

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS**

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**SUMMARY OF CONSTRUCTION COSTS**

**YEARS 2020 AND 2040**

## SUMMARY OF CONSTRUCTION COSTS FOR YEAR 2040

ITEM	NIIP - Moncisco	NIIP - Coury	NIIP - Cutter	NIIP - Amarillo	SJR - PNM	SJR - Infiltration
NIIP - Moncisco	\$186,837,550					
NIIP - Moncisco Reservoir	\$50,679,500					
NIIP - Coury Lateral		\$210,531,930				
NIIP - Amarillo				\$128,760,830		
NIIP - Coury Lateral Storage Pond		\$20,422,700				
NIIP - Amarillo Storage Pond				\$20,422,700		
NIIP - Cutter			\$260,367,570			
SJR - PNM					\$133,237,710	
SJR - Turnout Structure					\$852,410	
SJR - Infiltration						\$154,188,400
SJR - Cutter Lateral				\$25,444,400	\$25,444,400	\$25,444,400
Transmission lines	\$12,103,800	\$13,579,400	\$14,444,400	\$16,524,200	\$16,524,200	\$18,139,400
NIIP Moncisco WT	\$24,478,055	\$24,478,055	\$24,478,055			
Additional for 2040	\$7,933,400	\$7,933,400	\$7,933,400			
NIIP Cutter WT				\$5,963,700	\$5,963,700	\$5,963,700
Additional for 2040				\$1,213,000	\$1,213,000	\$1,213,000
NIIP - Amarillo WT				\$21,746,810		
Additional for 2040				\$7,145,600		
SJR PNM WT					\$22,689,810	
Additional for 2040					\$7,145,600	
SJR Infiltration WT						\$21,748,685
Additional for 2040						\$7,145,600
<b>SUBTOTAL</b>	<b>\$282,032,305</b>	<b>\$276,945,485</b>	<b>\$307,223,425</b>	<b>\$227,221,240</b>	<b>\$213,070,830</b>	<b>\$233,843,185</b>
<b>MOBILIZATION (+/- 5%)</b>	<b>\$14,000,000</b>	<b>\$14,000,000</b>	<b>\$15,500,000</b>	<b>\$11,500,000</b>	<b>\$10,500,000</b>	<b>\$11,500,000</b>
<b>UNLISTED ITEMS (+/- 10%)</b>	<b>\$33,967,695</b>	<b>\$29,054,515</b>	<b>\$27,276,575</b>	<b>\$21,278,760</b>	<b>\$26,429,170</b>	<b>\$24,656,815</b>
<b>CONTRACT COST</b>	<b>\$330,000,000</b>	<b>\$320,000,000</b>	<b>\$350,000,000</b>	<b>\$260,000,000</b>	<b>\$250,000,000</b>	<b>\$270,000,000</b>
<b>CONTINGENCIES (+/- 20%)</b>	<b>\$60,000,000</b>	<b>\$60,000,000</b>	<b>\$80,000,000</b>	<b>\$60,000,000</b>	<b>\$50,000,000</b>	<b>\$50,000,000</b>
<b>FIELD COST</b>	<b>\$390,000,000</b>	<b>\$380,000,000</b>	<b>\$430,000,000</b>	<b>\$320,000,000</b>	<b>\$300,000,000</b>	<b>\$320,000,000</b>

By Keith Copeland  
12/7/2001

Checked: Michael Hygus  
12/7/01

## SUMMARY OF CONSTRUCTION COSTS FOR YEAR 2020

ITEM	NIIP - Moncisco	NIIP - Coury	NIIP - Cutter	NIIP - Amarillo	SJR - PNM	SJR - Infiltration
NIIP - Moncisco	\$143,330,160					
NIIP - Moncisco Reservoir	\$44,942,000					
NIIP - Coury Lateral		\$158,911,620				
NIIP - Amarillo				\$111,010,060		
NIIP - Coury Lateral Storage Pond		\$20,422,700				
NIIP - Amarillo Storage Pond				\$20,422,700		
NIIP - Cutter			\$174,699,120			
SJR - PNM					\$103,277,480	
SJR - Turnout Structure					\$852,410	
SJR - Infiltration						\$114,618,320
SJR - Cutter Lateral				\$19,500,870	\$19,500,870	\$19,500,870
Transmission lines	\$12,103,800	\$13,579,400	\$14,444,400	\$16,524,200	\$16,524,200	\$18,139,400
NIIP Moncisco WT	\$24,478,055	\$24,478,055	\$24,478,055			
NIIP Cutter WT				\$5,963,700	\$5,963,700	\$5,963,700
NIIP - Amarillo WT				\$21,746,810		
SJR PNM WT					\$22,689,810	
SJR Infiltration WT						\$21,748,685
<b>SUBTOTAL</b>	<b>\$224,854,015</b>	<b>\$217,391,775</b>	<b>\$213,621,575</b>	<b>\$195,168,340</b>	<b>\$168,808,470</b>	<b>\$179,970,975</b>
<b>MOBILIZATION (+/- 5%)</b>	<b>\$11,000,000</b>	<b>\$11,000,000</b>	<b>\$10,500,000</b>	<b>\$9,800,000</b>	<b>\$8,400,000</b>	<b>\$9,000,000</b>
<b>UNLISTED ITEMS (+/- 10%)</b>	<b>\$24,145,985</b>	<b>\$21,608,225</b>	<b>\$25,878,425</b>	<b>\$25,031,660</b>	<b>\$17,791,530</b>	<b>\$21,029,025</b>
<b>CONTRACT COST</b>	<b>\$260,000,000</b>	<b>\$250,000,000</b>	<b>\$250,000,000</b>	<b>\$230,000,000</b>	<b>\$195,000,000</b>	<b>\$210,000,000</b>
<b>CONTINGENCIES (+/- 20%)</b>	<b>\$50,000,000</b>	<b>\$50,000,000</b>	<b>\$50,000,000</b>	<b>\$40,000,000</b>	<b>\$35,000,000</b>	<b>\$40,000,000</b>
<b>FIELD COST</b>	<b>\$310,000,000</b>	<b>\$300,000,000</b>	<b>\$300,000,000</b>	<b>\$270,000,000</b>	<b>\$230,000,000</b>	<b>\$250,000,000</b>

By Keith Copeland  
12/7/01

Checked  
David C. Donaldson  
12-7-01

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP MONCISCO  
ALTERNATIVE - YEAR 2020**

FEATURE:  
NIIP MONCISCO ALTERNATIVE 2020

28-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	1,932,500	CY	\$2.00	\$3,865,000.00
		Excavation, rock	8140	149,600	CY	\$8.00	\$1,196,800.00
		Backfill, common	8140	1,742,000	CY	\$1.50	\$2,613,000.00
		Furnish and install pipe as follows:	8140				
		48B700	233	5,000	FT	\$290.00	\$1,450,000.00
		48B675	233	11,150	FT	\$290.00	\$3,233,500.00
		48B650	233	5,350	FT	\$290.00	\$1,551,500.00
		48B625	199	48,000	FT	\$250.00	\$12,000,000.00
		48B600	199	7,480	FT	\$250.00	\$1,870,000.00
		48B575	199	16,930	FT	\$250.00	\$4,232,500.00
		48B550	199	22,000	FT	\$250.00	\$5,500,000.00
		48B525	166	19,160	FT	\$210.00	\$4,023,600.00
		48B500	166	36,340	FT	\$210.00	\$7,631,400.00
		48B475	166	17,910	FT	\$210.00	\$3,761,100.00
		48B450	166	11,000	FT	\$210.00	\$2,310,000.00
		48B425	132	6,340	FT	\$170.00	\$1,077,800.00
		48B400	132	46,650	FT	\$170.00	\$7,930,500.00
		48B350	132	1,510	FT	\$170.00	\$256,700.00
		48B325	132	9,000	FT	\$170.00	\$1,530,000.00
		48B300	92	4,000	FT	\$120.00	\$480,000.00
		48B250	88	10,900	FT	\$110.00	\$1,199,000.00
		48B225	88	18,000	FT	\$110.00	\$1,980,000.00
		48B200	88	5,610	FT	\$110.00	\$617,100.00
		48B150	88	660	FT	\$110.00	\$72,600.00
		48B125	88	7,050	FT	\$110.00	\$775,500.00
		48B100	88	10,000	FT	\$110.00	\$1,100,000.00
		48B75	88	1,710	FT	\$110.00	\$188,100.00
		48B25	88	11,000	FT	\$110.00	\$1,210,000.00
		30B650	84	210	FT	\$110.00	\$23,100.00
		30B575	84	140	FT	\$110.00	\$15,400.00
		30B525	84	6,600	FT	\$110.00	\$726,000.00
		30B500	63	1,350	FT	\$80.00	\$108,000.00
		30B475	58	1,000	FT	\$70.00	\$70,000.00
		30B425	52	1,840	FT	\$70.00	\$128,800.00
		30B400	49	6,900	FT	\$60.00	\$414,000.00
		30B375	46	4,020	FT	\$60.00	\$241,200.00
		30B350	43	1,000	FT	\$50.00	\$50,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$75,432,200.00</b>

QUANTITIES

BY  
Art Streifel  
DATE PREPARED  
28-Sep-2001

APPROVED  
DATE

BY  
K. Copeland  
DATE  
09/28/2001

CHECKED  
*Nom Hydron* 9/28/01  
PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
NIIP MONCISCO ALTERNATIVE 2020

28-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CS\TESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Furnish and install pipe as follows:	8140				
		30B325	39	2,760	FT	\$50.00	\$138,000.00
		30B300	36	4,000	FT	\$50.00	\$200,000.00
		30B275	35	1,440	FT	\$40.00	\$57,600.00
		30B250	35	5,050	FT	\$40.00	\$202,000.00
		30B200	35	3,000	FT	\$40.00	\$120,000.00
		30B175	35	1,000	FT	\$40.00	\$40,000.00
		30B150	35	1,000	FT	\$40.00	\$40,000.00
		30B125	35	1,000	FT	\$40.00	\$40,000.00
		30B100	35	1,580	FT	\$40.00	\$63,200.00
		30B75	35	1,000	FT	\$40.00	\$40,000.00
		30B50	35	4,820	FT	\$40.00	\$192,800.00
		24B375	30	360	FT	\$45.00	\$16,200.00
		24B325	26	7,000	FT	\$39.00	\$273,000.00
		24B300	24	22,390	FT	\$36.00	\$806,040.00
		24B275	22	7,180	FT	\$33.00	\$236,940.00
		24B250	22	5,380	FT	\$33.00	\$177,540.00
		24B225	22	3,510	FT	\$33.00	\$115,830.00
		24B200	22	2,420	FT	\$33.00	\$79,860.00
		24B175	22	14,860	FT	\$33.00	\$490,380.00
		24B150	22	2,000	FT	\$33.00	\$66,000.00
		24B125	22	1,800	FT	\$33.00	\$59,400.00
		24B100	22	2,000	FT	\$33.00	\$66,000.00
		24B75	22	2,640	FT	\$33.00	\$87,120.00
		24B50	22	14,300	FT	\$33.00	\$471,900.00
		24B25	22	2,590	FT	\$33.00	\$85,470.00
		20B625	35	5,000	FT	\$53.00	\$265,000.00
		20B550	30	4,140	FT	\$45.00	\$186,300.00
		20B525	29	8,390	FT	\$44.00	\$369,160.00
		20B500	28	2,670	FT	\$42.00	\$112,140.00
		20B475	26	1,900	FT	\$39.00	\$74,100.00
		20B450	25	5,340	FT	\$38.00	\$202,920.00
		20B425	23	25,960	FT	\$35.00	\$908,600.00
		20B400	22	7,010	FT	\$33.00	\$231,330.00
		20B375	21	2,260	FT	\$32.00	\$72,320.00
		<b>PAGE SUBTOTAL</b>					<b>\$6,587,150.00</b>

QUANTITIES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nom Hydrom 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL



ESTIMATE WORKSHEET

FEATURE:  
NIIP MONCISCO ALTERNATIVE 2020

28-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		12B525	11	5,000	FT	\$17.00	\$85,000.00
		12B500	10	7,310	FT	\$15.00	\$109,650.00
		12B475	10	8,710	FT	\$15.00	\$130,650.00
		12B450	10	3,860	FT	\$15.00	\$57,900.00
		12B425	10	1,780	FT	\$15.00	\$26,700.00
		12B400	10	10,630	FT	\$15.00	\$159,450.00
		12B375	10	6,000	FT	\$15.00	\$90,000.00
		12B350	10	5,160	FT	\$15.00	\$77,400.00
		12B325	10	2,000	FT	\$15.00	\$30,000.00
		12B300	10	7,900	FT	\$15.00	\$118,500.00
		12B275	10	3,000	FT	\$15.00	\$45,000.00
		12B225	10	3,000	FT	\$15.00	\$45,000.00
		12B200	10	4,140	FT	\$15.00	\$62,100.00
		12B175	10	2,000	FT	\$15.00	\$30,000.00
		12B150	10	5,790	FT	\$15.00	\$86,850.00
		12B125	10	3,000	FT	\$15.00	\$45,000.00
		12B100	10	920	FT	\$15.00	\$13,800.00
		12B75	10	850	FT	\$15.00	\$12,750.00
		12B50	10	2,000	FT	\$15.00	\$30,000.00
		10B675	10	6,000	FT	\$15.00	\$90,000.00
		10B625	9	17,330	FT	\$14.00	\$242,620.00
		10B600	9	15,780	FT	\$14.00	\$220,920.00
		10B575	9	28,050	FT	\$14.00	\$392,700.00
		10B550	9	3,800	FT	\$14.00	\$53,200.00
		10B525	9	8,000	FT	\$14.00	\$112,000.00
		10B500	9	2,000	FT	\$14.00	\$28,000.00
		10B425	9	4,000	FT	\$14.00	\$56,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$2,451,190.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hydon 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**  
**NIIP MONCISCO ALTERNATIVE 2020**  
 with Jicarilla Apache

