	x		SDI-5793		x
V33	V33010.00-V33011.00	x		SDI-5793		x
V33	V33008.00-V33009.00		x	SDI-5793		x
V33	V33006.00-V33007.00	x		SDI-5793		x
V33	V33004.00-V33005.00	x		SDI-5793		x
V33	V33001.00-V33002.00	x		SDI-5793		x
V33	V33105.00-V33106.00		x	SDI-5793		x
V33	V33100.00-V33101.00	x		SDI-5793		x
V33	V33099.00-V33102.00	x		SDI-5793		x
V33	V33092.00-V33103.00	x		SDI-5793		x
V33	V33149.00-V33150.00		x	SDI-7271		x
V33	V33086.00-V33087.00		x	SDI-7273	x	
V33	V33097.00-V33098.00		x	SDI-7273	x	
V33	V33093.00-V33095.00	x		SDI-7273	x	
V33	V33163.00-V33164.00		x	SDI-8347	x	
V33	V33080.B0-V33080.H0		x	SDI-8735		x
V33	V33151.00-V33152.00		x	SDI-9250		x
V34	V34062.C0-V34062.D0		x	SDI-11,038	x	
V34	V34084.00-V34085.00		x	SDI-5783H		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V34	V34078.00-V34079.00		x	SDI-5783H		x
V34	V34100.00-V34101.00		x	SDI-5783H		x
V34	EE		x	SDI-5783H		x
V34	EE	x		SDI-5783H		x
V34	V34027.00-V34028.00		x	SDI-5785H	x	
V34	V34024.00-V34025.00		x	SDI-5785H	x	
V34	V34019.00-V34020.00		x	SDI-5785H	x	
V34	V34017.00-V34018.00	x		SDI-5785H	x	
V34	V34004.00-V34006.00		x	SDI-5785H	x	
V34	EE		x	SDI-5785H	x	
V34	V34012.00-V34013.00		x	SDI-5786H	x	
V34	V34038.00-V34039.00		x	SDI-5787H		x
V34	V34038.00-V34039.00		x	SDI-5792		x
V34	V34084.00-V34085.00		x	SDI-5793		x
V34	V34078.00-V34079.00	x		SDI-5793		x
V34	V34076.00-V34077.00	x		SDI-5793		x
V34	V34070.00-V34071.00		x	SDI-5793		x
V34	V34063.00-V34065.00		x	SDI-5793		x
V34	V34057.00-V34058.00	x		SDI-5793		x
V34	V34105.A0-V34105.00	x		SDI-5793		x
V34	V34105.00-V34106.00	x		SDI-5793		x
V34	V34100.00-V34101.00		x	SDI-5793		x
V34	V34055.00-V34056.00		x	SDI-5793		x
V34	V34052.00-V34053.00		x	SDI-5793		x
V34	V34033.00-V34034.00	x		SDI-5793		x
V34	V34031.00-V34032.00	x		SDI-5793		x
V34	EE	x		SDI-5793		x
V34	EE	x		SDI-5793		x
V34	FM	x		SDI-5793		x
V34	FM	x		SDI-5793		x
V34	V34017.00-V34018.00		x	SDI-6934		x
V34	V34008.00-V34009.00		x	SDI-6934		x
V34	V34007.00-V34008.00	x		SDI-6934		x
V34	V34003.00-V34015.00	x		SDI-6934		x
V34	V34001.00-V34002.00		x	SDI-6934		x
V34	FM		x	SDI-6934		x
V34	EE		x	SDI-6934		x
V34	V34057.00-V34058.00		x	SDI-6935		x
V34	V34052.00-V34053.00	x		SDI-6935		x
V34	V34033.00-V34034.00		x	SDI-6935		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V34	V34031.00-V34032.00	x		SDI-6935		x
V34	V34084.00-V34085.00	x		SDI-9044	x	
V34	V34078.00-V34079.00		x	SDI-9044	x	
V34	V34076.00-V34077.00	x		SDI-9044	x	
V34	EE		x	SDI-9044	x	
V34	FM		x	SDI-9044	x	
V35	V35149.00-V35204.00		x	SDI-10,552		x
V35	V35205.00-V35206.00	x		SDI-10,552		x
V35	V35207.00-V35208.00		x	SDI-10,552		x
V35	V35203.00-V35204.00		x	SDI-10,552		x
V35	V35204.00-V35205.00	x		SDI-10,552		x
V35	V35061.00-V35063.00		x	SDI-10,782 A	x	
V35	V35056.00-V35057.00		x	SDI-10,782 A	x	
V35	V35064.00-V35065.00		x	SDI-10,782 A	x	
V35	V35024.00-V35025.00		x	SDI-10,782 A	x	
V35	V35047.00-V35048.00		x	SDI-10,782 A	x	
V35	V35037.00-V35038.00		x	SDI-10,782 A	x	
V35	V35061.00-V35063.00		x	SDI-10,782 B	x	
V35	V35024.00-V35025.00	x		SDI-10,782 B	x	
V35	V35022.00-V35023.00		x	SDI-10,782 B	x	
V35	V35044.00-V35045.00		x	SDI-10,782 B	x	
V35	V35037.00-V35038.00		x	SDI-10,782 B	x	
V35	V35035.00-V35036.00		x	SDI-10,782 B	x	
V35	V35037.A0-V35037.B0		x	SDI-10,782 B	x	
V35	V35120.00-V35121.00	x		SDI-11,037		x
V35	V35109.00-V35125.00		x	SDI-11,037		x
V35	V35108.00-V35109.00		x	SDI-11,037		x
V35	V35101.00-V35102.00		x	SDI-11,037		x
V35	V35098.00-V35099.00		x	SDI-11,037		x
V35	V35054.00-V35055.00		x	SDI-5792		x
V35	V35087.00-V35088.00		x	SDI-8091	x	
V35	V35120.00-V35121.00		x	SDI-8734		x
V35	V35112.00-V35114.00	x		SDI-8734		x
V35	V35110.00-V35111.00		x	SDI-8734		x
V35	V35109.00-V35125.00		x	SDI-8734		x
V35	V35184.00-V35186.00		x	SDI-8734		x
V35	V35182.00-V35183.00		x	SDI-8734		x
V35	V35126.00-V35144.00		x	SDI-8734		x
V35	V35061.00-V35063.00	x		SDI-8736		x
V35	V35056.00-V35057.00		x	SDI-8736		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V35	V35024.00-V35025.00	x		SDI-8736		x
V35	V35047.00-V35048.00		x	SDI-8736		x
V35	V35037.00-V35038.00	x		SDI-8736		x
V35	V35033.00-V35037.00		x	SDI-8736		x
V35	V35037.A0-V35037.B0		x	SDI-8736		x
V35	V35203.00-V35204.00		x	SDI-9042		x
V35	V35202.K0-V35202.L0	x		SDI-9042		x
V35	V35202.I0-V35202.J0		x	SDI-9042		x
V35	V35205.00-V35206.00	x		SDI-9043		x
V35	V35207.00-V35208.00		x	SDI-9043		x
V35	V35204.00-V35205.00		x	SDI-9043		x
V35	V35205.00-V35206.00		x	SDI-9045		x
V35	V35213.00-V35214.00		x	SDI-9045		x
V35	V35211.00-V35212.00		x	SDI-9045		x
V35	V35207.00-V35208.00		x	SDI-9045		x
V35	V35211.00-V35212.00		x	SDI-9047 (I-4)		x
V35	V35213.00-V35214.00		x	SDI-9047 (I-4)		x
V35-A-2	V35089.00-V35091.00		x	SDI-8091	x	

A CULTURAL RESOURCES EVALUATION FOR THE VISTA AND BUENA SANITATION DISTRICT 2007 SEWER MASTER PLAN UPDATE

City of Vista and Buena Sanitation District

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Report Date:	September 27, 2007
Report Title:	A Cultural Resources Evaluation for the Vista and Buena Sanitation District 2007 Sewer Master Plan Update
Prepared for:	Dudek and Associates 605 Third Street Encinitas, California 92024
Submitted to:	City of Vista Planning Department 600 Eucalyptus Avenue Vista, California 92084
USGS Quadrangle:	*San Marcos* and *San Luis Rey*, California
Study Area:	Approximately 275 linear miles
Key Words:	Records search, program level review, mitigation measures, City of Vista, Vista Sanitation District, Buena Sanitation District.

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List of Abbreviations

APE	Area of potential effect	TU	Test Unit
CEQA	California Environmental Quality Act	USGS	United States Geological Survey
CIP	Capital Improvements Project	YBP	Years before present
STP	Shovel Test Pit		

1.0 MANAGEMENT SUMMARY

The following report describes a cultural resources evaluation for the City of Vista and Buena Sanitation District 2007 Sewer Master Plan Update. Part of the Master Plan Update is the proposal for several Capital Improvement Projects (CIP) including both capacity replacement and non-capacity related rehabilitation and replacement projects. As part of the combined programmatic and project level environmental impact report (EIR) prepared for the master plan update, the effect of the proposed CIP projects on cultural resources was addressed. The cultural resources study utilized available archaeological records information of the CIP project corridors to determine where recorded archaeological sites might be impacted by the CIP projects, and to predict where CIP projects in undisturbed settings might encounter unrecorded resources.

The analysis of records searches and project maps has resulted in the listing of 448 pipeline reaches (or segments) that are situated within 500 feet of recorded archaeological sites or within either the Vista or Buena Sanitation Districts. Potential impacts to cultural resources for pipeline reaches, rehabilitations, and improvements will require the implementation of mitigation measures as part of the conditions of approval for these projects. The mitigation measures will require surveys of the pipelines prior to initiation of construction to accurately define the presence of any archaeological materials. Should the survey result in the positive identification of cultural resources within any pipeline reach, subsequent testing programs will be required to determine the importance of the sites under guideline criteria (California Environmental Quality Act [CEQA] 15064.5) and evaluate the significance of any of the impacts to the archaeological sites. Additional mitigation measures would be necessary if important cultural resources could not be avoided by pipeline construction.

2.0 INTRODUCTION

The following report describes a cultural resources evaluation of the proposed sewer and wastewater Master Plan update for the City of Vista and Buena Sanitation District. The city provides sewer service to areas within the Buena Vista Creek drainage basin as well as portions of the San Luis Rey and Agua Hedionda Creek basins. Approximately 190 miles of sewer collection pipes drain the sanitation district westerly via the Vista-Carlsbad Interceptors to the Encina Wastewater Treatment Plant. An additional 85 miles of pipes within the Buena Sewer Collection System serves a large portion of the Agua Hedionda Creek drainage basin that includes areas within Vista and the County of San Diego. The current 2007 Master Plan Update is an update to *The City of Vista and Buena Sanitation District Infrastructure Review Summary and Wastewater Master Plan Update* prepared in July 2001/2003.

In order to comply with CEQA, the cultural resources study for the program-level Master Plan update EIR included an archaeological records search and a data review of the project area to determine the recorded patterns of cultural resources within the sewer district boundaries. From this information, assessments could be made regarding the potential for impacts to cultural resources within the general vicinity of pipelines and facilities. This information also indicated where existing development has precluded the possibility of any cultural resources. No field surveys were conducted for this program-level EIR project.

The CIP projects included in the updated Master Plan represent potential impacts to cultural resources. This finding is based on the data collected regarding recorded resources and undeveloped landforms that may contain archaeological sites. In order to reduce the significance of potential impacts, mitigation measures have been presented in this report. The measures, if implemented, will mitigate impacts to cultural resources to a level below significant. Many of the mitigation measures are phased and correspond to requirements for initial surveys followed by resource testing and significance evaluations if archaeological sites or features are encountered within the project's area of potential effect (APE).

3.0 BACKGROUND INFORMATION

The project area lies generally within the City of Vista and the Highway 78 corridor. This region of northern San Diego County has an extensive record of prehistoric occupation and historic use. The existing setting of the project area is summarized below.

3.1 Environmental Setting

3.1.1 Geology

San Diego County lies in the Peninsular Range Geologic Province of southern California. The mountainous zone, which extends from northwest to southeast through the county, ranges to a maximum height of 6,533 feet above mean sea level (Beauchamp 1986). Foothills and valleys, which comprise the cismontane region, extend west from the mountains. This region typically receives more rainfall than the mesas and less than the mountainous region. Between the foothills and the coast lies the coastal mesa region, which is cut by several large drainages originating in the mountains and foothills. The coast is characterized by large bays and lagoons, where the major rivers empty into the sea, and mesas which terminate at the ocean in the form of bluffs (Beauchamp 1986).

The project area is located in the Coastal Plains Physiographic Province of San Diego County. The habitat in the project vicinity is characterized by rolling hills with limited bedrock exposures and intermittent drainages with lowland valleys that feed into the larger Buena Vista Creek that flows into Buena Vista Lagoon.

3.1.2 Biology

The large area of the project includes numerous biological settings and habitats. Much of the city area is either developed or has been cultivated in the past. Therefore, the biological setting is very diverse, but does include areas of coastal sage scrub, riparian habitat, and oak woodlands in addition to disturbed habitats. The diversity of habitats is matched by the quantity of animal species that are present. Continual growth of residential and commercial uses has had the effect of placing pressures on native animal species.

3.1.3 Hydrology

The sanitation district covers several square miles that fall generally within the Buena Vista Creek, Agua Hedionda Creek, and Loma Alta Creek drainage systems. All of these drainage patterns flow westward to the Pacific Ocean. Two major estuarine lagoons, Buena Vista Lagoon and Agua Hedionda Lagoon, are located in the project area at the western termination of the drainages. The lagoons were created as the sea level rose rapidly following the last glacial sequence that corresponds to a long period of lower sea levels that had allowed the surrounding creeks to cut deep canyons. The lagoons provided a variety of marine food

resources (e.g., mollusks, crustaceans, and fishes) that was used prehistorically in the subsistence routine of both the Late Prehistoric Luiseño Indians and the earlier La Jolla Complex peoples.

3.2 Cultural Setting

3.2.1 The San Dieguito Complex/Paleo-Indian

The term "San Dieguito Complex" is a cultural distinction used to describe a group of people that occupied sites in the region between 11,500 and 7,000 YBP and appear to be related to or contemporaneous with the Paleo-Indian groups in the Great Basin area and the Midwest. Initially believed to have been big game hunters, the San Dieguito are better typified as wide-ranging hunter-gatherers. The earliest evidence of the San Dieguito Complex sites are known from San Diego County, the Colorado Desert, and further north along the California coast. These people abandoned the drying inland lakes of the present California desert and arrived in San Diego County circa 9,000 years before present (YBP), as documented at the Harris Site SDI-149 (Warren 1966); Rancho Park North Site SDI-4392 (Kaldenberg 1982); and Agua Hedionda Sites SDI-210/UCLJ-M-15 and SDI-10,965/SDM-W-131 (Moriarty 1967; Gallegos and Carrico 1984; Gallegos 1991). A San Dieguito component appears to have been present in the lower strata at the Malago Cove site in Redondo Beach, Los Angeles County (Walker 1951). Although radiocarbon dates were not obtained from these levels, the lack of ground stone tools and presence of crude flaked tools suggests similarities to the San Dieguito Complex.

Diagnostic San Dieguito artifacts include finely crafted scraper planes, choppers, scrapers, crescentics, elongated bifacial knives, and intricate leaf-shaped points (Rogers 1939; Warren 1967). This tool assemblage resembles those of the Western Lithic Co-Tradition (Davis et al. 1969) and the Western Pluvial Lakes Tradition (Bedwell 1970; Moratto 1984). Typical San Dieguito sites lack ground stone tools. Tools recovered from San Dieguito Complex sites and the pattern of the site locations indicate that they were a wandering hunting and gathering society (Moriarty 1969; Rogers 1966). Faunal data from the Malago Cove site, which included mollusks, fish, birds, and terrestrial and marine mammals, suggests a diverse and broad-based strategy (Walker 1951).

The San Dieguito Complex is the least understood of the cultures that occupied the southern California region. This is due primarily to the fact that San Dieguito sites rarely contain stratigraphic information or datable material. Debate continues as to whether the San Dieguito sites are actually different activity areas of the early Encinitas Tradition peoples (Bull 1987; Gallegos 1987), or whether the San Dieguito Complex peoples had a separate origin and culture from the Encinitas Tradition (Hayden 1987; Moriarty 1987; Smith 1987). According to this second scenario, the San Dieguito Complex peoples may have been assimilated into the dominant Encinitas Tradition culture (Kaldenberg 1982; Moriarty 1967). A third possibility is that the San Dieguito Complex gave rise to the Encinitas Tradition (Koerper et al. 1991). The issue of shared or separate origins of the San Dieguito Complex and Encinitas Tradition may be

resolved with continued collection of archaeological data and collection of systematic radiocarbon dates.

3.2.2 The La Jolla Complex/Encinitas Tradition/Millingstone Horizon

Between 9,000 and 8,000 YBP, a widespread complex was established in the southern California region, primarily along the coast (Warren and True 1961). This complex is locally known as the La Jolla Complex (Rogers 1939; Moriarty 1966), which is regionally associated with the Encinitas Tradition (Warren 1968), and shared cultural components with the widespread Millingstone Horizon (Wallace 1955). The coastal expression of this complex, with a focus on coastal resources and development of deeply-stratified shell middens located primarily around bays and lagoons, appeared in the southern California coastal areas, where the older sites associated with this expression are located at Topanga Canyon, Newport Bay, Agua Hedionda Lagoon, and some of the Channel Islands. Radiocarbon dates from sites attributed to this complex span a period of over 7,000 years in this region, beginning over 9,000 YBP.