**28-Sep-2001**

**PROJECT:**  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 13 total, 1 at each pmp. plt.)	8140	13	EA	\$100,000.00	\$1,300,000.00
		<b>Furnish and install water regulating tanks,</b> as follows:					
		159,805 gallons, 40 ft. Dia. X 16 ft. Height, 1		1	EA	\$150,000.00	\$150,000.00
		141,004 gallons, 40 ft. Dia. X 13 ft. Height, 1		1	EA	\$140,000.00	\$140,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height, 4 tanks		4	EA	\$130,000.00	\$520,000.00
		<b>Furnish and install water forebay tanks,</b> as follows:					
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 13 tanks		13	EA	\$55,000.00	\$715,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		42.24 cfs, 369 ft. head, 5+1 units/plant		1	EA	\$1,700,000.00	\$1,700,000.00
		35.14 cfs, 489 ft. head, 4+1 units/plant		1	EA	\$1,810,000.00	\$1,810,000.00
		30.30 cfs, 504 ft. head, 4+1 units/plant		1	EA	\$1,640,000.00	\$1,640,000.00
		8.20 cfs, 261 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
		8.20 cfs, 275 ft. head, 1+1 units/plant		1	EA	\$340,000.00	\$340,000.00
		2.58 cfs, 170 ft. head, 1+1 units/plant		1	EA	\$140,000.00	\$140,000.00
		1.76 cfs, 417 ft. head, 1+1 units/plant		1	EA	\$170,000.00	\$170,000.00
		4.24 cfs, 356 ft. head, 1+1 units/plant		1	EA	\$250,000.00	\$250,000.00
		5.78 cfs, 296 ft. head, 1+1 units/plant		1	EA	\$280,000.00	\$280,000.00
		5.78 cfs, 321 ft. head, 1+1 units/plant		1	EA	\$290,000.00	\$290,000.00
		5.78 cfs, 378 ft. head, 1+1 units/plant		1	EA	\$320,000.00	\$320,000.00
		5.52 cfs, 330 ft. head, 1+1 units/plant		1	EA	\$290,000.00	\$290,000.00
		4.90 cfs, 459 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
		<b>Furnish and install water storage tanks,</b> as follows:	8140	13			
		Tohatchi (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Twin Lakes (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Rock Springs (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Window Rock (20 ft. H X 370 ft. Dia.)		1	EA	\$5,780,000.00	\$5,780,000.00
		Coyote Canyon (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Standing Rock (20 ft. H X 40 ft. Dia.)		1	EA	\$130,000.00	\$130,000.00
		Dalton Pass (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Naschitti (20 ft. H X 140 ft. Dia.)		1	EA	\$1,040,000.00	\$1,040,000.00
		Sheepsprings (20 ft. H X 100 ft. Dia.)		1	EA	\$600,000.00	\$600,000.00
		Newcomb (20ft. H X 140 ft. Dia.)		1	EA	\$1,040,000.00	\$1,040,000.00
		<b>PAGE SUBTOTAL</b>					\$26,745,000.00

**QUANTITIES**

**PRICES**

<b>BY</b> Art Streifel	<b>APPROVED</b>	<b>BY</b> K. Copeland	<b>CHECKED</b> <i>Alan Hyndman 9/28/01</i>
<b>DATE PREPARED</b> 28-Sep-2001	<b>DATE</b>	<b>DATE</b> 09/28/2001	<b>PRICE LEVEL</b>

**FEATURE:**  
**NIIP MONCISCO ALTERNATIVE 2020**  
 with Jicarilla Apache

**28-Sep-2001**

**PROJECT:**  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks,</b>	<b>8140</b>				
		<b>as follows:</b>					
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Huerfano (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Nageezi (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Counselor (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Torreon (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		<b>Furnish and install water storage tanks,</b>	<b>8140</b>				
		<b>as follows:</b>					
		Manuelito (40 ft. H X 90 ft. Dia.)		1	EA	\$490,000.00	\$490,000.00
		Red Rock, Breadsprings, Chichiltah (40 ft. H X 230 ft. Dia.)		1	EA	\$2,460,000.00	\$2,460,000.00
		Iyanbito (40 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Church Rock (40 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Pinedale, Mariano Lake (40 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		<b>Furnish and install pumping plants as follows:</b>	<b>8140</b>				
		0.38 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$70,000.00	\$70,000.00
		0.62 cfs, 162 ft. head, 3+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		0.52 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		1.03 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$100,000.00	\$100,000.00
		0.71 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		<b>Furnish and install pumping plants as follows:</b>	<b>8140</b>				
		Sanostee (1.18 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Newcomb (0.89 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Sheepsprings (0.42 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Naschitti (0.89 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Tohatchi (1.16 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Twin Lakes (1.10 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Rock Springs (1.93 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Window Rock (6.27 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$230,000.00	\$230,000.00
		Coyote Canyon (0.74 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Standing Rock (0.07 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$60,000.00	\$60,000.00
		Dalton Pass (1.76 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Huerfano (0.26 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Nageezi (2.77 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$140,000.00	\$140,000.00
		Counselor (1.61 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Torreon (1.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
				15			
		<b>PAGE SUBTOTAL</b>					\$15,840,000.00
		<b>TOTAL FOR ALL PAGES</b>					\$143,330,160.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nom Hyndman 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**

**07-Dec-2001 PROJECT:**

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**Moncisco Reservoir  
Crest elevation 6040  
Year 2020**

**DIVISION:  
NAVAJO GALLUP WATER SUPPLY PROJECT  
UNIT:**

**H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\MONCISCO.WK4**

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation for dam foundation	223	860,000	CY	\$4.00	\$3,440,000.00
		Earthfill in Dam - Zone 1	223	300,000	CY	\$7.00	\$2,100,000.00
		Earthfill in Dam - Zone 2	223	210,000	CY	\$24.00	\$5,040,000.00
		Earthfill in Dam - Zone 2a	223	155,000	CY	\$27.00	\$4,185,000.00
		Earthfill in Dam - Zone 3	223	2,000,000	CY	\$6.00	\$12,000,000.00
		Soil Cement slope protection U/S	223	85,000	CY	\$35.00	\$2,975,000.00
		Soil Cement slope protection D/S	223	28,000	CY	\$35.00	\$980,000.00
		Spillway 100' crest length	223	1	LS		\$7,862,000.00
		Outlet Works	223	1	LS		\$850,000.00
		Natural Channel Stabilization	223	1	LS		\$2,054,000.00
		Mitigaiton and Relocation of Utilities	223	1	LS		\$3,456,000.00
		<b>TOTAL</b>					<b>\$44,942,000.00</b>

All quantities and unit prices provided by BOR Farmington Office.

BY  
Leon Baros  
DATE PREPARED  
11/20/2001

**QUANTITIES**

APPROVED

DATE

BY  
Leon Baros

DATE PREPARED

11/20/2001

**PRICES**

CHECKED

PRICE LEVEL

*RKC*

*12/7/01*

FEATURE: **NAVAJO GALLUP WATER SUPPLY APPRAISAL-GRADE ESTIMATE**  
**NIIP Moncisco Alternative**

PROJECT: **Navajo-Gallup Water Supply**

DIVISION / REGION: **UC - New Mexico**

CONTRACT/SPEC:

FILE: J:\WKSHTS\CY2001\GALLUP2.WK4

WOID: **DUR30**

PLANT PAY 09:27 AM  
 ACCT. ITEM DESCRIPTION

CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>D-8440</b>	<b>73</b>	<b>wmile</b>	<b>\$100,600.00</b>	<b>\$7,343,800.00</b>
Per mile calculations:				
3/c	15,840	ft	\$2.40	
1/grd	5,280	ft	\$1.00	
1/op-grd	5,280	ft	\$4.00	
includes ins	7.54	strut/mi	\$4,800.00	
Unit cost			\$100,608.00	
1				
Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire				
Conductor: 336 kcmil ACSR				
OHG: 1/2" HSS				
OPGW: 24 fiber				
Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky				
Two pole wood structures about 55-65 feet tall, about 700 foot spans				
2a	13	ea	\$35,000.00	\$455,000.00
Electrical equipment at each plant, including engine-generator w/full plant capacity				
2b	1	ea	\$35,000.00	\$35,000.00
Electrical equipment at each treatment plant				
3	20	ea	\$5,000.00	\$100,000.00
Electrical equipment at each turnout				
4	13	ea	\$5,000.00	\$65,000.00
SCADA equipment including controller				
	20	ea	\$5,000.00	\$100,000.00
Each plant				
Each turnout				
5	1	ls	\$300,000.00	\$300,000.00
New SCADA system in NTUA Fort Defiance				
6	13	ea	\$20,000.00	\$260,000.00
Communication equipment:				
	20	ea	\$20,000.00	\$400,000.00
Each plant				
Each turnout				
7	13	ea	\$5,000.00	\$65,000.00
Security system equipment at each plant				
8	1	LS	\$1,000,000.00	\$1,000,000.00
Substation near Moncisco				
Tap structure, switch, circuit breaker, transformer				
9	13	ea	\$60,000.00	\$780,000.00
Power tap-poles, transformer				
	20	ea	\$60,000.00	\$1,200,000.00
Each plant				
Each turnout				
<b>SUBTOTAL</b>				<b>\$12,103,800.00</b>

QUANTITIES

PRICES

BY **D-8440**  
**Lisa Gamuciello**  
 DATE PREPARED **07-Sep-2001**

APPROVED  
 BY **D-8170**  
**L. Pedde**  
 CHECKED **RKC 10/15/01**  
 DATE **09-Oct-2001**  
 PRICE LEVEL

**FEATURE:**  
**NIIP Alternatives**  
**Moncisco Dam, Coury Lateral & Cutter Dam**  
**2020 Demand (26.25 MGD)**  
 Quantities for tanks, building and process ponds for  
 2040 demand. All other quantities for 2020 demand  
**Includes Jicarilla Apache Nation Demand**

12-Oct-2001

**PROJECT:**  
 Navajo Gallup WSP

**DIVISION:**

**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\NIIP-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2,700 square foot mezzanine.	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		Hollow Fiber UF Water Treatment System		27,640,000	GPD	\$0.46	\$12,714,400.00
3		Concrete Reinforced tanks for UF System		1047	CY	\$400.00	\$418,800.00
4		Concrete for Flocculation tank		310	CY	\$400.00	\$124,000.00
5		Concrete for splitter box		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		10800	CY	\$10.00	\$108,000.00
9		Reinforced Concrete for Clearwell		1162	CY	\$400.00	\$464,800.00
10		Backfill after Clearwell Construction		6327	CY	\$15.00	\$94,905.00
11		Excavation for wastewater polishing ponds		8850	CY	\$8.00	\$70,800.00
12		Mixers for Clearwell		6	EA	\$15,000.00	\$90,000.00
13		Sediment Drying beds Sand for Wastewater Polishing Ponds		125	CY	\$20.00	\$2,500.00
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eaves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		35,500.00	SF	\$0.50	\$17,750
				35,500.00	SF	\$0.20	\$7,100
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc. )					\$5,100,000.00
		Subtotal					\$22,068,055.00
		Unlisted 10% (for DBP Treatment Systems at service points)					\$2,210,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$24,478,055.00</b>

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>AP 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks as follows: (Capacities from DePauli Report, Appendix H)</b>					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows: (from DePauli Report, Appendix H)</b>					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Apper		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used - assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY Kevin Moran & Marc DePauli	APPROVED	BY	CHECKED
DATE PREPARED 19-Feb-2002	DATE	DATE	PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP MONCISCO  
ALTERNATIVE - YEAR 2040**

FEATURE:  
NIIP MONCISCO ALTERNATIVE 2040

27-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	2,359,500	CY	\$2.00	\$4,719,000.00
		Excavation, rock	8140	234,300	CY	\$8.00	\$1,874,400.00
		Backfill, common	8140	2,189,900	CY	\$1.50	\$3,284,850.00
		Furnish and install pipe as follows:	8140				
		48B675	233	2,000	FT	\$290.00	\$580,000.00
		48B650	233	4,000	FT	\$290.00	\$1,160,000.00
		48B625	199	6,150	FT	\$250.00	\$1,537,500.00
		48B600	199	9,350	FT	\$250.00	\$2,337,500.00
		48B575	199	4,760	FT	\$250.00	\$1,190,000.00
		48B550	199	26,760	FT	\$250.00	\$6,690,000.00
		48B525	166	39,880	FT	\$210.00	\$8,374,800.00
		48B500	166	19,420	FT	\$210.00	\$4,078,200.00
		48B475	166	40,760	FT	\$210.00	\$8,559,600.00
		48B450	166	25,940	FT	\$210.00	\$5,447,400.00
		48B425	132	23,160	FT	\$170.00	\$3,937,200.00
		48B400	132	5,550	FT	\$170.00	\$943,500.00
		48B375	132	36,840	FT	\$170.00	\$6,262,800.00
		48B350	132	27,580	FT	\$170.00	\$4,688,600.00
		48B325	132	11,760	FT	\$170.00	\$1,999,200.00
		48B300	92	1,970	FT	\$120.00	\$236,400.00
		48B275	88	10,760	FT	\$110.00	\$1,183,600.00
		48B250	88	1,000	FT	\$110.00	\$110,000.00
		48B225	88	12,170	FT	\$110.00	\$1,338,700.00
		48B200	88	27,240	FT	\$110.00	\$2,996,400.00
		48B175	88	3,000	FT	\$110.00	\$330,000.00
		48B150	88	2,260	FT	\$110.00	\$248,600.00
		48B125	88	4,000	FT	\$110.00	\$440,000.00
		48B100	88	14,000	FT	\$110.00	\$1,540,000.00
		48B75	88	4,340	FT	\$110.00	\$477,400.00
		48B50	88	6,000	FT	\$110.00	\$660,000.00
		48B25	88	11,820	FT	\$110.00	\$1,300,200.00
		36B550	100	590	FT	\$130.00	\$76,700.00
		36B525	100	16,000	FT	\$130.00	\$2,080,000.00
		36B500	100	9,000	FT	\$130.00	\$1,170,000.00
		36B475	100	31,320	FT	\$130.00	\$4,071,600.00
PAGE SUBTOTAL							\$85,924,150.00