The Encinitas Tradition is best recognized for its pattern of large coastal sites characterized by shell middens, grinding tools closely associated with the marine resources of the area, cobble-based tools, and flexed human burials (Shumway et al. 1961; Smith and Moriarty 1985). While ground stone tools and scrapers are the most recognized tool types, coastal Encinitas Tradition sites also contain numerous utilized flakes, which may have been used to pry open shellfish. Artifact assemblages at coastal sites indicate a subsistence pattern focused on shellfish collection and near-shore fishing, suggesting an incipient maritime adaptation with regional similarities to more northern sites of the same period (Koerper et al. 1986). Other artifacts associated with Encinitas Tradition sites include stone bowls, doughnut stones, discoidals, stone balls, and stone, bone, and shell beads.

The coastal lagoons in northwestern San Diego County supported large Millingstone Horizon populations circa 6,000 YBP, as shown by numerous radiocarbon dates from the many sites adjacent to the lagoons. The ensuing millennia were not stable environmentally, and by 3,000 YBP, many of the coastal sites in central San Diego County had been abandoned (Gallegos 1987, 1992). The abandonment of the area is usually attributed to the sedimentation of coastal lagoons and the resulting deterioration of fish and mollusk habitat, a situation well documented at Batiquitos Lagoon (Miller 1966; Gallegos 1987). Over a two thousand year period at Batiquitos Lagoon, dominant mollusk species occurring in archaeological middens shifted from deep-water mollusks (*Argopecten* sp.) to species tolerant of tidal flat conditions (*Chione* sp.), indicating water depth and temperature changes (Miller 1966; Gallegos 1987). This situation likely occurred for other small drainages (Buena Vista, Agua Hedionda, San Marcos, and Escondido Creeks) along the central San Diego coast, where low flow rates did not produce sufficient discharge to flush the lagoons they fed (Buena Vista, Agua Hedionda, Batiquitos, and San Elijo Lagoons) (Byrd 1998). Drainages along the northern and southern San Diego coastline

were larger and able to flush the coastal hydrological features they fed, keeping them open to the ocean and allowing for continued human exploitation (Byrd 1998). Los Peñasquitos lagoon exhibits dates as late as 2,355 YBP (Smith and Moriarty 1985), and Sorrento Valley (Carrico and Taylor 1983; Carrico and Gallegos 1988; Gallegos et al. 1989; Smith and Moriarty 1983; WESTEC 1975) and San Diego Bay showed continuous occupation until the close of the Millingstone Horizon (Gallegos et al. 1988). Additionally, data from several drainages in Camp Pendleton indicate a continued occupation of shell midden sites until the close of the period, indicating that coastal sites were not entirely abandoned during this time (Byrd 1998).

By 5,000 YBP, an inland expression of the La Jolla Complex, which exhibits influences from the Campbell Tradition from the north, is evident in the archaeological record. These inland Millingstone Horizon sites have been termed "Pauma Complex" (True 1958; Warren et al. 1961; Meighan 1954). By definition, Pauma Complex sites share a predominance of grinding implements (manos and metates), lack mollusk remains, have a greater tool variety (including atlatl dart points, quarry-based tools, and crescentics), and seem to express a more sedentary lifestyle with a subsistence economy based on the use of a broad variety of terrestrial resources. Although originally viewed as a separate culture from the coastal La Jolla Complex (True 1980), it appears that these inland sites may be part of a subsistence and settlement system utilized by the coastal peoples. Evidence from the 4S Project in inland San Diego County suggests that these inland sites may represent seasonal components within an annual subsistence round by La Jolla Complex populations (Raven-Jennings et al. 1996). Including both coastal and inland sites of this time period in discussions of the Encinitas Tradition, therefore, provides a more a complete appraisal of the settlement and subsistence system exhibited by this cultural complex.

3.2.3 The Late Prehistoric Period

The Late Prehistoric period begins approximately 1,300 YBP when a Shoshonean-speaking group from the Great Basin region moved into San Diego County. This period is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period, with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, but effective, technological innovations, such as the bedrock mortar for use in acorn processing. Atlatl darts were replaced by smaller arrow points to be used with the bow and arrow.

The period is divided into two phases, San Luis Rey I and San Luis Rey II, and is based upon the introduction of pottery (Meighan 1954). Through radiocarbon dating, the introduction of pottery and the initiation of the San Luis Rey II phase began at approximately 1300 A.D. San Luis Rey I is characterized by the use of portable shaped or unshaped slab metates, and non-portable bedrock milling features. Manos and pestles can also be shaped or unshaped. Cremation of the dead, bone awls, and stone and shell ornaments are also prominent in the

material culture. The later San Luis Rey II assemblage is augmented by pottery cooking and storage vessels, cremation urns, and polychrome pictographs. The fluorescence of rock art likely appeared as the result of increased population sizes and increased sedentism (True et al. 1974). Projectile points are dominated by the Cottonwood Triangular series, but Desert Side-notched and Dos Cabezas Serrated styles also occur. Subsistence is thought to have focused on the utilization of acorns, a storable species that allowed for relative sedentism and increased populations.

The ethnographic period begins at approximately AD 1769 when the Mission San Luis Rey was established. Ethnohistorical and ethnographic evidence indicates that the Luiseño occupied northern San Diego County. These peoples were seasonal hunter-gatherers with cultural elements that were very distinct from the Archaic Period peoples, including cremation of the dead, the use of the bow and arrow, and use of the acorn as a main food staple (Moratto 1984). Along the coast, the Luiseño made use of the marine resources available by fishing and collecting mollusks for food. Seasonally available terrestrial resources including acorns and game were also sources of nourishment for Luiseño groups. The elaborate kinship and clan systems between the Luiseño and Cahuilla and other groups facilitated a wide-reaching trade network that included trade of Obsidian Butte obsidian and other resources from the eastern deserts and steatite from the Channel Islands. The Luiseño were Takic-speaking people more closely related linguistically and ethnographically to each other and the Cahuilla, Gabrielino and Cupeño than to the Kumeyaay, who occupied territory to the south.

The Luiseño occupied a territory bounded on the west by the Pacific Ocean, on the east by the Peninsular Range Mountains at San Jacinto, including Palomar Mountain to the south and Santiago Peak to the north, on the south by Agua Hedionda Lagoon, and on the north by Aliso Creek in present day San Juan Capistrano. The Luiseño differed from their neighboring Takic speakers in having an extensive proliferation of social statuses, a system of ruling families that provided ethnic cohesion within the territory, a distinct world view that stemmed from use of the hallucinogen datura, and an elaborate religion that included ritualized sand paintings of the sacred being "Chingichngish" (Bean and Shipek 1978; Kroeber 1925).

The Luiseño occupied sedentary villages, most often located in sheltered areas in valley bottoms, along streams, or along coastal strands near mountain ranges. Villages were located near water sources to facilitate acorn leaching, and in areas that offered thermal and defensive protection. Villages were composed of areas that were both publicly and privately, or family, owned. Publicly owned areas included trails, temporary campsites, hunting areas, and quarry sites. Inland groups had fishing and gathering sites along the coast that were utilized, particularly from January to March, when inland food resources were scarce. During October and November, most of the village would relocate to mountain oak groves to harvest acorns. For the remainder of the year, the Luiseño remained at village sites, where food resources were within a day's travel (Bean and Shipek 1978; Kroeber 1925).

3.2.4 Historic Period

Spanish Period (1769-1821)

The Spanish occupation of the claimed territory of Alta California took place during the reign of King Carlos III of Spain. A representative of the King in Mexico, Jose de Gálvez, conceived of the plan to colonize Alta California and thereby secure the area for the Spanish crown (Rolle 1969). The effort involved both a military and a religious contingent, with the overall intent of establishing forts and missions to gain control of the land and of the native inhabitants through conversion. Actual colonization of the San Diego area began on July 16, 1769, when the first Spanish exploring party, commanded by Gaspar de Portolá (with Father Junípero Serra in charge of religious conversion of the native populations), arrived in San Diego to secure California for the Spanish crown (Palou 1926). The natural attraction of the harbor at San Diego and the establishment of a military presence in the area solidified the importance of San Diego to the Spanish colonization of the region and the growth of the civilian population. Missions were constructed from San Diego to as far north as San Francisco. The mission locations were based on a number of important territorial, military, and religious considerations. Grants of land to persons who made an application were made, but many tracts reverted to the government for lack of use. As an extension of territorial control by the Spanish empire, each mission was placed so as to command as much territory and as large a population as possible. While primary access to California during the Spanish Period was by sea, the route of El Camino Real served as the land route for transportation, commercial, and military activities. This route was considered to be the most direct path between the missions (Rolle 1969). As increasing numbers of Spanish and Mexican people, and later Americans during the Gold Rush, settled in the area, the Indian populations diminished as they were displaced or decimated by disease (Carrico and Taylor 1983).