QUANTITIES

BY  
Art Streifel  
DATE PREPARED  
27-Sep-2001

APPROVED  
DATE

BY  
K. Copeland  
DATE  
09/27/2001

CHECKED  
*Norman W. Johnson* 9/28/01  
PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
NIIP MONCISCO ALTERNATIVE 2040

27-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		36B450	100	48,560	FT	\$130.00	\$6,312,800.00
		36B425	75	1,720	FT	\$90.00	\$154,800.00
		36B400	69	1,270	FT	\$90.00	\$114,300.00
		36B375	65	15,000	FT	\$80.00	\$1,200,000.00
		36B350	61	53,080	FT	\$80.00	\$4,246,400.00
		36B325	56	930	FT	\$70.00	\$65,100.00
		36B300	52	2,000	FT	\$70.00	\$140,000.00
		36B275	50	14,180	FT	\$60.00	\$850,800.00
		36B250	50	13,000	FT	\$60.00	\$780,000.00
		36B200	50	790	FT	\$60.00	\$47,400.00
		36B175	50	46,000	FT	\$60.00	\$2,760,000.00
		36B150	50	10,800	FT	\$60.00	\$648,000.00
		36B100	50	250	FT	\$60.00	\$15,000.00
		36B50	50	23,000	FT	\$60.00	\$1,380,000.00
		30B375	46	360	FT	\$60.00	\$21,600.00
		30B325	39	7,000	FT	\$50.00	\$350,000.00
		30B300	36	22,390	FT	\$50.00	\$1,119,500.00
		30B275	35	7,130	FT	\$40.00	\$285,200.00
		30B250	35	5,420	FT	\$40.00	\$216,800.00
		30B225	35	3,510	FT	\$40.00	\$140,400.00
		30B200	35	2,420	FT	\$40.00	\$96,800.00
		30B175	35	14,860	FT	\$40.00	\$594,400.00
		30B150	35	2,000	FT	\$40.00	\$80,000.00
		30B125	35	1,800	FT	\$40.00	\$72,000.00
		30B100	35	2,000	FT	\$40.00	\$80,000.00
		30B75	35	2,640	FT	\$40.00	\$105,600.00
		30B50	35	13,300	FT	\$40.00	\$532,000.00
		30B25	35	3,590	FT	\$40.00	\$143,600.00
		24B625	51	320	FT	\$77.00	\$24,640.00
		24B600	48	140	FT	\$72.00	\$10,080.00
		24B575	46	630	FT	\$69.00	\$43,470.00
		24B525	42	15,390	FT	\$63.00	\$969,570.00
		24B500	40	420	FT	\$60.00	\$25,200.00
		24B475	38	7,870	FT	\$57.00	\$448,590.00
		24B450	36	39,580	FT	\$54.00	\$2,137,320.00
		24B425	34	21,650	FT	\$51.00	\$1,104,150.00
		24B400	32	10,000	FT	\$48.00	\$480,000.00
		24B375	30	6,600	FT	\$45.00	\$297,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$28,092,520.00</b>

QUANTITIES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hyslop</i> 9/28/01
DATE PREPARED 27-Sep-2001	DATE	DATE 09/27/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
NIIP MONCISCO ALTERNATIVE 2040

27-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		24B350	28	8,020	FT	\$42.00	\$336,840.00
		24B325	26	15,690	FT	\$39.00	\$611,910.00
		24B300	24	73,960	FT	\$36.00	\$2,662,560.00
		24B275	22	17,560	FT	\$33.00	\$579,480.00
		24B250	22	18,080	FT	\$33.00	\$596,640.00
		24B225	22	4,570	FT	\$33.00	\$150,810.00
		24B200	22	22,670	FT	\$33.00	\$748,110.00
		24B175	22	9,380	FT	\$33.00	\$309,540.00
		24B150	22	5,160	FT	\$33.00	\$170,280.00
		24B125	22	7,650	FT	\$33.00	\$252,450.00
		24B100	22	13,770	FT	\$33.00	\$454,410.00
		24B75	22	450	FT	\$33.00	\$14,850.00
		24B50	22	15,030	FT	\$33.00	\$495,990.00
		20B475	26	1,170	FT	\$39.00	\$45,630.00
		20B450	25	3,190	FT	\$38.00	\$121,220.00
		20B425	23	1,970	FT	\$35.00	\$68,950.00
		20B400	22	4,260	FT	\$33.00	\$140,580.00
		20B375	21	8,000	FT	\$32.00	\$256,000.00
		20B350	19	5,420	FT	\$29.00	\$157,180.00
		20B325	18	17,260	FT	\$27.00	\$466,020.00
		20B300	17	5,130	FT	\$26.00	\$133,380.00
		20B275	17	1,680	FT	\$26.00	\$43,680.00
		20B250	17	1,000	FT	\$26.00	\$26,000.00
		20B225	17	11,680	FT	\$26.00	\$303,680.00
		20B200	17	11,210	FT	\$26.00	\$291,460.00
		20B175	17	130	FT	\$26.00	\$3,380.00
		20B150	17	20,010	FT	\$26.00	\$520,260.00
		20B125	17	6,630	FT	\$26.00	\$172,380.00
		20B100	17	12,790	FT	\$26.00	\$332,540.00
		18B725	33	1,830	FT	\$50.00	\$91,500.00
		18B700	32	950	FT	\$48.00	\$45,600.00
		18B675	31	920	FT	\$47.00	\$43,240.00
		18B650	29	830	FT	\$44.00	\$36,520.00
		18B625	28	150	FT	\$42.00	\$6,300.00
		18B600	27	20	FT	\$41.00	\$820.00
		18B575	26	5,000	FT	\$39.00	\$195,000.00
		18B550	25	4,750	FT	\$38.00	\$180,500.00
		<b>PAGE SUBTOTAL</b>					<b>\$11,065,690.00</b>

QUANTITIES

PRICES

BY  
Art Streifel

APPROVED

BY

K. Copeland

CHECKED

*Norm Hyman 9/28/01*

DATE PREPARED  
27-Sep-2001

DATE

DATE

09/27/2001

PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**  
**NIIP MONCISCO ALTERNATIVE 2040**

**27-Sep-2001**

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CS\TESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		18B525	24	11,590	FT	\$36.00	\$417,240.00
		18B500	23	1,710	FT	\$35.00	\$59,850.00
		18B475	21	970	FT	\$32.00	\$31,040.00
		18B450	20	4,710	FT	\$30.00	\$141,300.00
		18B425	19	6,940	FT	\$29.00	\$201,260.00
		18B400	18	6,790	FT	\$27.00	\$183,330.00
		18B375	17	1,000	FT	\$26.00	\$26,000.00
		18B350	16	5,010	FT	\$24.00	\$120,240.00
		18B325	15	8,000	FT	\$23.00	\$184,000.00
		18B300	15	4,890	FT	\$23.00	\$112,470.00
		18B250	15	3,070	FT	\$23.00	\$70,610.00
		18B225	15	1,690	FT	\$23.00	\$38,870.00
		18B200	15	4,380	FT	\$23.00	\$100,740.00
		18B175	15	5,790	FT	\$23.00	\$133,170.00
		18B150	15	3,000	FT	\$23.00	\$69,000.00
		18B125	15	920	FT	\$23.00	\$21,160.00
		18B100	15	850	FT	\$23.00	\$19,550.00
		18B75	15	2,000	FT	\$23.00	\$46,000.00
		10B725	11	4,000	FT	\$17.00	\$68,000.00
		10B700	10	4,000	FT	\$15.00	\$60,000.00
		10B675	10	2,000	FT	\$15.00	\$30,000.00
		10B650	9	8,080	FT	\$14.00	\$113,120.00
		10B625	9	13,530	FT	\$14.00	\$189,420.00
		10B600	9	23,050	FT	\$14.00	\$322,700.00
		10B575	9	11,730	FT	\$14.00	\$164,220.00
		10B550	9	18,770	FT	\$14.00	\$262,780.00
		10B525	9	580	FT	\$14.00	\$8,120.00
		10B475	9	4,000	FT	\$14.00	\$56,000.00
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 13 total, 1 at each pmp. plt.)	8140	13	EA	\$100,000.00	\$1,300,000.00
<b>PAGE SUBTOTAL</b>							<b>\$4,550,190.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nora Hayden 7/28/01</i>
DATE PREPARED 27-Sep-2001	DATE	DATE 09/27/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**  
**NIIP MONCISCO ALTERNATIVE 2040**

**27-Sep-2001**

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\TESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water regulating tanks, as follows:</b>					
		197,406 gallons, 40 ft. Dia. X 21 ft. Height		1	EA	\$160,000.00	\$160,000.00
		141,004 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		103,403 gallons, 40 ft. Dia. X 11 ft. Height		1	EA	\$135,000.00	\$135,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		65.36 cfs, 390 ft. head, 7+1 units/plant		1	EA	\$2,680,000.00	\$2,680,000.00
		44.84 cfs, 465 ft. head, 5+1 units/plant		1	EA	\$2,170,000.00	\$2,170,000.00
		36.53 cfs, 411 ft. head, 4+1 units/plant		1	EA	\$1,610,000.00	\$1,610,000.00
		14.71 cfs, 261 ft. head, 2+1 units/plant		1	EA	\$540,000.00	\$540,000.00
		14.71 cfs, 275 ft. head, 2+1 units/plant		1	EA	\$550,000.00	\$550,000.00
		4.44 cfs, 164 ft. head, 1+1 units/plant		1	EA	\$180,000.00	\$180,000.00
		3.06 cfs, 415 ft. head, 1+1 units/plant		1	EA	\$230,000.00	\$230,000.00
		12.49 cfs, 349 ft. head, 2+1 units/plant		1	EA	\$570,000.00	\$570,000.00
		8.34 cfs, 326 ft. head, 1+1 units/plant		1	EA	\$380,000.00	\$380,000.00
		8.34 cfs, 369 ft. head, 1+1 units/plant		1	EA	\$420,000.00	\$420,000.00
		8.34 cfs, 390 ft. head, 1+1 units/plant		1	EA	\$430,000.00	\$430,000.00
		7.84 cfs, 426 ft. head, 1+1 units/plant		1	EA	\$440,000.00	\$440,000.00
		6.78 cfs, 324 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
		<b>Furnish and install water forebay tanks, as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 13 tanks		13	EA	\$55,000.00	\$715,000.00
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Tohatchi (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Twin Lakes (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Rock Springs (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Window Rock (20 ft. H X 500 ft. Dia.)		1	EA	\$9,910,000.00	\$9,910,000.00
		Coyote Canyon (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Standing Rock (20 ft. H X 60 ft. Dia.)		1	EA	\$240,000.00	\$240,000.00
		Dalton Pass (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Naschitti (20 ft. H X 190 ft. Dia.)		1	EA	\$1,680,000.00	\$1,680,000.00
		Sheepsprings ( 20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Newcomb (20ft. H X 180 ft. Dia.)		1	EA	\$1,600,000.00	\$1,600,000.00
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Huerfano (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Nageezi (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Counselor (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Torreon (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$45,785,000.00</b>

**QUANTITIES**

**PRICES**

**BY**  
 Art Streifel  
**DATE PREPARED**  
 27-Sep-2001

**APPROVED**  
  
**DATE**

**BY**  
 K. Copeland  
**DATE**  
 09/27/2001

**CHECKED**  
*Northrup* 9/28/01  
**PRICE LEVEL**

FEATURE:  
NIIP MONCISCO ALTERNATIVE 2040

27-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Manuelito (20 ft. H X 120 ft. Dia.)		1	EA	\$790,000.00	\$790,000.00
		Red Rock, Breadsprings, Chichiltah (20 ft. H X 290 ft. Dia.)		1	EA	\$3,720,000.00	\$3,720,000.00
		Iyanbito (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Church Rock (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Pinedale, Mariano Lake (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		0.61 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		3.93 cfs, 162 ft. head, 4+1 units/plant		1	EA	\$180,000.00	\$180,000.00
		0.79 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		1.73 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$120,000.00	\$120,000.00
		1.30 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$110,000.00	\$110,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Sanostee (2.00 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$230,000.00	\$230,000.00
		Newcomb (1.52 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$200,000.00	\$200,000.00
		Sheepsprings (0.70 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Naschitti (1.55 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Tohatchi (1.99 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Twin Lakes (1.88 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Rock Springs (3.19 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$150,000.00	\$150,000.00
		Window Rock (11.51 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$340,000.00	\$340,000.00
		Coyote Canyon (1.24 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Standing Rock (0.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Dalton Pass (3.06 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$150,000.00	\$150,000.00
		Huerfano (0.50 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Nageezi (1.05 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Counselor (2.62 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$140,000.00	\$140,000.00
		Torreon (2.01 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		<b>PAGE SUBTOTAL</b>					\$11,420,000.00
		<b>TOTAL FOR ALL PAGES</b>					\$186,837,550.00

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hyndman 9/28/01</i>
DATE PREPARED 27-Sep-2001	DATE	DATE 09/27/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**

**07-Dec-2001 PROJECT:**

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**Moncisco Reservoir  
Crest elevation 6047  
Year 2040**

**DIVISION:  
NAVAJO GALLUP WATER SUPPLY PROJECT  
UNIT:**

**H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\MONCISCO.WK4**

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation for dam foundation	223	980,000	CY	\$4.00	\$3,920,000.00
		Earthfill in Dam - Zone 1	223	340,000	CY	\$7.00	\$2,380,000.00
		Earthfill in Dam - Zone 2	223	240,000	CY	\$24.00	\$5,760,000.00
		Earthfill in Dam - Zone 2a	223	175,000	CY	\$27.00	\$4,725,000.00
		Earthfill in Dam - Zone 3	223	2,500,000	CY	\$6.00	\$15,000,000.00
		Soil Cement slope protection U/S	223	100,000	CY	\$35.00	\$3,500,000.00
		Soil Cement slope protection D/S	223	33,500	CY	\$35.00	\$1,172,500.00
		Spillway 100' crest length	223	1	LS		\$7,862,000.00
		Outlet Works	223	1	LS		\$850,000.00
		Natural Channel Stabilization	223	1	LS		\$2,054,000.00
		Mitigation and Relocation of Utilities	223	1	LS		\$3,456,000.00
		<b>TOTAL</b>					<b>\$50,679,500.00</b>

All quantities and unit prices provided by BOR Farmington Office.

BY  
Leon Baros  
DATE PREPARED  
10/1/2001

**QUANTITIES**

APPROVED  
  
DATE

**PRICES**

BY  
Leon Baros  
DATE PREPARED  
10/1/2001  
CHECKED  
*RKC 12/2/01*  
PRICE LEVEL

**FEATURE:** NAVAJO GALLUP WATER SUPPLY  
 APPRAISAL-GRADE ESTIMATE  
 NIIP Moncisco Alternative

**PROJECT:** Navajo-Gallup Water Supply  
**DIVISION / REGION:** UC - New Mexico  
**CONTRACT/SPEC:**  
**FILE:** JAWKSHTSCY2001GALLUP2.WK4

**WOID:** DUR30  
 09:27 AM

PLANT ACCT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
			<b>D-8440</b>				
	1	Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire		73	wmile	\$100,600.00	\$7,343,800.00
		Conductor: 336 kcmil ACSR	3/c	15,840	ft	\$2.40	
		OHG: 1/2" HSS	1/grd	5,280	ft	\$1.00	
		OPGW: 24 fiber	1/op-grd	5,280	ft	\$4.00	
		Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky	includes ins	7.54	strut/mi	\$4,800.00	
		Two pole wood structures about 55-65 feet tall, about 700 foot spans	Unit cost			\$100,608.00	
	2a	Electrical equipment at each plant, including engine-generator w/full plant capacity		13	ea	\$35,000.00	\$455,000.00
	2b	Electrical equipment at each treatment plant		1	ea	\$35,000.00	\$35,000.00
	3	Electrical equipment at each turnout		20	ea	\$5,000.00	\$100,000.00
	4	SCADA equipment including controller					
		Each plant		13	ea	\$5,000.00	\$65,000.00
		Each turnout		20	ea	\$5,000.00	\$100,000.00
	5	New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
	6	Communication equipment:					
		Each plant		13	ea	\$20,000.00	\$260,000.00
		Each turnout		20	ea	\$20,000.00	\$400,000.00
	7	Security system equipment at each plant		13	ea	\$5,000.00	\$65,000.00
	8	Substation near Moncisco		1	LS	\$1,000,000.00	\$1,000,000.00
		Tap structure, switch, circuit breaker, transformer					
	9	Power tap-poles, transformer					
		Each plant		13	ea	\$60,000.00	\$780,000.00
		Each turnout		20	ea	\$60,000.00	\$1,200,000.00
		<b>SUBTOTAL</b>					<b>\$12,103,800.00</b>

QUANTITIES		PRICES	
BY	D-8440 Lisa Gamuciello	APPROVED	BY D-8170 L. Pedde
DATE PREPARED	07-Sep-2001	DATE	09-Oct-2001
		CHECKED	RKc 10/15/01
		PRICE LEVEL	

**FEATURE:**  
 NIIP Alternatives  
 Moncisco Dam, Coury Lateral & Cutter Dam  
 2020 Demand (26.25 MGD)  
 Quantities for tanks, building and process ponds for  
 2040 demand. All other quantities for 2020 demand  
 Includes Jicarilla Apache Nation Demand

12-Oct-2001

**PROJECT:**  
 Navajo Gallup WSP

**DIVISION:**

**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\NIIP-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2,700 square foot mezzanine.	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		Hollow Fiber UF Water Treatment System		27,640,000	GPD	\$0.46	\$12,714,400.00
3		Concrete Reinforced tanks for UF System		1047	CY	\$400.00	\$418,800.00
4		Concrete for Flocculation tank		310	CY	\$400.00	\$124,000.00
5		Concrete for splitter box		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		10800	CY	\$10.00	\$108,000.00
9		Reinforced Concrete for Clearwell		1162	CY	\$400.00	\$464,800.00
10		Backfill after Clearwell Construction		6327	CY	\$15.00	\$94,905.00
11		Excavation for wastewater polishing ponds		8850	CY	\$8.00	\$70,800.00
12		Mixers for Clearwell		6	EA	\$15,000.00	\$90,000.00
13		Sediment Drying beds Sand for Wastewater Polishing Ponds		125	CY	\$20.00	\$2,500.00
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eaves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		35,500.00 35,500.00	SF SF	\$0.50 \$0.20	\$17,750 \$7,100
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$5,100,000.00
		Subtotal					\$22,068,055.00
		Unlisted 10% (for DBP Treatment Systems at service points)					\$2,210,000.00
		Construct and operate Pilot system for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$24,478,055.00</b>

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>HP</i> 10-12-01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

**FEATURE:**  
 NIIP Alternatives  
 Moncisco Dam, Coury Lateral & Cutter Dam  
 Additional treatment units to  
 to upgrade the plant by 15.99 MGD for a  
 total Production Rate of 43.63 MGD  
 Includes Jicarilla Apache Nation Demand

11-Oct-2001

**PROJECT:**  
**DIVISION:**  
**FILE:**  
 H:\D8170\ESTSPREADSH\COPELAND\NAVAJO-1\NIIP-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		ZeeWeed Water Treatment System		15,990,000	MGD	\$0.46	\$7,355,400 ✓
2		Ultraviolet Disinfection Units		2	EA	\$100,000	\$200,000 ✓
		Unlisted 5%					\$378,000.00 ✓
<b>TOTAL</b>							<b>\$7,933,400.00</b> ✓

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard		BY K. Copeland	CHECKED <i>[Signature]</i> 10/11/01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 11-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks</b> as follows: (Capacities from DePauli Report, Appendix H)					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Apper		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY Kevin Moran & Marc DePauli	APPROVED	BY	CHECKED
DATE PREPARED 19-Feb-2002	DATE	DATE	PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP COURY LATERAL  
ALTERNATIVE - YEAR 2020**

ESTIMATE WORKSHEET

FEATURE: 28-Sep-2001  
 NIIP COURY LATERAL ALTERNATIVE 2020

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\ESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	1,836,700	CY	\$2.00	\$3,673,400.00
		Excavation, rock	8140	112,400	CY	\$8.00	\$899,200.00
		Backfill, common	8140	1,626,000	CY	\$1.50	\$2,439,000.00
		Furnish and install pipe as follows:	8140				
		42B900	234	2,000	FT	\$290.00	\$580,000.00
		42B850	205	13,150	FT	\$260.00	\$3,419,000.00
		42B825	205	42,090	FT	\$260.00	\$10,943,400.00
		42B800	205	7,160	FT	\$260.00	\$1,861,600.00
		42B775	205	1,140	FT	\$260.00	\$296,400.00
		42B750	205	34,050	FT	\$260.00	\$8,853,000.00
		42B725	176	19,600	FT	\$220.00	\$4,312,000.00
		42B700	176	15,730	FT	\$220.00	\$3,460,600.00
		42B675	176	7,870	FT	\$220.00	\$1,731,400.00
		42B650	176	25,000	FT	\$220.00	\$5,500,000.00
		42B625	176	960	FT	\$220.00	\$211,200.00
		42B600	146	3,340	FT	\$180.00	\$601,200.00
		42B575	146	15,750	FT	\$180.00	\$2,835,000.00
		42B550	146	5,620	FT	\$180.00	\$1,011,600.00
		42B525	146	32,230	FT	\$180.00	\$5,801,400.00
		42B500	146	8,800	FT	\$180.00	\$1,584,000.00
		42B475	117	13,000	FT	\$150.00	\$1,950,000.00
		42B450	117	590	FT	\$150.00	\$88,500.00
		42B425	117	1,870	FT	\$150.00	\$280,500.00
		42B400	117	10,000	FT	\$150.00	\$1,500,000.00
		42B375	117	18,100	FT	\$150.00	\$2,715,000.00
		42B350	83	9,210	FT	\$100.00	\$921,000.00
		42B325	77	6,580	FT	\$100.00	\$658,000.00
		42B300	71	4,340	FT	\$90.00	\$390,600.00
		42B275	68	15,440	FT	\$90.00	\$1,389,600.00
		42B250	68	4,000	FT	\$90.00	\$360,000.00
		42B225	68	6,120	FT	\$90.00	\$550,800.00
		42B200	68	20,000	FT	\$90.00	\$1,800,000.00
		42B175	68	820	FT	\$90.00	\$73,800.00
		42B150	68	6,310	FT	\$90.00	\$567,900.00
		42B125	68	17,050	FT	\$90.00	\$1,534,500.00
		42B100	68	18,850	FT	\$90.00	\$1,696,500.00
		42B75	68	8,020	FT	\$90.00	\$721,800.00
		42B50	68	3,410	FT	\$90.00	\$306,900.00
		PAGE SUBTOTAL					\$77,518,800.00

QUANTITIES

PRICES

BY Art Streifel  
 DATE PREPARED 28-Sep-2001

APPROVED  
 DATE

BY K. Copeland  
 DATE 09/28/2001

CHECKED *Norm Higdon* 9/28/01  
 PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: 28-Sep-2001  
 NIIP CORY LATERAL ALTERNATIVE 2020

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
	36B625		125	5,000	FT	\$160.00	\$800,000.00
	36B600		125	9,000	FT	\$160.00	\$1,440,000.00
	36B575		125	8,000	FT	\$160.00	\$1,280,000.00
	36B550		100	9,000	FT	\$130.00	\$1,170,000.00
	36B525		100	1,000	FT	\$130.00	\$130,000.00
	36B425		75	11,000	FT	\$90.00	\$990,000.00
	36B400		69	4,000	FT	\$90.00	\$360,000.00
	36B375		65	650	FT	\$80.00	\$52,000.00
	36B325		56	590	FT	\$70.00	\$41,300.00
	36B275		50	7,000	FT	\$60.00	\$420,000.00
	36B250		50	4,050	FT	\$60.00	\$243,000.00
	36B225		50	6,970	FT	\$60.00	\$418,200.00
	36B200		50	1,000	FT	\$60.00	\$60,000.00
	36B175		50	210	FT	\$60.00	\$12,600.00
	36B25		50	1,000	FT	\$60.00	\$60,000.00
	30B575		84	5,000	FT	\$110.00	\$550,000.00
	30B550		84	3,600	FT	\$110.00	\$396,000.00
	30B525		84	350	FT	\$110.00	\$38,500.00
	30B475		58	840	FT	\$70.00	\$58,800.00
	30B375		46	1,000	FT	\$60.00	\$60,000.00
	30B300		36	140	FT	\$50.00	\$7,000.00
	24B575		46	12,650	FT	\$69.00	\$872,850.00
	24B525		42	630	FT	\$63.00	\$39,690.00
	24B500		40	9000	FT	\$60.00	\$540,000.00
	24B475		38	2300	FT	\$57.00	\$131,100.00
	24B450		36	9530	FT	\$54.00	\$514,620.00
	24B425		34	9340	FT	\$51.00	\$476,340.00
	24B400		32	19390	FT	\$48.00	\$930,720.00
	24B375		30	22360	FT	\$45.00	\$1,006,200.00
	24B350		28	18400	FT	\$42.00	\$772,800.00
	24B325		26	12030	FT	\$39.00	\$469,170.00
	24B300		24	13810	FT	\$36.00	\$497,160.00
	24B275		22	12620	FT	\$33.00	\$416,460.00
	24B250		22	11080	FT	\$33.00	\$365,640.00
	24B225		22	14510	FT	\$33.00	\$478,830.00
	24B200		22	4420	FT	\$33.00	\$145,860.00
	24B175		22	480	FT	\$33.00	\$15,840.00
	24B125		22	1380	FT	\$33.00	\$45,540.00
	24B75		22	5400	FT	\$33.00	\$178,200.00
		<b>PAGE SUBTOTAL</b>					<b>\$16,484,420.00</b>

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nora Hyndman 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: 28-Sep-2001  
 NIIP COURY LATERAL ALTERNATIVE 2020