Mexican Period (1821-1846)

By 1821, Mexico had gained independence from Spain, and the northern territories were subject to political repercussions. By 1834, all of the mission lands had been removed from the control of the Franciscan Order under the Acts of Secularization. Without proper maintenance, the missions quickly began to disintegrate and after 1836, missionaries ceased to make regular visits inland to minister the needs of the Indians (Engelhardt 1921). Large tracts of land continued to be granted to persons who applied for them or had gained favor with the Mexican government. Grants of land were also made to settle government debts.

Anglo-American Period (1846-Present)

California was invaded by United States troops during the Mexican-American War of 1846-1848. The acquisition of strategic Pacific ports and California land was one of the principal objectives of the war (Price 1967). At the time, the inhabitants of California were

practically defenseless, and they quickly surrendered to the United States Navy in July 1847 (Bancroft 1884).

The cattle ranchers of the "counties" of southern California prospered during the cattle boom of the early 1850s. They were able to "reap windfall profit...pay taxes and lawyer's bills...and generally live according to custom" (Pitt 1966). Cattle raising soon declined, however, contributing to the expansion of agriculture. With the passage of the "No Fence Act," San Diego's economy changed from stock raising to farming (Rolle 1969). The act allowed for the expansion of unfenced farms, which was crucial in an area where fencing material was practically unavailable. Five years after its passage, most of the arable lands in San Diego County had been patented as either ranchos or homesteads, and growing grain crops replaced raising cattle in many of the county's inland valleys (Blick 1976; Elliott 1883 [1965]). By 1870, farmers had learned to dry farm and were coping with some of the peculiarities of San Diego County's climate (*San Diego Union*, February 6, 1868; Van Dyke 1886). Between 1869 and 1871, the amount of cultivated acreage in the county rose from less than 5,000 acres to more than 20,000 (*San Diego Union*, January 2, 1872). Of course, droughts continued to hinder the development of agriculture (Crouch 1915; *San Diego Union*, November 10, 1870; Shipek 1977). Large-scale farming in San Diego County was limited by a lack of water and the small size of arable valleys; also, the small urban population and poor roads restricted commercial crop growing. Nevertheless, cattle continued to be grazed in inland San Diego County (Gordinier 1966).

During the first two decades of the twentieth century, the population of San Diego County continued to grow. The population of the inland county declined during the 1890s, but between 1900 and 1910, it rose by about 70 percent. The pioneering efforts were over, the railroads had broken the relative isolation of southern California, and life in San Diego County became similar to other communities throughout the west. After World War I, the history of San Diego County was primarily determined by the growth of San Diego Bay. In 1919, the United States Navy decided to make the bay the home base for the Pacific Fleet (Pourade 1967). During the 1920s, the aircraft industry also established itself at the bay (Heiges 1976). The establishment of these industries led to the growth of the county as a whole; however, most of the growth occurred in the north county coastal areas, including the Carlsbad region, where the population almost tripled between 1920 and 1930. During this time period, the history of inland San Diego County was subsidiary to that of the City of San Diego, which became a Navy center and industrial city (Heiges 1976). In inland San Diego County, agriculture became specialized, and recreational areas were established in the mountain and desert areas. Just before World War II, urbanization began to spread to the inland county and the northern and southern peripheries of the city, including the area of northwestern San Diego County that contains the current study area.

4.0 RESULTS

The Sewer Master Plan includes a variety of construction CIP projects that range from rehabilitation of existing facilities to the installation of new sewer pipelines to increase service. For the cultural resources study, all existing pipeline segments and proposed locations for the construction of additional segments will be reviewed.

In order to assess the potential of the CIP projects to impact cultural resources, records searches were obtained from the South Coastal Information Center at San Diego State University. The records searches principally focused on the locational information for recorded sites. The data from the information center was transferred onto the USGS CIP project maps to assess possible conflicts with proposed projects. The results of this study have been presented in Table 4.0–1.

For the assessment of impacts, the data from the records searches was organized in categories for each pipeline. These categories included:

- Presence of recorded sites within 100 feet.
- Presence of recorded sites within 500 feet.
- Disturbed and/or Developed setting.
- Undisturbed or partially disturbed setting.

Based on this categorization, the pipelines that may impact cultural resources have been identified in Table 4.0–1. Because many pipelines are long and pass through different types of settings, the particular reaches or segments of each pipeline that correspond to the various categories listed above were noted in Table 4.0–1.

4.1 Projects Likely to Impact Cultural Resources

The information gathered from various sources and presented in Table 4.0–1 indicates that 146 pipeline segments or reaches are situated within 100 feet of a recorded archaeological site. Of this group, 107 reaches are situated in undisturbed or partially disturbed areas and retain a high potential for the presence of cultural resources within these particular projects. Thirty-nine of the reaches are situated in previously disturbed or developed settings, and the potential of encountering elements of the recorded sites is very unlikely as the archaeological materials are assumed to be disturbed or destroyed by previous grading impacts. The archaeological sites that would be impacted by the 107 reaches where sites have been recorded are also listed on Table 4.0–1. Descriptions of the sites have been provided in Table 4.0–2. A potentially important site is included in this group, Sites SDI-638, which is a major prehistoric encampment or village. At least two sites have reported human burials, Sites SDI-8736 and SDI-10,782. The majority of the recorded sites are listed as surface scatters of lithic materials or milling tools; however, most of these sites have not been tested or evaluated for significance.

4.2 Projects which Will Potentially Impact Cultural Resources

The second set of pipeline reaches with potential impacts to cultural resources are those with recorded archaeological materials within 500 feet of the proposed alignment. As noted in Table 4.0–1, 302 pipeline segments or reaches are situated within 500 feet of a recorded archaeological site. In this group of 302 pipeline reaches, 74 segments pass through areas where the recorded sites are situated within disturbed or developed areas and the potential for any remaining archaeological materials is very remote. The remaining 228 reaches in this group retain the potential to encounter archaeological materials because the recorded cultural resources within 500 feet are situated in settings that are either undisturbed or partially disturbed. The archaeological sites that would be impacted by the 302 reaches where sites have been recorded within 500 feet are also listed on Table 4.0–1. Descriptions of the sites have been provided in Table 4.0–2. Some of the recorded sites are potentially significant, although many have not been previously tested.

4.3 Sites Located within the Sanitation Districts that Will Not be Impacted

The last group of sites that are noted in Table 4.0–1 are 28 sites which are not situated within 500 feet of any pipeline reaches, but are located within either the Vista or Buena Sanitation Districts. Descriptions of the sites have been provided in Table 4.0–2. This group of sites will not incur any direct or indirect impacts from the proposed project.

TABLE 4.0–1

Pipeline ID in Archaeological Site Vicinities

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B01	503		x	SDI-5779		x
B01	2134		x	SDI-5785H	x	
B01	483		x	SDI-5787H		x
B01	493	x		SDI-5787H		x
B01	503		x	SDI-5787H		x
B01	58		x	SDI-5787H		x
B01	50		x	SDI-5792		x
B01	161		x	SDI-5792		x
B01	2134		x	SDI-5792		x
B01	298		x	SDI-5792		x
B01	299		x	SDI-5792		x
B01	483		x	SDI-5792		x
B01	493		x	SDI-5792		x
B01	50		x	SDI-5792		x
B01	503		x	SDI-5792		x
B01	51		x	SDI-5792		x
B01	531	x		SDI-5792		x
B01	58		x	SDI-5792		x
B01	673		x	SDI-5792		x
B01	674		x	SDI-5792		x
B01	675	x		SDI-5792		x
B01	679	x		SDI-5792		x
B01	680	x		SDI-5792		x
B01	689		x	SDI-5792		x
B01	71		x	SDI-5792		x
B01	75		x	SDI-5792		x
B01	77	x		SDI-5792		x
B01	7828		x	SDI-5792		x
B01	79	x		SDI-5792		x
B01	80	x		SDI-5792		x
B01	81		x	SDI-5792		x
B01	85		x	SDI-5792		x
B01	86		x	SDI-5792		x
B01	689		x	SDI-8091	x	
B01	531	x		SDI-8092	x	
B01	680		x	SDI-8092	x	
B01	50	x		SDI-8735		x
B01	51		x	SDI-8735		x
B01	58		x	SDI-8735		x

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B01	7828		x	SDI-8735		x
B01	50		x	SDI-9582		x
B01	51		x	SDI-9582		x
B01-A-30	53	x		SDI-5792		x
B01-A-30	53		x	SDI-8735		x
B01-A-33	194		x	SDI-5792		x
B01-A-33	194		x	SDI-8735		x
B01-A-33	194	x		SDI-9582		x
B01-A-35	192		x	SDI-5791H	x	
B01-A-35	192	x		SDI-5792		x
B01-A-35	192	x		SDI-9582		x
B02	48		x	SDI-5792		x
B07/B01-D-1	199	x		SDI-5787H		x
B07/B01-D-1	199	x		SDI-5792		x
B08	3228		x	I-401	x	
B08	3239		x	I-401	x	
B08	2287	x		I-402	x	
B08	2289		x	I-402	x	
B08	2768	x		I-402	x	
B08	3239	x		I-402	x	
B08	2294		x	I-403	x	
B08	1068		x	P-018224		x
B08	3228	x		P-018224		x
B08	4301		x	P-018224		x
B08	4307		x	P-018224		x
B08	4309		x	P-018224		x
B08	3239	x		SDI-12,520 H	x	
B08	1146		x	SDI-12,521	x	
B08	1142	x		SDI-12,521	x	
B08	2296		x	SDI-12,521	x	
B08	1068	x		SDI-13,009	x	
B08	3228	x		SDI-13,009	x	
B09	2223	x		I-402	x	
B12	7443		x	P-025154		x
B12	2163		x	SDI-11,037		x
B14	7262	x		SDI-8250 A		x
B14	7262	x		SDI-8250 B		x
B14	2242	x		SDI-8250 C		x
B14	7262	x		SDI-8250 C		x
B14-A-30	6864	x		SDI-8250 C		x
B15	2492		x	P-024185		x
B15	5917		x	P-024185		x
B15	6324		x	P-024185		x
B15	6411		x	P-024185		x

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B15	6967	x		P-024185		x
B15	6989		x	P-024185		x
B15	1192	x		SDI-5634		x
B15	1396	x		SDI-5634		x
B15	1444	x		SDI-5634		x
B15	1449		x	SDI-5634		x
B15	1451		x	SDI-5634		x
B15	2114	x		SDI-5634		x
B15	8361	x		SDI-5635		x
B15	8348		x	SDI-5637		x
B15	8361		x	SDI-5637		x
B15	1368		x	SDI-5779		x
B15	1370		x	SDI-5779		x
B15	1336	x		SDI-5788H		x
B15	1338		x	SDI-5788H		x
B15	1339		x	SDI-5788H		x
B15	1341		x	SDI-5788H		x
B15	1361		x	SDI-5788H		x
B15	1386		x	SDI-5788H		x
B15	2988		x	SDI-5788H		x
B15	2989		x	SDI-5788H		x
B15	8361		x	SDI-5789H, A		x
B15	8361		x	SDI-5791H	x	
B15	7513	x		SDI-5792		x
B15	1336		x	SDI-5792		x
B15	1338		x	SDI-5792		x
B15	1339	x		SDI-5792		x
B15	1341	x		SDI-5792		x
B15	1352		x	SDI-5792		x
B15	1357		x	SDI-5792		x
B15	1361		x	SDI-5792		x
B15	1368		x	SDI-5792		x
B15	1370	x		SDI-5792		x
B15	1376		x	SDI-5792		x
B15	1386	x		SDI-5792		x
B15	1388		x	SDI-5792		x
B15	1459	x		SDI-5792		x
B15	177		x	SDI-5792		x
B15	2988	x		SDI-5792		x
B15	2989	x		SDI-5792		x
B15	3295	x		SDI-5792		x
B15	3640	x		SDI-5792		x
B15	5917		x	SDI-5792		x
B15	7447	x		SDI-5792		x

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B15	7498		x	SDI-5792		x
B15	7520	x		SDI-5792		x
B15	8361	x		SDI-5792		x
B15	8361	x		SDI-8347	x	
B15	6303	x		SDI-9503	x	
B15	6836		x	SDI-9503	x	
B15	762	x		SDI-9503	x	
B15/V33-D-1	2610		x	SDI-5779		x
B15/V33-D-1	508	x		SDI-5779		x
B15/V33-D-1	2611		x	SDI-5790H		x
B15/V33-D-1	2611	x		SDI-5792		x
B15-A-3	6841		x	SDI-5792		x
B15-A-4	1128		x	SDI-5792		x
B15-A-5	588	x		SDI-5792		x
B15-A-9	1462		x	SDI-5792		x
none	none	none	none	I-469		x
none	none	none	none	SDI-10,150		x
none	none	none	none	SDI-11,651 H	x	
none	none	none	none	SDI-12,522		x
none	none	none	none	SDI-12,736		x
none	none	none	none	SDI-15,675 H	x	
none	none	none	none	SDI-5543 A	x	
none	none	none	none	SDI-5543 B		x
none	none	none	none	SDI-5780		x
none	none	none	none	SDI-5784 H		x
none	none	none	none	SDI-6089	x	
none	none	none	none	SDI-642	x	
none	none	none	none	SDI-7270		x
none	none	none	none	SDI-7272	x	
none	none	none	none	SDI-7275		x
none	none	none	none	SDI-7276		x
none	none	none	none	SDI-7278	x	
none	none	none	none	SDI-7279		x
none	none	none	none	SDI-7282		x
none	none	none	none	SDI-7283		x
none	none	none	none	SDI-7286	x	
none	none	none	none	SDI-8242	x	
none	none	none	none	SDI-8462		x
none	none	none	none	SDI-8777		x
none	none	none	none	SDI-9046		
none	none	none	none	SDI-9047 (I-5)		x
none	none	none	none	SDI-9047 (I-6)		x
none	none	none	none	SDI-9251		x
OV2	2853	x		SDI-637	x	

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
OV5	3615		x	P-024949		x
OV5	3514		x	SDI-13,182		x
OV5	3518		x	SDI-13,182		x
OV5	3562		x	SDI-14,730H		x
OV5	3518	x		SDI-5992		x
OV5	3551		x	SDI-6091	x	
OV5	3586	x		SDI-6091	x	
OV5	3520	x		SDI-8241	x	
OV5	3526		x	SDI-8241	x	
V01	2887		x	P-025143		x
V01	3373		x	P-025143		x
V01	3379		x	P-025143		x
V02	3708		x	P-025144		x
V02	3723	x		P-025144		x
V02	3725		x	P-025144		x
V02	7515		x	P-025144		x
V02	7515		x	P-025145		x
V02	7515		x	P-025146		x
V02	7515		x	P-025147		x
V02	7515		x	P-025148		x
V02-D-2	3718		x	P-025144		x
V03	3147	x		P-025145		x
V03	3488		x	P-025145		x
V03	3501		x	P-025145		x
V03	3147	x		P-025146		x
V03	3488		x	P-025146		x
V03	3147	x		P-025147		x
V03	3488		x	P-025147		x
V03	3142		x	P-025148		x
V03	3743	x		P-025149		x
V03	3134		x	P-025150		x
V03	3494		x	P-025150		x
V03	3743	x		P-025150		x
V03-A-10	3733		x	P-025149		x
V03-A-10	3733		x	P-025150		x
V03-A-10	3733	x		SDI-8246	x	
V03-A-13	3738		x	P-025149		x
V03-A-13	3738		x	P-025150		x
V03-A-13	3738	x		SDI-16,502	x	
V03-A-13	3738	x		SDI-639	x	
V03-A-19	3136		x	P-025148		x
V03-A-19	3136		x	P-025149		x
V03-A-19	3136		x	P-025150		x
V03-A-82	3149		x	P-025145		x