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		24B50	22	18,950	FT	\$33.00	\$625,350.00
		18B575	26	18,000	FT	\$39.00	\$702,000.00
		18B550	25	1,000	FT	\$38.00	\$38,000.00
		18B525	24	1,000	FT	\$36.00	\$36,000.00
		18B475	21	1,000	FT	\$32.00	\$32,000.00
		18B450	20	1,540	FT	\$30.00	\$46,200.00
		18B400	18	24,000	FT	\$27.00	\$648,000.00
		18B375	17	59,320	FT	\$26.00	\$1,542,320.00
		18B350	16	4,790	FT	\$24.00	\$114,960.00
		18B325	15	18,520	FT	\$23.00	\$425,960.00
		18B300	15	1,010	FT	\$23.00	\$23,230.00
		18B275	15	23,780	FT	\$23.00	\$546,940.00
		18B250	15	15,980	FT	\$23.00	\$367,540.00
		18B225	15	3,240	FT	\$23.00	\$74,520.00
		18B200	15	2,830	FT	\$23.00	\$65,090.00
		18B175	15	8,330	FT	\$23.00	\$191,590.00
		18B150	15	960	FT	\$23.00	\$22,080.00
		18B125	15	1,000	FT	\$23.00	\$23,000.00
		18B100	15	3,430	FT	\$23.00	\$78,890.00
		16B575	21	8,000	FT	\$32.00	\$256,000.00
		16B550	20	12,290	FT	\$30.00	\$368,700.00
		16B525	19	3,910	FT	\$29.00	\$113,390.00
		16B500	18	4,320	FT	\$27.00	\$116,640.00
		16B475	17	14,690	FT	\$26.00	\$381,940.00
		16B450	16	2,360	FT	\$24.00	\$56,640.00
		16B425	15	20,000	FT	\$23.00	\$460,000.00
		16B400	14	30,390	FT	\$21.00	\$638,190.00
		16B375	13	45,080	FT	\$20.00	\$901,600.00
		16B350	13	39,000	FT	\$20.00	\$780,000.00
		16B325	13	15,160	FT	\$20.00	\$303,200.00
		16B300	13	2,180	FT	\$20.00	\$43,600.00
		16B275	13	2,760	FT	\$20.00	\$55,200.00
		16B250	13	43,590	FT	\$20.00	\$871,800.00
		16B225	13	3,000	FT	\$20.00	\$60,000.00
		16B175	13	5,000	FT	\$20.00	\$100,000.00
		16B150	13	9,220	FT	\$20.00	\$184,400.00
		16B125	13	18,960	FT	\$20.00	\$379,200.00
		16B100	13	36,150	FT	\$20.00	\$723,000.00
		16B75	13	11,000	FT	\$20.00	\$220,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$12,617,170.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nora Hyndman</i> 9/28/01
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:** 28-Sep-2001  
**NIIP CORY LATERAL ALTERNATIVE 2020**

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CASTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		16B50	13	8,030	FT	\$20.00	\$160,600.00
		16B25	13	16,000	FT	\$20.00	\$320,000.00
		12B650	14	1,830	FT	\$21.00	\$38,430.00
		12B625	13	920	FT	\$20.00	\$18,400.00
		12B600	13	1,780	FT	\$20.00	\$35,600.00
		12B550	11	170	FT	\$17.00	\$2,890.00
		12B525	11	5,000	FT	\$17.00	\$85,000.00
		12B500	10	3,000	FT	\$15.00	\$45,000.00
		12B475	10	12,050	FT	\$15.00	\$180,750.00
		12B450	10	4,270	FT	\$15.00	\$64,050.00
		12B425	10	820	FT	\$15.00	\$12,300.00
		12B400	10	4,520	FT	\$15.00	\$67,800.00
		12B375	10	12,630	FT	\$15.00	\$189,450.00
		12B350	10	6,160	FT	\$15.00	\$92,400.00
		12B325	10	2,000	FT	\$15.00	\$30,000.00
		12B300	10	6,010	FT	\$15.00	\$90,150.00
		12B275	10	4,890	FT	\$15.00	\$73,350.00
		12B225	10	3,000	FT	\$15.00	\$45,000.00
		12B200	10	1,760	FT	\$15.00	\$26,400.00
		12B175	10	4,380	FT	\$15.00	\$65,700.00
		12B150	10	5,000	FT	\$15.00	\$75,000.00
		12B125	10	3,790	FT	\$15.00	\$56,850.00
		12B100	10	920	FT	\$15.00	\$13,800.00
		12B75	10	850	FT	\$15.00	\$12,750.00
		12B50	10	2,000	FT	\$15.00	\$30,000.00
		8B750	7	1,000	FT	\$11.00	\$11,000.00
		8B725	7	1,320	FT	\$11.00	\$14,520.00
		8B675	7	780	FT	\$11.00	\$8,580.00
		8B650	7	2,000	FT	\$11.00	\$22,000.00
		8B625	7	4,580	FT	\$11.00	\$50,380.00
		8B600	7	1,000	FT	\$11.00	\$11,000.00
		8B575	7	12,280	FT	\$11.00	\$135,080.00
		8B550	7	21,000	FT	\$11.00	\$231,000.00
		8B525	7	9,000	FT	\$11.00	\$99,000.00
		8B500	7	28,000	FT	\$11.00	\$308,000.00
		8B400	7	4,000	FT	\$11.00	\$44,000.00
<b>PAGE SUBTOTAL</b>							<b>\$2,766,230.00</b>

**QUANTITIES**

**PRICES**

<b>BY</b> Art Streifel	<b>APPROVED</b>	<b>BY</b> K. Copeland	<b>CHECKED</b> <i>Nam Hayden</i> 9/28/01
<b>DATE PREPARED</b> 28-Sep-2001	<b>DATE</b>	<b>DATE</b> 09/28/2001	<b>PRICE LEVEL</b>

FEATURE: 28-Sep-2001 PROJECT:  
 NIIP COURY LATERAL ALTERNATIVE 2020

NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		42.76 cfs, 329 ft. head, 5+1 units/plant		1	EA	\$1,590,000.00	\$1,590,000.00
		27.78 cfs, 311 ft. head, 3+1 units/plant		1	EA	\$1,020,000.00	\$1,020,000.00
		26.67 cfs, 425 ft. head, 3+1 units/plant		1	EA	\$1,250,000.00	\$1,250,000.00
		4.24 cfs, 419 ft. head, 1+1 units/plant		1	EA	\$280,000.00	\$280,000.00
		2.58 cfs, 175 ft. head, 1+1 units/plant		1	EA	\$140,000.00	\$140,000.00
		8.20 cfs, 261 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
		8.20 cfs, 280 ft. head, 1+1 units/plant		1	EA	\$340,000.00	\$340,000.00
		5.78 cfs, 390 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
		4.90 cfs, 346 ft. head, 1+1 units/plant		1	EA	\$280,000.00	\$280,000.00
				9			
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Sanostee (1.18 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$190,000.00	\$190,000.00
		Newcomb (0.89 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$170,000.00	\$170,000.00
		Sheepsprings (0.42 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Naschitti (0.89 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Tohatchi (1.16 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Twin Lakes (1.10 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Rock Springs (1.93 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Window Rock (6.27 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$230,000.00	\$230,000.00
		Coyote Canyon (0.74 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Standing Rock (0.07 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$60,000.00	\$60,000.00
		Dalton Pass (1.76 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Huerfano (0.26 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Nageezi (0.62 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Counselor (1.61 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Torreon (1.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
				15			
		<b>Furnish and install air chambers</b>	8140				
		(20 ft. Dia. Sphere, 9 total, 1 at each pmp. plt.)		9	EA	\$100,000.00	\$900,000.00
		<b>Furnish and install water regulating tanks,</b>					
		<b>as follows:</b>					
		155,593 gallons, 40 ft. Dia. X 17 ft. Height		1	EA	\$150,000.00	\$150,000.00
		125,343 gallons, 40 ft. Dia. X 13 ft. Height, 2 tanks		2	EA	\$140,000.00	\$280,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height, 3 tanks		3	EA	\$130,000.00	\$390,000.00
		<b>PAGE SUBTOTAL</b>					\$8,990,000.00

QUANTITIES		PRICES	
BY	APPROVED	BY	CHECKED
Art Streifel		K. Copeland	<i>Norm Hyman 9/28/01</i>
DATE PREPARED	DATE	DATE	PRICE LEVEL
28-Sep-2001		09/28/2001	

ESTIMATE WORKSHEET

FEATURE: 28-Sep-2001  
 NIIP COURY LATERAL ALTERNATIVE 2020

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CESTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water forebay tanks,</b>	8140				
		<b>as follows:</b>					
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 9 tanks		9	EA	\$55,000.00	\$495,000.00
		<b>Furnish and install water storage tanks,</b>	8140				
		<b>as follows:</b>					
		Tohatchi (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Twin Lakes (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Rock Springs (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Window Rock (20 ft. H X 500 ft. Dia.)		1	EA	\$9,910,000.00	\$9,910,000.00
		Coyote Canyon (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Standing Rock (20 ft. H X 60 ft. Dia.)		1	EA	\$240,000.00	\$240,000.00
		Dalton Pass (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Naschitti (20 ft. H X 190 ft. Dia.)		1	EA	\$1,680,000.00	\$1,680,000.00
		Sheepsprings ( 20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Newcomb (20ft. H X 180 ft. Dia.)		1	EA	\$1,600,000.00	\$1,600,000.00
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Huerfano (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Nageezi (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Counselor (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Torreon (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
<b>PAGE SUBTOTAL</b>							<b>\$34,335,000.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED K. Copeland	BY K. Copeland	CHECKED Norm Hayden 9/28/01
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:** 28-Sep-2001  
**NAIIP COURTY LATERAL ALTERNATIVE 2020**

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Manuelito (20 ft. H X 90 ft. Dia.)		1	EA	\$490,000.00	\$490,000.00
		Red Rock, Breadsprings, Chichiltah (20 ft. H X 230 ft. Dia.)		1	EA	\$2,460,000.00	\$2,460,000.00
		Iyanbito (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Church Rock (40 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Pinedale, Mariano Lake (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		0.38 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$70,000.00	\$70,000.00
		2.36 cfs, 162 ft. head, 3+1 units/plant		1	EA	\$140,000.00	\$140,000.00
		0.52 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		1.03 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$100,000.00	\$100,000.00
		0.71 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		<b>PAGE SUBTOTAL</b>					\$6,200,000.00
		<b>TOTAL FOR ALL PAGES</b>					\$158,911,620.00

QUANTITIES		PRICES	
BY	APPROVED	BY	CHECKED
Art Streifel		K. Copeland	<i>Nora Hyndman 9/28/01</i>
DATE PREPARED	DATE	DATE	PRICE LEVEL
28-Sep-2001		09/28/2001	

FEATURE:

4500 Acre-Feet Storage Pond  
 NIIP Coury Lateral Alternative  
 NIIP Amarillo Alternative

07-Dec-2001

PROJECT:

Navajo-Gallup Water Supply Project

DIVISION:

FILE:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\POND.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation	8140	6,530,000	CY	\$1.70	\$11,101,000.00
		Compacted Embankment	8140	19,700	CY	\$6.00	\$118,200.00
		Liner (40 mil PPE-R)	8140	10,080,000	SQ FT	\$0.45	\$4,536,000.00
		6" Riprap	8140	186,700	CY	\$25.00	\$4,667,500.00
<b>TOTAL</b>							<b>\$20,422,700.00</b>

QUANTITIES		PRICES	
BY David Gesundheit	APPROVED	BY K. Copeland	CHECKED <i>Cop</i> 12/7/2001
DATE PREPARED 11/29/2001	DATE	DATE 07-Dec-2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:** NAVAJO GALLUP WATER SUPPLY  
**APPRAISAL-GRADE ESTIMATE**  
**NIIP Coury Lateral Alternative**

**PROJECT:** Navajo-Gallup Water Supply

**DIVISION / REGION:** UC - New Mexico

**CONTRACT/SPEC:**

**FILE:** J:\WKSHTS\CY2001\GALLUP2.WK4

**WOID:** DUR30

09:27 AM

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
			<b>D-8440</b>				
	1	Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire		74	wmile	\$100,600.00	\$7,444,400.00
		Conductor: 336 kcmil ACSR	3/c	15,840	ft	\$2.40	
		OHG: 1/2" HSS	1/grd	5,280	ft	\$1.00	
		OPGW: 24 fiber	1/op-grd	5,280	ft	\$4.00	
		Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky	includes ins	7.54	strut/mi	\$4,800.00	
		Two pole wood structures about 55-65 feet tall, about 700 foot spans	Unit cost			\$100,608.00	
	2a	Electrical equipment at each plant, & diver. str. including engine-generator w/full plant capacity		24	ea	\$35,000.00	\$840,000.00
	2b	Electrical equipment at each treatment plant		1	ea	\$35,000.00	\$35,000.00
	3	Electrical equipment at each turnout		20	ea	\$5,000.00	\$100,000.00
	4	SCADA equipment including controller					
		Each plant		24	ea	\$5,000.00	\$120,000.00
		Each turnout		20	ea	\$5,000.00	\$100,000.00
	5	New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
	6	Communication equipment:					
		Each plant		24	ea	\$20,000.00	\$480,000.00
		Each turnout		20	ea	\$20,000.00	\$400,000.00
	7	Security system equipment at each plant		24	ea	\$5,000.00	\$120,000.00
	8	Substation near Moncisco		1	LS	\$1,000,000.00	\$1,000,000.00
		Tap structure, switch, circuit breaker, transformer					
	9	Power tap-poles, transformer					
		Each plant		24	ea	\$60,000.00	\$1,440,000.00
		Each turnout		20	ea	\$60,000.00	\$1,200,000.00
		<b>SUBTOTAL</b>					<b>\$13,579,400.00</b>