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V03-A-82	3149		x	P-025146		x
V03-A-82	3149		x	P-025147		x
V03-A-82	3149		x	P-025148		x
V04	3939		x	P-025151		x
V04	3996		x	P-025151		x
V04	4003		x	P-025151		x
V04	3185		x	P-025152		x
V04	7674	x		P-025153		x
V04	7674		x	P-025154		x
V04-A-30	3180	x		P-025152		x
V04-A-49	4001		x	P-025151		x
V05	1162		x	P-025154		x
V05-A-25	1443		x	P-025153		x
V05-A-52	1440		x	P-025154		x
V06-A-14	4080		x	SDI-645	x	
V08	7721	x		SDI-14,324H		x
V08	7747	x		SDI-14,324H		x
V09	3040		x	SDI-14,323H		x
V10	4098		x	SDI-5345	x	
V10	4425		x	SDI-5345	x	
V11	3788		x	SDI-11,630	x	
V12	6135		x	SDI-650	x	
V12	6137	x		SDI-652	x	
V12	3970		x	SDI-653	x	
V12-A-23	6172		x	SDI-651		x
V13	4998		x	SDI-651		x
V13-B-34	3815		x	SDI-652	x	
V13-B-38	4997		x	SDI-651		x
V14	356	x		SDI-654	x	
V14	357	x		SDI-654	x	
V15-A-6	4331		x	SDI-653	x	
V15-A-7	4330		x	SDI-653	x	
V16	859	x		SDI-17,786		x
V16	862	x		SDI-17,786		x
V16	859		x	SDI-655	x	
V17-A-20	3962		x	SDI-656	x	
V17-A-20	3962		x	SDI-657	x	
V18-A-11	4756		x	SDI-658	x	
V19-A-19	4675		x	SDI-659	x	
V19-B-10	3414		x	SDI-17,779		x
V20	5553	x		SDI-660		x
V20	5606	x		SDI-660		x
V20-A-2	5593		x	SDI-660		x
V21	3261	x		SDI-648	x	

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V21	3261	x		SDI-649	x	
V21	3255		x	SDI-653	x	
V21	5122		x	SDI-661	x	
V21	6540		x	SDI-661	x	
V21/V22-D-1	4800		x	SDI-650	x	
V22	4801		x	SDI-647	x	
V22-A-7	5850	x		SDI-647	x	
V25-A-12	6462		x	SDI-5785H	x	
V28	5992	x		SDI-646	x	
V28-B-10	6326		x	SDI-646	x	
V29	5721		x	SDI-646	x	
V30	5627	x		SDI-11,629	x	
V30	5820	x		SDI-11,629	x	
V30	5822	x		SDI-11,629	x	
V30	6854	x		SDI-11,629	x	
V32	5500		x	P-025154		x
V32	5685		x	SDI-638 A		x
V32	5516	x		SDI-638 B		x
V32	4545	x		SDI-643	x	
V32	2429	x		SDI-643	x	
V32	5985	x		SDI-643	x	
V32	5688		x	SDI-644	x	
V32	5861		x	SDI-644	x	
V32-A-8	5497	x		SDI-638 B		x
V32T	7027		x	P-025143		x
V32T	7028		x	P-025143		x
V32T	7022		x	P-025144		x
V32T	7023		x	P-025144		x
V32T	7411		x	P-025145		x
V32T	7412		x	P-025145		x
V32T	7411	x		P-025148		x
V32T	7404		x	P-025149		x
V32T	7408		x	P-025149		x
V32T	7393		x	P-025152		x
V32T	7390		x	P-025153		x
V32T	7393		x	P-025153		x
V32T	7390		x	P-025154		x
V32T	7393		x	P-025154		x
V32T	8084		x	SDI-5783H		x
V32T	8084		x	SDI-5793		x
V32T	8286		x	SDI-5793		x
V32T	7401		x	SDI-640	x	
V32T	7401		x	SDI-641	x	
V32T-D-1	7388		x	P-025154		x

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V33	2592		x	SDI-5635		x
V33	2594	x		SDI-5635		x
V33	2597		x	SDI-5635		x
V33	2594		x	SDI-5636	x	
V33	2597	x		SDI-5636	x	
V33	2594		x	SDI-5637		x
V33	2597		x	SDI-5637		x
V33	1206	x		SDI-5775		x
V33	1211		x	SDI-5775		x
V33	1711		x	SDI-5775		x
V33	2641		x	SDI-5775		x
V33	2647		x	SDI-5775		x
V33	2648	x		SDI-5775		x
V33	2655	x		SDI-5775		x
V33	1211		x	SDI-5776		x
V33	1628		x	SDI-5776		x
V33	1711		x	SDI-5776		x
V33	2625		x	SDI-5776		x
V33	2639		x	SDI-5776		x
V33	2641	x		SDI-5776		x
V33	2647		x	SDI-5776		x
V33	2648		x	SDI-5776		x
V33	2655		x	SDI-5776		x
V33	2625		x	SDI-5777		x
V33	2637		x	SDI-5777		x
V33	2639		x	SDI-5777		x
V33	2641		x	SDI-5777		x
V33	2647		x	SDI-5777		x
V33	2648		x	SDI-5777		x
V33	2655		x	SDI-5777		x
V33	2615		x	SDI-5778 A	x	
V33	460		x	SDI-5778 A	x	
V33	487		x	SDI-5778 A	x	
V33	502		x	SDI-5778 A	x	
V33	513	x		SDI-5778 A	x	
V33	108		x	SDI-5778 B	x	
V33	3000		x	SDI-5779		x
V33	460		x	SDI-5779		x
V33	479		x	SDI-5779		x
V33	502		x	SDI-5779		x
V33	2604		x	SDI-5781H		x
V33	2605	x		SDI-5781H		x
V33	2606		x	SDI-5781H		x
V33	2588		x	SDI-5788H		x

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V33	2592	x		SDI-5789H, A		x
V33	278	x		SDI-5789H, A		x
V33	2592	x		SDI-5789H, B		x
V33	278	x		SDI-5789H, B		x
V33	278		x	SDI-5791H	x	
V33	2588		x	SDI-5792		x
V33	2592	x		SDI-5792		x
V33	2600		x	SDI-5792		x
V33	278	x		SDI-5792		x
V33	472		x	SDI-5792		x
V33	479		x	SDI-5792		x
V33	1206		x	SDI-5793		x
V33	1211	x		SDI-5793		x
V33	1711	x		SDI-5793		x
V33	1713		x	SDI-5793		x
V33	1715	x		SDI-5793		x
V33	1717	x		SDI-5793		x
V33	1721	x		SDI-5793		x
V33	2641		x	SDI-5793		x
V33	2647	x		SDI-5793		x
V33	2648	x		SDI-5793		x
V33	2655	x		SDI-5793		x
V33	2604		x	SDI-7271		x
V33	1206		x	SDI-7273	x	
V33	2650		x	SDI-7273	x	
V33	2654	x		SDI-7273	x	
V33	2594		x	SDI-8347	x	
V33	195		x	SDI-8735		x
V33	3002		x	SDI-9250		x
V34	8022		x	SDI-11,038	x	
V34	1797		x	SDI-5783H		x
V34	1803		x	SDI-5783H		x
V34	2520		x	SDI-5783H		x
V34	283		x	SDI-5783H		x
V34	8019	x		SDI-5783H		x
V34	2557		x	SDI-5785H	x	
V34	2560		x	SDI-5785H	x	
V34	2566		x	SDI-5785H	x	
V34	2568	x		SDI-5785H	x	
V34	2580		x	SDI-5785H	x	
V34	8018		x	SDI-5785H	x	
V34	2573		x	SDI-5786H	x	
V34	2544		x	SDI-5787H		x
V34	2544		x	SDI-5792		x

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V34	1797		x	SDI-5793		x
V34	1803	x		SDI-5793		x
V34	1805	x		SDI-5793		x
V34	2077		x	SDI-5793		x
V34	2083		x	SDI-5793		x
V34	2088	x		SDI-5793		x
V34	21	x		SDI-5793		x
V34	2516	x		SDI-5793		x
V34	2520		x	SDI-5793		x
V34	2526		x	SDI-5793		x
V34	2529		x	SDI-5793		x
V34	2551	x		SDI-5793		x
V34	2553	x		SDI-5793		x
V34	283	x		SDI-5793		x
V34	8019	x		SDI-5793		x
V34	8021	x		SDI-5793		x
V34	823	x		SDI-5793		x
V34	2568		x	SDI-6934		x
V34	2576		x	SDI-6934		x
V34	2577	x		SDI-6934		x
V34	2581	x		SDI-6934		x
V34	2583		x	SDI-6934		x
V34	8000		x	SDI-6934		x
V34	8017		x	SDI-6934		x
V34	2088		x	SDI-6935		x
V34	2529	x		SDI-6935		x
V34	2551		x	SDI-6935		x
V34	2553	x		SDI-6935		x
V34	1797	x		SDI-9044	x	
V34	1803		x	SDI-9044	x	
V34	1805	x		SDI-9044	x	
V34	8019		x	SDI-9044	x	
V34	8021		x	SDI-9044	x	
V35	241		x	SDI-10,552		x
V35	3427	x		SDI-10,552		x
V35	574		x	SDI-10,552		x
V35	576		x	SDI-10,552		x
V35	696	x		SDI-10,552		x
V35	1581		x	SDI-10,782 A	x	
V35	1584		x	SDI-10,782 A	x	
V35	1891		x	SDI-10,782 A	x	
V35	2187		x	SDI-10,782 A	x	
V35	410		x	SDI-10,782 A	x	
V35	419		x	SDI-10,782 A	x	