**QUANTITIES**

**PRICES**

BY D-8440  
 Lisa Gamuciello

APPROVED

BY D-8170  
 L. Pedde

CHECKED  
 RKC 10/15/01

DATE PREPARED  
 07-Sep-2001

DATE

DATE  
 09-Oct-2001

PRICE LEVEL

<b>FEATURE:</b> NIIP Alternatives Moncisco Dam, Coury Lateral & Cutter Dam 2020 Demand (26.25 MGD) Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand Includes Jicarilla Apache Nation Demand	12-Oct-2001	<b>PROJECT:</b> Navajo Gallup WSP <hr/> <b>DIVISION:</b> <hr/> <b>FILE:</b> H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\NIIP-ESTA.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2,700 square foot mezzanine.	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		Hollow Fiber UF Water Treatment System		27,640,000	GPD	\$0.46	\$12,714,400.00
3		Concrete Reinforced tanks for UF System		1047	CY	\$400.00	\$418,800.00
4		Concrete for Flocculation tank		310	CY	\$400.00	\$124,000.00
5		Concrete for splitter box		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		10800	CY	\$10.00	\$108,000.00
9		Reinforced Concrete for Clearwell		1162	CY	\$400.00	\$464,800.00
10		Backfill after Clearwell Construction		6327	CY	\$15.00	\$94,905.00
11		Excavation for wastewater polishing ponds		8850	CY	\$8.00	\$70,800.00
12		Mixers for Clearwell		6	EA	\$15,000.00	\$90,000.00
13		Sediment Drying beds Sand for Wastewater Polishing Ponds		125	CY	\$20.00	\$2,500.00
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eaves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		35,500.00 35,500.00	SF SF	\$0.50 \$0.20	\$17,750 \$7,100
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$5,100,000.00 ✓
		Subtotal					\$22,068,055.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$2,210,000.00
		Construct and operate Pilot system for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$24,478,055.00</b> ✓

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>HP</i> 10-12-01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

<b>FEATURE:</b> GALLUP REGIONAL SYSTEM	19-Feb-2002	<b>PROJECT:</b> NAVAJO-GALLUP WATER SUPPLY PROJECT
		<b>DIVISION:</b>
		<b>UNIT:</b>
<b>C:\TEMP\REVISE~1.WK4</b>		

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b>					
		(Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks as follows: (Capacities from DePauli Report, Appendix H)</b>					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows: (from DePauli Report, Appendix H)</b>					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Apper		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used - assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Kevin Moran & Marc DePauli	APPROVED	BY	CHECKED
DATE PREPARED 19-Feb-2002	DATE	DATE	PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP COURY LATERAL  
ALTERNATIVE - YEAR 2040**

ESTIMATE WORKSHEET

FEATURE: 28-Sep-2001 PROJECT:  
NIIP COURTY LATERAL ALTERNATIVE 2040

NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	2,426,400	CY	\$2.00	\$4,852,800.00
		Excavation, rock	8140	171,200	CY	\$8.00	\$1,369,600.00
		Backfill, common	8140	2,104,700	CY	\$1.50	\$3,157,050.00
		<b>Furnish and install pipe as follows:</b>	8140				
		48B875	300	2,000	FT	\$380.00	\$760,000.00
		48B850	267	150	FT	\$330.00	\$49,500.00
		48B825	267	24,350	FT	\$330.00	\$8,035,500.00
		48B800	267	9,000	FT	\$330.00	\$2,970,000.00
		48B775	267	7,070	FT	\$330.00	\$2,333,100.00
		48B750	233	7,230	FT	\$290.00	\$2,096,700.00
		48B725	233	26,730	FT	\$290.00	\$7,751,700.00
		48B700	233	1,580	FT	\$290.00	\$458,200.00
		48B675	233	14,790	FT	\$290.00	\$4,289,100.00
		48B650	233	21,520	FT	\$290.00	\$6,240,800.00
		48B625	199	11,000	FT	\$250.00	\$2,750,000.00
		48B600	199	1,340	FT	\$250.00	\$335,000.00
		48B575	199	9,000	FT	\$250.00	\$2,250,000.00
		48B550	199	13,370	FT	\$250.00	\$3,342,500.00
		48B525	166	3,750	FT	\$210.00	\$787,500.00
		48B500	166	1,290	FT	\$210.00	\$270,900.00
		48B475	166	17,000	FT	\$210.00	\$3,570,000.00
		48B450	166	4,260	FT	\$210.00	\$894,600.00
		48B425	132	260	FT	\$170.00	\$44,200.00
		48B400	132	2,610	FT	\$170.00	\$443,700.00
		48B375	132	22,820	FT	\$170.00	\$3,879,400.00
		48B350	132	13,480	FT	\$170.00	\$2,291,600.00
		48B325	132	5,840	FT	\$170.00	\$992,800.00
		48B300	92	5,090	FT	\$120.00	\$610,800.00
		48B275	88	9,440	FT	\$110.00	\$1,038,400.00
		48B250	88	10,000	FT	\$110.00	\$1,100,000.00
		48B225	88	5,350	FT	\$110.00	\$588,500.00
		48B200	88	8,770	FT	\$110.00	\$964,700.00
		48B175	88	12,820	FT	\$110.00	\$1,410,200.00
		48B150	88	4,000	FT	\$110.00	\$440,000.00
		48B125	88	15,350	FT	\$110.00	\$1,688,500.00
		48B100	88	18,850	FT	\$110.00	\$2,073,500.00
		48B75	88	11,020	FT	\$110.00	\$1,212,200.00
		48B50	88	4,410	FT	\$110.00	\$485,100.00
		PAGE SUBTOTAL					\$77,828,150.00

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nora Hayden 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: NIIP COURTY LATERAL ALTERNATIVE 2040

28-Sep-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	<b>8140</b>				
		42B800	205	22,000	FT	\$260.00	\$5,720,000.00
		42B750	205	50	FT	\$260.00	\$13,000.00
		42B725	176	1,000	FT	\$220.00	\$220,000.00
		42B700	176	19,310	FT	\$220.00	\$4,248,200.00
		42B625	176	3,000	FT	\$220.00	\$660,000.00
		42B600	146	6,000	FT	\$180.00	\$1,080,000.00
		42B575	146	6,960	FT	\$180.00	\$1,252,800.00
		42B550	146	6,000	FT	\$180.00	\$1,080,000.00
		42B525	146	8,000	FT	\$180.00	\$1,440,000.00
		42B500	146	25,600	FT	\$180.00	\$4,608,000.00
		42B475	117	15,350	FT	\$150.00	\$2,302,500.00
		42B425	117	15,170	FT	\$150.00	\$2,275,500.00
		42B400	117	1,000	FT	\$150.00	\$150,000.00
		42B375	117	1,000	FT	\$150.00	\$150,000.00
		42B350	83	650	FT	\$100.00	\$65,000.00
		42B325	77	590	FT	\$100.00	\$59,000.00
		42B275	68	10,140	FT	\$90.00	\$912,600.00
		42B250	68	4,050	FT	\$90.00	\$364,500.00
		42B225	68	3,970	FT	\$90.00	\$357,300.00
		42B200	68	1,000	FT	\$90.00	\$90,000.00
		42B175	68	210	FT	\$90.00	\$18,900.00
		42B25	68	1,000	FT	\$90.00	\$90,000.00
		36B725	151	590	FT	\$190.00	\$112,100.00
		36B625	125	90	FT	\$160.00	\$14,400.00
		36B600	125	1500	FT	\$160.00	\$240,000.00
		36B575	125	820	FT	\$160.00	\$131,200.00
		36B525	100	16390	FT	\$130.00	\$2,130,700.00
		36B500	100	15000	FT	\$130.00	\$1,950,000.00
		36B475	100	40230	FT	\$130.00	\$5,229,900.00
		36B450	100	53240	FT	\$130.00	\$6,921,200.00
		36B425	75	4720	FT	\$90.00	\$424,800.00
		36B400	69	2870	FT	\$90.00	\$258,300.00
		36B375	65	4000	FT	\$80.00	\$320,000.00
		36B350	61	52620	FT	\$80.00	\$4,209,600.00
		36B325	56	4930	FT	\$70.00	\$345,100.00
		36B275	52	640	FT	\$70.00	\$44,800.00
		36B250	50	9790	FT	\$60.00	\$587,400.00
		36B200	50	1330	FT	\$60.00	\$79,800.00
		36B175	50	46460	FT	\$60.00	\$2,787,600.00
		36B150	50	9000	FT	\$60.00	\$540,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$53,484,200.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm H. Goodman 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

FEATURE: 28-Sep-2001  
 NIIP COURTY LATERAL ALTERNATIVE 2040

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		36B125	50	250	FT	\$60.00	\$15,000.00
		36B50	50	23,000	FT	\$60.00	\$1,380,000.00
		30B475	58	1,000	FT	\$70.00	\$70,000.00
		30B450	55	1,000	FT	\$70.00	\$70,000.00
		30B425	52	1,000	FT	\$70.00	\$70,000.00
		30B400	49	8,300	FT	\$60.00	\$498,000.00
		30B375	46	24,410	FT	\$60.00	\$1,464,600.00
		30B350	43	2,000	FT	\$50.00	\$100,000.00
		30B325	39	14,150	FT	\$50.00	\$707,500.00
		30B300	36	1,030	FT	\$50.00	\$51,500.00
		30B275	35	5,940	FT	\$40.00	\$237,600.00
		30B250	35	5,050	FT	\$40.00	\$202,000.00
		30B225	35	15,510	FT	\$40.00	\$620,400.00
		30B200	35	2,420	FT	\$40.00	\$96,800.00
		30B175	35	1,480	FT	\$40.00	\$59,200.00
		30B125	35	1,380	FT	\$40.00	\$55,200.00
		30B75	35	3,640	FT	\$40.00	\$145,600.00
		30B50	35	17,130	FT	\$40.00	\$685,200.00
		30B25	35	3,590	FT	\$40.00	\$143,600.00
		24B600	48	200	FT	\$72.00	\$14,400.00
		24B575	46	23,460	FT	\$69.00	\$1,618,740.00
		24B550	44	8,630	FT	\$66.00	\$569,580.00
		24B525	42	8,000	FT	\$63.00	\$504,000.00
		24B500	40	1,420	FT	\$60.00	\$85,200.00
		24B475	38	1,880	FT	\$57.00	\$107,160.00
		24B450	36	4,630	FT	\$54.00	\$250,020.00
		24B425	34	17,830	FT	\$51.00	\$909,330.00
		24B400	32	17,000	FT	\$48.00	\$816,000.00
		24B375	30	73,570	FT	\$45.00	\$3,310,650.00
		24B350	28	14,310	FT	\$42.00	\$601,020.00
		24B325	26	32,010	FT	\$39.00	\$1,248,390.00
		24B300	24	1,000	FT	\$36.00	\$36,000.00
		24B275	22	25,300	FT	\$33.00	\$834,900.00
		24B250	22	20,810	FT	\$33.00	\$686,730.00
		24B225	22	11,160	FT	\$33.00	\$368,280.00
		24B200	22	5,250	FT	\$33.00	\$173,250.00
		24B175	22	7,140	FT	\$33.00	\$235,620.00
		24B150	22	960	FT	\$33.00	\$31,680.00
		24B125	22	3,670	FT	\$33.00	\$121,110.00
		<b>PAGE SUBTOTAL</b>					<b>\$19,194,260.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hyndman 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: NIIP COURTY LATERAL ALTERNATIVE 2040

28-Sep-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		24B100	22	760	FT	\$33.00	\$25,080.00
		18B575	26	6,000	FT	\$39.00	\$234,000.00
		18B550	25	480	FT	\$38.00	\$18,240.00
		18B525	24	990	FT	\$36.00	\$35,640.00
		18B500	23	1,400	FT	\$35.00	\$49,000.00
		18B475	21	4,650	FT	\$32.00	\$148,800.00
		18B450	20	2,000	FT	\$30.00	\$60,000.00
		18B425	19	14,000	FT	\$29.00	\$406,000.00
		18B400	18	6,000	FT	\$27.00	\$162,000.00
		18B375	17	3,000	FT	\$26.00	\$78,000.00
		18B350	16	1,000	FT	\$24.00	\$24,000.00
		18B325	15	1,210	FT	\$23.00	\$27,830.00
		18B300	15	1,200	FT	\$23.00	\$27,600.00
		18B275	15	3,760	FT	\$23.00	\$86,480.00
		18B250	15	3,410	FT	\$23.00	\$78,430.00
		18B200	15	1,000	FT	\$23.00	\$23,000.00
		18B150	15	30	FT	\$23.00	\$690.00
		18B100	15	9,450	FT	\$23.00	\$217,350.00
		18B75	15	4,030	FT	\$23.00	\$92,690.00
		14B650	18	720	FT	\$27.00	\$19,440.00
		14B625	18	1,110	FT	\$27.00	\$29,970.00
		14B600	17	1,870	FT	\$26.00	\$48,620.00
		14B575	16	830	FT	\$24.00	\$19,920.00
		14B525	15	170	FT	\$23.00	\$3,910.00
		14B500	14	9,710	FT	\$21.00	\$203,910.00
		14B475	13	7,310	FT	\$20.00	\$146,200.00
		14B450	12	7,860	FT	\$18.00	\$141,480.00
		14B425	12	1,190	FT	\$18.00	\$21,420.00
		14B400	12	5,430	FT	\$18.00	\$97,740.00
		14B375	12	11,790	FT	\$18.00	\$212,220.00
		14B350	12	5,160	FT	\$18.00	\$92,880.00
		14B325	12	2,000	FT	\$18.00	\$36,000.00
		14B300	12	5,010	FT	\$18.00	\$90,180.00
		14B275	12	5,890	FT	\$18.00	\$106,020.00
		14B225	12	3,000	FT	\$18.00	\$54,000.00
		14B200	12	3,760	FT	\$18.00	\$67,680.00
		14B175	12	2,380	FT	\$18.00	\$42,840.00
		14B150	12	5,000	FT	\$18.00	\$90,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$3,319,260.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nom Hyndman 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: 28-Sep-2001  
 NIIP COURTY LATERAL ALTERNATIVE 2040