Sub-Basin	Pipeline ID	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V35	1581		x	SDI-10,782 B	x	
V35	2187	x		SDI-10,782 B	x	
V35	2189		x	SDI-10,782 B	x	
V35	411		x	SDI-10,782 B	x	
V35	419		x	SDI-10,782 B	x	
V35	420		x	SDI-10,782 B	x	
V35	8111		x	SDI-10,782 B	x	
V35	1611	x		SDI-11,037		x
V35	2130		x	SDI-11,037		x
V35	2131		x	SDI-11,037		x
V35	2140		x	SDI-11,037		x
V35	2143		x	SDI-11,037		x
V35	1586		x	SDI-5792		x
V35	1569		x	SDI-8091	x	
V35	1611		x	SDI-8734		x
V35	1780	x		SDI-8734		x
V35	1782		x	SDI-8734		x
V35	2130		x	SDI-8734		x
V35	315		x	SDI-8734		x
V35	317		x	SDI-8734		x
V35	364		x	SDI-8734		x
V35	1581	x		SDI-8736		x
V35	1584		x	SDI-8736		x
V35	2187	x		SDI-8736		x
V35	410		x	SDI-8736		x
V35	419	x		SDI-8736		x
V35	422		x	SDI-8736		x
V35	8111		x	SDI-8736		x
V35	576		x	SDI-9042		x
V35	8236	x		SDI-9042		x
V35	8238		x	SDI-9042		x
V35	3427	x		SDI-9043		x
V35	574		x	SDI-9043		x
V35	696		x	SDI-9043		x
V35	3427		x	SDI-9045		x
V35	569		x	SDI-9045		x
V35	571		x	SDI-9045		x
V35	574		x	SDI-9045		x
V35	571		x	SDI-9047 (I-4)		x
V35	569		x	SDI-9047 (I-4)		x
V35-A-2	1567		x	SDI-8091	x	

TABLE 4.0–2
Archaeological Site Description Table

Site Number	Site Features	Disturbances	Year Registered	Testing
I-401	Isolated lithic tool fragment	Disked	1991	
I-402	Isolated lithic production waste	Disked	1991	
I-403	Isolated mano fragment	Disked	1991	
I-469	Isolated mano fragment	Adjacent to gravel quarry	1992	Not collected
P-018224	Culvert	None	1999	
P-024185	Isolated lithic production waste	None	2000	
P-024949	Isolated lithic production waste	None	2003	
P-025143	1940's tract home	None	2003	
P-025144	1940's tract home	None	2003	
P-025145	1920's Craftsman home	None	2003	
P-025146	1940's tract home	None	2003	
P-025147	1940's tract home	None	2003	
P-025148	1940's frame commercial building	None	2003	
P-025149	1940's tract home	None	2003	
P-025150	1940's tract home	None	2003	
P-025151	1923 converted barn	None	2003	
P-025152	1950's tract home	None	2003	
P-025153	1950's tract home	None	2003	
P-025154	1950's tract home	None	2003	
SDI-10,150	Bedrock milling feature	Illegal camping	1985	
SDI-10,552	Lithic scatter	Fire roads through site	1985	
SDI-10,782 A	Bedrock milling features, burials, groundstone tools, lithic scatter, precision tools and shell midden	Graded	1987	Five TUs, STPs
SDI-10,782 B	Bedrock milling features, burials, groundstone tools, lithic scatter, precision tools and shell midden	Graded	1987	Five TUs, STPs
SDI-11,037	Moderate lithic scatter	None	1988	
SDI-11,038	Sparse lithic scatter	Cultivated, fire roads through site	1988	

Site Number	Site Features	Disturbances	Year Registered	Testing
SDI-11,629	Bedrock milling features	Disked	1989	
SDI-11,630	Shell scatter	Graded	1989	
SDI-11,651H	Historic homestead	Site destroyed	1989	
SDI-12,520H	Historic trash scatter and prehistoric lithic scatter with hearth feature	Disked	1991	
SDI-12,521	Bedrock milling features, lithic scatter	Cultivated, fire roads through site	1991	
SDI-12,522	Bedrock milling features	None	1991	Subsurface testing
SDI-12,736	Groundstone tools, percussion tools and lithic scatter	None	1992	
SDI-13,009	Bedrock milling features, groundstone tools, percussion tools, precision tools, projectile point, shell and faunal remains	Graded	1993	Seven TUs, seven STPs
SDI-13,182	Bedrock milling features, groundstone tools, lithic scatter	Nothing addressed	1973	
SDI-14,323H	Historic foundations associated with AT & SF railroad	None	1996	Five STPs
SDI-14,324H	Historic foundations associated with AT & SF railroad	None	1996	Five STPs
SDI-14,730H	Historic cobble house	None	1998	
SDI-15,675H	Historic mining shed	Graded	1999	
SDI-16,502	Bedrock milling feature, ceramic and shell scatter	Paved road through site	2003	
SDI-17,779	Lithic and shell scatter	Nothing addressed	2005	One TU, 12 STPs
SDI-17,786	Groundstone tools, precision tools, shell scatter	Nothing addressed	1979	
SDI-5345	Midden soil, bedrock milling feature, groundstone tools	Cultivated, houses on site	1975 / 1978	
SDI-5543 A	Isolated mano	Plowed and disked	1978	
SDI-5543 B	Lithic scatter	None	1978	
SDI-5634	Bedrock milling feature, lithic and shell scatter	Modern dump site	1977 / 1981	One TU
SDI-5635	Bedrock milling feature, shell scatter	None	1977	
SDI-5636	Bedrock milling feature, ceramic and lithic scatter	None	1977	
SDI-5637	Shell, ceramic and lithic scatter	None	1977	
SDI-5775	Midden soil, shell, ceramic and lithic scatter	None	1978	
SDI-5776	Bedrock milling feature	None	1978	

Site Number	Site Features	Disturbances	Year Registered	Testing
SDI-5777	Bedrock milling feature	None	1978	
SDI-5778 A	Lithic scatter, percussion and precision tools	Power lines, access roads through site	1978	
SDI-5778 B	Isolated hammerstone	Plowed	1978	
SDI-5779	Bedrock milling feature	None	1978	
SDI-5780	Bedrock milling features, lithic and shell scatter	None	1978	
SDI-5781H	1888 eucalyptus grove	Nothing addressed	1978	
SDI-5783H	Matthew Kelly, Jr. homestead	Nothing addressed	1978	
SDI-5784H	Rancho Aqua Hedionda y Los Monos	Nothing addressed	1978	
SDI-5785H	H. M. Squires homestead	Eucalyptus grove on site	1978	
SDI-5786H	May Emma Kelly homestead and prehistoric lithic scatter with previously recorded burial	Cultivated, house on site	1978 / 1979	
SDI-5787H	Olive grove	Nothing addressed	1978	
SDI-5788H	Brearley family homestead	Nothing addressed	1978	
SDI-5789H, A	Julio Osuna homestead	Nothing addressed	1978	
SDI-5789H, B	Isolated historic iron harness buckle	Nothing addressed	1978	
SDI-5790H	Charles Kelly homestead	Nothing addressed	1978	
SDI-5791H	Williams' homestead	Graded, structure collapsed and vandalized	1977 / 1978 / 1981	
SDI-5792	Traditional Native American trail from Mission San Luis Rey through the San Marcos plains en route to the Cuyamaca Mountains	Nothing addressed	1978	
SDI-5793	Rancho de los Quiotes to Mission San Luis Rey trail	Nothing addressed	1978	
SDI-5992	Guajome Ranch House complex	None	1978 / 1987	
SDI-6089	Groundstone tools, percussion tools and lithic scatter	Plowed	1978	
SDI-6091	Bedrock milling features	Portion graded	1978 / 2000 / 2001	One TU, eight STPs
SDI-637	Groundstone tools	Disked	1958	
SDI-638 A, B	Rock art, bedrock milling features, lithic flake scatter, groundstone tools, ceramic	Rock art vandalized	1977 / 1978	
SDI-639	Bedrock milling features, groundstone tools, lithic tools, ceramic and shell scatter	Cultivated, houses on site	1958	

Site Number	Site Features	Disturbances	Year Registered	Testing
SDI-640	Groundstone tools, lithic scatter	Plowed and disked	1958	
SDI-641	Groundstone tools, percussion tools	Plowed, house on site	1958	
SDI-642	Bedrock milling feature with mano	Cultivated	1958	
SDI-643	Groundstone tools, percussion tools	Cultivated	1958	
SDI-644	Groundstone tools, percussion tools, precision tool, polishing pebble, shell scatter	Plowed and disked	1958	
SDI-645	Bedrock milling feature, groundstone tools, shell scatter	Plowed and disked	1959	Not collected
SDI-646	Bedrock milling features, groundstone tools, shell scatter	Plowed, disked, house on site	1958	
SDI-647	Groundstone tools, adobe house	Cultivated, houses on site	1958	
SDI-648	Sparse shell and lithic scatter	Cultivated, residential development	1958 / 1991	One STP
SDI-649	Bedrock milling features, subsurface hearth feature, groundstone tools, percussion tools, projectile points, ceramic, polishing pebbles	Cultivated, residential development	1958 / 1961	Five TUs, ten STPs
SDI-650	Bedrock milling feature, ceramic and shell scatter	Water tank erected on site	1958	
SDI-651	Groundstone tool	Cultivated	1958	
SDI-652	Groundstone tools, shell scatter	Cultivated	1958	
SDI-653	Groundstone tools, percussion tools	Cultivated, residential development	1958	
SDI-654	Rock art	House on site	1958 / 1977	
SDI-655	Bedrock milling features, groundstone tools, lithic tools, ceramic and shell scatter	Cultivated	1958 / 2005	Three TUs, nine STPs
SDI-656	Groundstone tools, percussion tools	Cultivated	1958	
SDI-657	Groundstone tools, percussion tools	Cultivated	1958	
SDI-658	Groundstone tool, shell scatter	House on site	1958	
SDI-659	Groundstone tools	Cultivated, residential development	1958	
SDI-660	Bedrock milling features, groundstone tools	None	1958	
SDI-661	Groundstone tool, projectile point	Cultivated, houses on site	1958	
SDI-6934	Lithic scatter	None	1978	
SDI-6935	Lithic scatter	None	1978	

Site Number	Site Features	Disturbances	Year Registered	Testing
SDI-7270	Shell midden and bedrock milling features	None	1979	
SDI-7271	Bedrock milling feature	None	1979	
SDI-7272	Lithic and shell scatter	Graded	1979	
SDI-7273	Shell scatter	Graded	1979	
SDI-7275	Isolated core	None	1979	
SDI-7276	Bedrock milling features	None	1979	
SDI-7278	Lithic scatter	Graded	1979	
SDI-7279	Shell scatter	None	1979	
SDI-7282	Lithic scatter	None	1979	
SDI-7283	Lithic and ceramic scatter	Nothing addressed	1979	
SDI-7286	Lithic scatter	Graded	1979	
SDI-8091	Lithic and shell scatter	Plowed, graded, reservoir constructed	1980	
SDI-8092	Lithic and shell scatter	Plowed, graded, reservoir constructed	1980	
SDI-8241	Rock art, bedrock milling features, lithic flake scatter, groundstone tools, ceramic	Plowed and disked	1973	
SDI-8242	Bedrock milling feature, ceramic and lithic scatter	Plowed, graded, reservoir constructed	1973	
SDI-8246	Midden soil, shell and lithic scatter	Disked	1980	
SDI-8250 A	Bedrock milling feature	None	1980	
SDI-8250 B	Bedrock milling features	None	1980	
SDI-8250 C	Bedrock milling features	None	1980	
SDI-8347	Bedrock milling feature, ceramic and shell scatter	Site cleared, graded	1980	
SDI-8462	Lithic scatter	Fire roads through site	1980	
SDI-8734	Sparse shell and lithic scatter	Fire roads through site	1981	
SDI-8735	Sparse shell and lithic scatter	Fire roads through site	1981	
SDI-8736	Midden soil, burial, bedrock milling features, lithic tools, shell and lithic scatter	Fire roads through site	1981 / 1987	TUs to 80 cm
SDI-8777	Sparse lithic scatter	Fire roads through site	1981	
SDI-9042	Lithic scatter, percussion and precision tools	Paved road through site	1981	

Site Number	Site Features	Disturbances	Year Registered	Testing
SDI-9043	Potential midden, lithic scatter, percussion and precision tools	Fire roads through site	1981	
SDI-9044	Potential midden and lithic scatter	Cultivated	1981	
SDI-9045	Potential midden, lithic scatter, percussion and precision tools	Fire roads through site	1981	
SDI-9046	Missing Site Form			
SDI-9047 (I-4)	Isolated lithic production waste	None	1981	
SDI-9047 (I-5)	Lithic, precision and groundstone tools	None	1981	
SDI-9047 (I-6)	Precision tools, lithic production waste	None	1981	
SDI-9250	Sparse lithic scatter	None	1982	
SDI-9251	Groundstone tools, precision tool and lithic scatter	None	1982	
SDI-9503	Groundstone tools, lithic scatter	Developed golf course	1981	
SDI-9582	Shell midden, lithic and ceramic scatter	Power lines, access roads through site	1974 / 1977	

5.0 IMPACT ANALYSIS AND MITIGATION RECOMMENDATIONS

The analysis of the data regarding recorded cultural resources and areas that may contain unrecorded resources has identified 448 pipeline reaches that could potentially impact historic or prehistoric sites. These impacts would result from clearing, trenching, and grading activities associated with the construction of pipelines or other related facilities and any rehabilitations of existing pipes, which may result in disturbing native soil. Impacts may be direct or indirect, depending on the proximity of the construction to any particular resource. Impacts to resources that are determined to be important under criteria provided in CEQA (Section 15064.5) would represent significantly adverse impacts. Because of the nature of program-level EIR studies, the exact type of impacts represented by the 448 reaches noted in Table 4.0–1 is uncertain. Therefore, for the purposes of this study, all impacts are assumed to be potentially significant and will require the implementation of measures to mitigate the impacts.

To mitigate potentially significant impacts to cultural resources, the following mitigation program should be adopted. In general terms, the mitigation program will require surveys of the reaches or pipelines that may encounter cultural resources. Survey data is needed to establish the presence or absence of archaeological materials for each pipeline.

Proposed Mitigation Measures for CIP Projects:

Prior to the initiation of construction for any of the projects, the following measures must be completed to the satisfaction of the City of Vista:

1. An archaeological survey of the particular pipeline corridor must be completed by a qualified archaeologist. This survey shall include a review of records information or an updated records search to locate all previously recorded archaeological sites within the project area. Any historic or prehistoric sites identified during the survey shall be recorded at the South Coastal Information Center, or, if already recorded, updated forms shall be submitted.

2. If the pipeline or related construction activities will potentially impact an archaeological site, a testing program will be required to fully record the resources, and to evaluate the site. The testing program shall include mapping of all site features and artifacts, and subsurface excavations (shovel test pits or test units) to search for subsurface deposits of cultural materials and assess the content of the deposits. Related laboratory work will be conducted to treat the materials that are recovered from any archaeological investigations.

3. A technical report shall be prepared that will present all of the information gathered from the survey and any site investigations. The report shall identify any significant cultural

resources and evaluate the potential impacts to those resources. If any site evaluated as significant will be impacted by a proposed project, additional mitigation measures will be required to reduce the level of impacts. These mitigation measures would include one of the following:

- A data recovery program to recover sufficient cultural materials to exhaust the research potential of the site such that construction will no longer represent a source of adverse impacts.
  Or
- The construction corridor can be relocated away from the significant cultural site and impacts could be avoided.

4. Implementation of mitigation measures must be part of the conditions of approval of any pipeline or facilities improvement project that is identified as potentially impacting significant cultural resources. Data recovery will be employed whenever a grading or trenching project will directly impact an archaeological site. This process will include the excavation of a sufficiently large percentage of a subsurface deposit that the research potential of the deposit will be exhausted. Typically, a 5% to 15% sample within the trench corridor will be required to complete the data recovery process. Laboratory analysis and research would also be conducted to catalog and analyze all materials and to interpret the data.

5. Indirect impacts may be identified for pipeline projects where the actual grading and trenching are situated adjacent to a significant resource. In cases where construction activities are considered potential indirect impacts because of the possible intrusion into sites by construction equipment, impacts may be mitigated by placing a temporary fence around the site to curtail any intrusions into the site area. Indirect impacts must be addressed during the initial archaeological survey and testing phase of work, with measures adopted as conditions of approval.

6. CIP projects that will pass through or near recorded archaeological sites or which will be constructed through areas where resources may be encountered will require archaeological monitoring. Monitoring of construction grading and trenching will facilitate the identification of any unrecorded resources uncovered by the excavation process. In the event that such resources are discovered, work at that location will be suspended while the archaeological deposit is evaluated. If this evaluation process confirms the deposit is significant, mitigation measures will be required to complete a

data recovery program. Any mitigation measures must be approved by the City before implementation.

The program-level study of cultural resources and proposed CIP projects has identified recorded archaeological sites within certain projects that will either be impacted or possibly impacted. These impacts may be significant if resources are determined to be important. Because of the minimal information available, it is assumed that all impacts are mitigable to levels below significant by the implementation of measures listed above.

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