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Furnish and install pipe as follows:	8140				
		14B125	12	3,790	FT	\$18.00	\$68,220.00
		14B100	12	920	FT	\$18.00	\$16,560.00
		14B75	12	850	FT	\$18.00	\$15,300.00
		14B50	12	2,000	FT	\$18.00	\$36,000.00
		10B750	11	790	FT	\$17.00	\$13,430.00
		10B725	11	430	FT	\$17.00	\$7,310.00
		10B700	10	1,100	FT	\$15.00	\$16,500.00
		10B675	10	780	FT	\$15.00	\$11,700.00
		10B650	9	1,000	FT	\$14.00	\$14,000.00
		10B625	9	5,000	FT	\$14.00	\$70,000.00
		10B600	9	580	FT	\$14.00	\$8,120.00
		10B575	9	9,000	FT	\$14.00	\$126,000.00
		10B550	9	12,280	FT	\$14.00	\$171,920.00
		10B525	9	21,000	FT	\$14.00	\$294,000.00
		10B500	9	18,000	FT	\$14.00	\$252,000.00
		10B475	9	11,000	FT	\$14.00	\$154,000.00
		10B400	9	4,000	FT	\$14.00	\$56,000.00
PAGE SUBTOTAL							\$1,331,060.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nora Hydman 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

FEATURE: NIIP COURY LATERAL ALTERNATIVE 2040

28-Sep-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		67.51 cfs, 329 ft. head, 7+1 units/plant		1	EA	\$2,440,000.00	\$2,440,000.00
		38.39 cfs, 311 ft. head, 4+1 units/plant		1	EA	\$1,370,000.00	\$1,370,000.00
		36.51 cfs, 381 ft. head, 4+1 units/plant		1	EA	\$1,520,000.00	\$1,520,000.00
		12.49 cfs, 349 ft. head, 2+1 units/plant		1	EA	\$570,000.00	\$570,000.00
		4.44 cfs, 164 ft. head, 1+1 units/plant		1	EA	\$180,000.00	\$180,000.00
		14.71 cfs, 261 ft. head, 2+1 units/plant		1	EA	\$540,000.00	\$540,000.00
		11.51 cfs, 275 ft. head, 2+1 units/plant		1	EA	\$460,000.00	\$460,000.00
		8.34 cfs, 403 ft. head, 1+1 units/plant		1	EA	\$440,000.00	\$440,000.00
		6.79 cfs, 356 ft. head, 1+1 units/plant		1	EA	\$350,000.00	\$350,000.00
				9	EA		
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Sanostee (2.00 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$230,000.00	\$230,000.00
		Newcomb (1.52 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$200,000.00	\$200,000.00
		Sheepsprings (0.70 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Naschitti (1.55 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Tohatchi (1.99 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Twin Lakes (1.88 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Rock Springs (3.19 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$150,000.00	\$150,000.00
		Window Rock (11.51 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$340,000.00	\$340,000.00
		Coyote Canyon (1.24 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Standing Rock (0.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Dalton Pass (3.06 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$150,000.00	\$150,000.00
		Huerfano (0.50 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Nageezi (1.05 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Counselor (2.62 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$140,000.00	\$140,000.00
		Torreon (2.01 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		<b>Furnish and install air chambers</b>	8140				
		(20 ft. Dia. Sphere, 9 total, 1 at each pmp. plt.)		9	EA	\$100,000.00	\$900,000.00
		<b>Furnish and install water regulating tanks,</b>					
		<b>as follows:</b>					
		202,125 gallons, 40 ft. Dia. X 22 ft. Height		1	EA	\$165,000.00	\$165,000.00
		143,843 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		143,843 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		96,842 gallons, 40 ft. Dia. X 10 ft. Height		1	EA	\$135,000.00	\$135,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$11,740,000.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm H. Copeland 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:** 28-Sep-2001  
**NIIP CORY LATERAL ALTERNATIVE 2040**

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water forebay tanks, as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 9 tanks		9	EA	\$55,000.00	\$495,000.00
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Tohatchi (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Twin Lakes (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Rock Springs (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Window Rock (20 ft. H X 500 ft. Dia.)		1	EA	\$9,910,000.00	\$9,910,000.00
		Coyote Canyon (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Standing Rock (20 ft. H X 60 ft. Dia.)		1	EA	\$240,000.00	\$240,000.00
		Dalton Pass (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Naschitti (20 ft. H X 190 ft. Dia.)		1	EA	\$1,680,000.00	\$1,680,000.00
		Sheepsprings ( 20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Newcomb (20ft. H X 180 ft. Dia.)		1	EA	\$1,600,000.00	\$1,600,000.00
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Huerfano (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Nageezi (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Counselor (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Torreon (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
<b>PAGE SUBTOTAL</b>							<b>\$34,335,000.00</b>

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Man. Hernandez</i> 9/28/01
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**  
**NIIP COURY LATERAL ALTERNATIVE 2040**

**28-Sep-2001**

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\ESTSPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks,</b>	8140				
		<b>as follows:</b>					
		Manuelito (20 ft. H X 120 ft. Dia.)		1	EA	\$790,000.00	\$790,000.00
		Red Rock, Breadsprings, Chichiltah (20 ft. H X 290 ft. Dia.)		1	EA	\$3,720,000.00	\$3,720,000.00
		Iyanbito (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Church Rock (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Pinedale, Mariano Lake (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		0.61 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		3.93 cfs, 162 ft. head, 4+1 units/plant		1	EA	\$180,000.00	\$180,000.00
		0.79 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		1.73 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$120,000.00	\$120,000.00
		1.30 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$110,000.00	\$110,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$9,300,000.00</b>
		<b>TOTAL FOR ALL PAGES</b>					<b>\$210,531,930.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nancy Hyndman 9/28/01</i>
DATE PREPARED 28-Sep-2001	DATE	DATE 09/28/2001	PRICE LEVEL



FEATURE:		NAVAJO GALLUP WATER SUPPLY APPRAISAL-GRADE ESTIMATE NIIP Coury Lateral Alternative			PROJECT:		Navajo-Gallup Water Supply		
WOID:		DUR30			DIVISION / REGION:		UC - New Mexico		
PLANT ACCT.		PAY ITEM			CONTRACT/SPEC:		FILE: J:\WKSHTS\CY2001\GALLUP2.WK4		
		DESCRIPTION			CODE	QUANTITY	UNIT	PRICE	AMOUNT
					<b>D-8440</b>				
	1	Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire				74	wmile	\$100,600.00	\$7,444,400.00
		Conductor: 336 kcmil ACSR			3/c	15,840	ft	\$2.40	
		OHG: 1/2" HSS			1/grd	5,280	ft	\$1.00	
		OPGW: 24 fiber			1/op-grd	5,280	ft	\$4.00	
		Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky			includes ins	7.54	strut/mi	\$4,800.00	
		Two pole wood structures about 55-65 feet tall, about 700 foot spans			Unit cost			\$100,608.00	
	2a	Electrical equipment at each plant, & diver. str. including engine-generator w/full plant capacity				24	ea	\$35,000.00	\$840,000.00
	2b	Electrical equipment at each treatment plant				1	ea	\$35,000.00	\$35,000.00
	3	Electrical equipment at each turnout				20	ea	\$5,000.00	\$100,000.00
	4	SCADA equipment including controller							
		Each plant				24	ea	\$5,000.00	\$120,000.00
		Each turnout				20	ea	\$5,000.00	\$100,000.00
	5	New SCADA system in NTUA Fort Defiance				1	ls	\$300,000.00	\$300,000.00
	6	Communication equipment:							
		Each plant				24	ea	\$20,000.00	\$480,000.00
		Each turnout				20	ea	\$20,000.00	\$400,000.00
	7	Security system equipment at each plant				24	ea	\$5,000.00	\$120,000.00
	8	Substation near Moncisco				1	LS	\$1,000,000.00	\$1,000,000.00
		Tap structure, switch, circuit breaker, transformer							
	9	Power tap-poles, transformer							
		Each plant				24	ea	\$60,000.00	\$1,440,000.00
		Each turnout				20	ea	\$60,000.00	\$1,200,000.00
<b>SUBTOTAL</b>									<b>\$13,579,400.00</b>

QUANTITIES				PRICES			
BY	D-8440	APPROVED		BY	D-8170	CHECKED	
	Lisa Gamuciello				L. Pedde	RKC	10/15/01
DATE PREPARED	07-Sep-2001	DATE		DATE	09-Oct-2001	PRICE LEVEL	

**FEATURE:**  
 NIIP Alternatives  
 Moncisco Dam, Coury Lateral & Cutter Dam  
 2020 Demand (26.25 MGD)  
 Quantities for tanks, building and process ponds for  
 2040 demand. All other quantities for 2020 demand  
 Includes Jicarilla Apache Nation Demand

12-Oct-2001

**PROJECT:**  
 Navajo Gallup WSP

**DIVISION:**

**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\NIIP-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2,700 square foot mezzanine.	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		Hollow Fiber UF Water Treatment System		27,640,000	GPD	\$0.46	\$12,714,400.00
3		Concrete Reinforced tanks for UF System		1047	CY	\$400.00	\$418,800.00
4		Concrete for Flocculation tank		310	CY	\$400.00	\$124,000.00
5		Concrete for splitter box		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		10800	CY	\$10.00	\$108,000.00
9		Reinforced Concrete for Clearwell		1162	CY	\$400.00	\$464,800.00
10		Backfill after Clearwell Construction		6327	CY	\$15.00	\$94,905.00
11		Excavation for wastewater polishing ponds		8850	CY	\$8.00	\$70,800.00
12		Mixers for Clearwell		6	EA	\$15,000.00	\$90,000.00
13		Sediment Drying beds Sand for Wastewater Polishing Ponds		125	CY	\$20.00	\$2,500.00
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eaves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		35,500.00 35,500.00	SF SF	\$0.50 \$0.20	\$17,750 \$7,100
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$5,100,000.00
		Subtotal					\$22,068,055.00
		Unlisted 10% (for DBP Treatment Systems at service points)					\$2,210,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$24,478,055.00</b>

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>AP</i> 10-12-01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

ESTIMATE WORKSHEET

<b>FEATURE:</b> NIIP Alternatives Moncisco Dam, Coury Lateral & Cutter Dam Additional treatment units to to upgrade the plant by 15.99 MGD for a total Production Rate of 43.63 MGD Includes Jicarilla Apache Nation Demand	11-Oct-2001	<b>PROJECT:</b>  <b>DIVISION:</b>  <b>FILE:</b> H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\NIP-ESTA.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		ZeeWeed Water Treatment System		15,990,000	MGD	\$0.46	\$7,355,400 ✓
2		Ultraviolet Disinfection Units		2	EA	\$100,000	\$200,000 ✓
		Unlisted 5%					\$378,000.00 ✓
<b>TOTAL</b>							<b>\$7,933,400.00</b> ✓

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard		BY K. Copeland	CHECKED <i>[Signature]</i> 10/11/01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 11-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks</b> as follows: (Capacities from DePauli Report, Appendix H)					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Apper		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used - assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY  
Kevin Moran & Marc DePauli

APPROVED

BY

CHECKED

DATE PREPARED  
19-Feb-2002

DATE

DATE

PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP CUTTER  
ALTERNATIVE - YEAR 2020**

ESTIMATE WORKSHEET

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2020

24-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	2,183,100	CY	\$2.00	\$4,366,200.00
		Excavation, rock	8140	40,100	CY	\$8.00	\$320,800.00
		Backfill, common	8140	1,895,000	CY	\$1.50	\$2,842,500.00
		Furnish and install pipe as follows:	8140				
		42B825	205	2,000	FT	\$260.00	\$520,000.00
		42B800	205	5,060	FT	\$260.00	\$1,315,600.00
		42B775	205	4,630	FT	\$260.00	\$1,203,800.00
		42B750	205	6,000	FT	\$260.00	\$1,560,000.00
		42B725	176	4,000	FT	\$220.00	\$880,000.00
		42B700	176	2,260	FT	\$220.00	\$497,200.00
		42B675	176	2,260	FT	\$220.00	\$497,200.00
		42B650	176	8,000	FT	\$220.00	\$1,760,000.00
		42B625	176	10,030	FT	\$220.00	\$2,206,600.00
		42B600	146	8,740	FT	\$180.00	\$1,573,200.00
		42B575	146	13,680	FT	\$180.00	\$2,462,400.00
		42B550	146	7,500	FT	\$180.00	\$1,350,000.00
		42B525	146	11,250	FT	\$180.00	\$2,025,000.00
		42B500	146	6,790	FT	\$180.00	\$1,222,200.00
		42B475	117	29,080	FT	\$150.00	\$4,362,000.00
		42B450	117	9,350	FT	\$150.00	\$1,402,500.00
		42B425	117	14,770	FT	\$150.00	\$2,215,500.00
		42B400	117	16,300	FT	\$150.00	\$2,445,000.00
		42B375	117	14,000	FT	\$150.00	\$2,100,000.00
		42B350	83	8,030	FT	\$100.00	\$803,000.00
		42B325	77	1,000	FT	\$100.00	\$100,000.00
		42B300	71	530	FT	\$90.00	\$47,700.00
		42B275	68	4,000	FT	\$90.00	\$360,000.00
		42B225	68	2,460	FT	\$90.00	\$221,400.00
		42B200	68	6,000	FT	\$90.00	\$540,000.00
		42B175	68	9,380	FT	\$90.00	\$844,200.00
		42B150	68	910	FT	\$90.00	\$81,900.00
		42B125	68	5,630	FT	\$90.00	\$506,700.00
		42B100	68	2,500	FT	\$90.00	\$225,000.00
		36B925	175	2,000	FT	\$220.00	\$440,000.00
		36B900	175	4,150	FT	\$220.00	\$913,000.00
		36B875	175	10,350	FT	\$220.00	\$2,277,000.00
		36B850	151	4,480	FT	\$190.00	\$851,200.00
		PAGE SUBTOTAL					\$47,338,800.00

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nan Hydon</i> 9/25/01
DATE PREPARED 24-Sep-2001	DATE	DATE 09/24/2001	PRICE LEVEL

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2020

24-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		36B825	151	13,910	FT	\$190.00	\$2,642,900.00
		36B800	151	12,400	FT	\$190.00	\$2,356,000.00
		36B775	151	20,120	FT	\$190.00	\$3,822,800.00
		36B750	151	19,110	FT	\$190.00	\$3,630,900.00
		36B725	151	33,900	FT	\$190.00	\$6,441,000.00
		36B700	125	30,680	FT	\$160.00	\$4,908,800.00
		36B675	125	10,190	FT	\$160.00	\$1,630,400.00
		36B650	125	2,900	FT	\$160.00	\$464,000.00
		36B625	125	8,800	FT	\$160.00	\$1,408,000.00
		36B600	125	31,810	FT	\$160.00	\$5,089,600.00
		36B575	125	12,740	FT	\$160.00	\$2,038,400.00
		36B550	100	2,900	FT	\$130.00	\$377,000.00
		36B525	100	18,020	FT	\$130.00	\$2,342,600.00
		36B500	100	5,600	FT	\$130.00	\$728,000.00
		36B475	100	6,980	FT	\$130.00	\$907,400.00
		36B450	100	10,840	FT	\$130.00	\$1,409,200.00
		36B425	75	21,940	FT	\$90.00	\$1,974,600.00
		36B400	69	2,770	FT	\$90.00	\$249,300.00
		36B375	65	29,000	FT	\$80.00	\$2,320,000.00
		36B350	61	17,000	FT	\$80.00	\$1,360,000.00
		36B325	56	2,590	FT	\$70.00	\$181,300.00
		36B300	52	330	FT	\$70.00	\$23,100.00
		36B275	50	10,140	FT	\$60.00	\$608,400.00
		36B250	50	7,700	FT	\$60.00	\$462,000.00
		36B225	50	970	FT	\$60.00	\$58,200.00
		36B200	50	1000	FT	\$60.00	\$60,000.00
		36B175	50	210	FT	\$60.00	\$12,600.00
		36B25	50	1000	FT	\$60.00	\$60,000.00
		30B525	84	1000	FT	\$110.00	\$110,000.00
		30B500	63	1000	FT	\$80.00	\$80,000.00
		30B475	58	2000	FT	\$70.00	\$140,000.00
		30B450	55	3000	FT	\$70.00	\$210,000.00
		30B425	52	1000	FT	\$70.00	\$70,000.00
		30B400	49	8350	FT	\$60.00	\$501,000.00
		30B375	46	24190	FT	\$60.00	\$1,451,400.00
		30B350	43	5460	FT	\$50.00	\$273,000.00
		30B325	39	10790	FT	\$50.00	\$539,500.00
		30B300	36	9810	FT	\$50.00	\$490,500.00
		30B275	35	11700	FT	\$40.00	\$468,000.00
		30B250	35	2000	FT	\$40.00	\$80,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$51,979,900.00</b>

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hydeman 9/25/01</i>
DATE PREPARED 24-Sep-2001	DATE	DATE 09/24/2001	PRICE LEVEL

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2020

24-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
	30B225		35	510	FT	\$40.00	\$20,400.00
	30B200		35	2,000	FT	\$40.00	\$80,000.00
	30B175		35	480	FT	\$40.00	\$19,200.00
	30B125		35	1,380	FT	\$40.00	\$55,200.00
	30B100		35	3,000	FT	\$40.00	\$120,000.00
	30B75		35	8,280	FT	\$40.00	\$331,200.00
	30B50		35	13,070	FT	\$40.00	\$522,800.00
	24B450		36	12,460	FT	\$54.00	\$672,840.00
	24B400		32	8,630	FT	\$48.00	\$414,240.00
	24B350		28	2,880	FT	\$42.00	\$120,960.00
	24B325		26	8,630	FT	\$39.00	\$336,570.00
	24B300		24	6,160	FT	\$36.00	\$221,760.00
	24B275		22	790	FT	\$33.00	\$26,070.00
	24B250		22	13,000	FT	\$33.00	\$429,000.00
	24B225		22	3,000	FT	\$33.00	\$99,000.00
	24B200		22	10,000	FT	\$33.00	\$330,000.00
	24B175		22	5,000	FT	\$33.00	\$165,000.00
	24B150		22	520	FT	\$33.00	\$17,160.00
	24B50		22	520	FT	\$33.00	\$17,160.00
	18B900		51	330	FT	\$77.00	\$25,410.00
	18B875		51	2,500	FT	\$77.00	\$192,500.00
	18B850		38	850	FT	\$57.00	\$48,450.00
	18B750		34	6,720	FT	\$51.00	\$342,720.00
	18B725		33	7,110	FT	\$50.00	\$355,500.00
	18B700		32	25,870	FT	\$48.00	\$1,241,760.00
	18B675		31	17,110	FT	\$47.00	\$804,170.00
	18B650		29	12,150	FT	\$44.00	\$534,600.00
	18B625		28	8,020	FT	\$42.00	\$336,840.00
	18B600		27	5,000	FT	\$41.00	\$205,000.00
	18B575		26	31,000	FT	\$39.00	\$1,209,000.00
	18B550		25	10,910	FT	\$38.00	\$414,580.00
	18B525		24	23,050	FT	\$36.00	\$829,800.00
	18B500		23	15,510	FT	\$35.00	\$542,850.00
	18B475		21	8,240	FT	\$32.00	\$263,680.00
	18B450		20	21,550	FT	\$30.00	\$646,500.00
	18B425		19	25,280	FT	\$29.00	\$733,120.00
	18B400		18	14,830	FT	\$27.00	\$400,410.00
	18B375		17	41,860	FT	\$26.00	\$1,088,360.00
	18B350		16	60,680	FT	\$24.00	\$1,456,320.00
		<b>PAGE SUBTOTAL</b>					<b>\$15,670,130.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED Norm Hyslop 9/25/01
DATE PREPARED 24-Sep-2001	DATE	DATE 09/24/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2020

24-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		18B325	15	23,250	FT	\$23.00	\$534,750.00
		18B300	15	4,690	FT	\$23.00	\$107,870.00
		18B275	15	4,010	FT	\$23.00	\$92,230.00
		18B250	15	38,050	FT	\$23.00	\$875,150.00
		18B225	15	19,150	FT	\$23.00	\$440,450.00
		18B200	15	5,380	FT	\$23.00	\$123,740.00
		18B175	15	11,180	FT	\$23.00	\$257,140.00
		18B150	15	29,310	FT	\$23.00	\$674,130.00
		18B125	15	2,310	FT	\$23.00	\$53,130.00
		18B100	15	13,080	FT	\$23.00	\$300,840.00
		18B75	15	5,120	FT	\$23.00	\$117,760.00
		18B50	15	16,700	FT	\$23.00	\$384,100.00
		18B25	15	12,000	FT	\$23.00	\$276,000.00
		12B325	10	660	FT	\$15.00	\$9,900.00
		12B300	10	7,820	FT	\$15.00	\$117,300.00
		12B275	10	2,990	FT	\$15.00	\$44,850.00
		12B250	10	9,840	FT	\$15.00	\$147,600.00
		12B225	10	21,000	FT	\$15.00	\$315,000.00
		12B200	10	12,090	FT	\$15.00	\$181,350.00
		12B175	10	20,000	FT	\$15.00	\$300,000.00
		12B150	10	54,000	FT	\$15.00	\$810,000.00
		12B125	10	15,010	FT	\$15.00	\$225,150.00
		12B100	10	15,790	FT	\$15.00	\$236,850.00
		12B75	10	13,000	FT	\$15.00	\$195,000.00
		12B50	10	9,000	FT	\$15.00	\$135,000.00
		12B25	10	9,000	FT	\$15.00	\$135,000.00
PAGE SUBTOTAL							\$7,090,290.00

QUANTITIES		PRICES	
BY	APPROVED	BY	CHECKED
Art Streifel		K. Copeland	<i>Norm H. Copeland 9/25/01</i>
DATE PREPARED	DATE	DATE	PRICE LEVEL
24-Sep-2001		09/24/2001	

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2020

24-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		42.76 cfs, 262 ft. head, 5+1 units/plant		1	EA	\$1,370,000.00	\$1,370,000.00
		42.76 cfs, 359 ft. head, 5+1 units/plant		1	EA	\$1,700,000.00	\$1,700,000.00
		42.76 cfs, 476 ft. head, 5+1 units/plant		1	EA	\$2,130,000.00	\$2,130,000.00
		27.77 cfs, 318 ft. head, 3+1 units/plant		1	EA	\$1,030,000.00	\$1,030,000.00
		26.67 cfs, 380 ft. head, 3+1 units/plant		1	EA	\$1,140,000.00	\$1,140,000.00
		4.24 cfs, 349 ft. head, 1+1 units/plant		1	EA	\$250,000.00	\$250,000.00
		2.58 cfs, 164 ft. head, 1+1 units/plant		1	EA	\$140,000.00	\$140,000.00
		8.20 cfs, 341 ft. head, 1+1 units/plant		1	EA	\$390,000.00	\$390,000.00
		6.27 cfs, 275 ft. head, 1+1 units/plant		1	EA	\$290,000.00	\$290,000.00
		4.90 cfs, 464 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
				10			
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Sanostee (1.18 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$190,000.00	\$190,000.00
		Newcomb (0.89 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$170,000.00	\$170,000.00
		Sheepsprings (0.42 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Naschitti (0.89 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Tohatchi (1.16 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Twin Lakes (1.10 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Rock Springs (1.93 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Window Rock (6.27 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$230,000.00	\$230,000.00
		Coyote Canyon (0.74 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Standing Rock (0.07 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$60,000.00	\$60,000.00
		Dalton Pass (1.76 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Huerfano (0.26 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Nageezi (0.62 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Counselor (1.61 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Torreon (1.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
				15			
		<b>Furnish and install air chambers</b>	8140				
		(20 ft. Dia. Sphere, 10 total, 1 at each pmp. plt.)		10	EA	\$100,000.00	\$1,000,000.00
		<b>Furnish and install water regulating tanks,</b>					
		<b>as follows:</b>					
		155,593 gallons, 40 ft. Dia. X 17 ft. Height		1	EA	\$150,000.00	\$150,000.00
		125,343 gallons, 40 ft. Dia. X 13 ft. Height		1	EA	\$140,000.00	\$140,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		<b>PAGE SUBTOTAL</b>					\$12,030,000.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hyndman 9/25/01</i>
DATE PREPARED 24-Sep-2001	DATE	DATE 09/24/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2020

24-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water forebay tanks,</b>	8140				
		<b>as follows:</b>					
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 10 tanks		10	EA	\$55,000.00	\$550,000.00
		<b>Furnish and install water storage tanks,</b>	8140				
		<b>as follows:</b>					
		Tohatchi (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Twin Lakes (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Rock Springs (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Window Rock (20 ft. H X 500 ft. Dia.)		1	EA	\$9,910,000.00	\$9,910,000.00
		Coyote Canyon (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Standing Rock (20 ft. H X 60 ft. Dia.)		1	EA	\$240,000.00	\$240,000.00
		Dalton Pass (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Naschitti (20 ft. H X 190 ft. Dia.)		1	EA	\$1,680,000.00	\$1,680,000.00
		Sheepsprings (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Newcomb (20ft. H X 180 ft. Dia.)		1	EA	\$1,600,000.00	\$1,600,000.00
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Huerfano (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Nageezi (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Counselor (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Torreon (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
<b>PAGE SUBTOTAL</b>							<b>\$34,390,000.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hyndman 9/25/01</i>
DATE PREPARED 24-Sep-2001	DATE	DATE 09/24/2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**  
**NIIP CUTTER ALTERNATIVE - 2020**

**24-Sep-2001**

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks,</b>	8140				
		<b>as follows:</b>					
		Manuelito (20 ft. H X 90 ft. Dia.)		1	EA	\$490,000.00	\$490,000.00
		Red Rock, Breadsprings, Chichiltah (40 ft. H X 230 ft. Dia.)		1	EA	\$2,460,000.00	\$2,460,000.00
		Iyanbito (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Church Rock (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Pinedale, Mariano Lake (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		0.38 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$70,000.00	\$70,000.00
		2.36 cfs, 162 ft. head, 3+1 units/plant		1	EA	\$140,000.00	\$140,000.00
		0.52 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		1.03 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$100,000.00	\$100,000.00
		0.71 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		<b>PAGE SUBTOTAL</b>					\$6,200,000.00
		<b>TOTAL FOR ALL PAGES</b>					\$174,699,120.00

QUANTITIES		PRICES	
BY	APPROVED	BY	CHECKED
Art Streifel		K. Copeland	<i>Non Hydon 9/25/01</i>
DATE PREPARED	DATE	DATE	PRICE LEVEL
24-Sep-2001		09/24/2001	

**ESTIMATE WORKSHEET**

**FEATURE: NAVAJO GALLUP WATER SUPPLY  
APPRAISAL-GRADE ESTIMATE  
NIIP Cutter Alternative**

**PROJECT: Navajo-Gallup Water Supply**

**DIVISION / REGION: UC - New Mexico**

**CONTRACT/SPEC:**

**FILE: J:\WKSHTS\CY2001\GALLUP2.WK4**

**WOID:** DUR30  
**PLANT PAY:** 09:27 AM  
**ACCT. ITEM:**

DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1 Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire Conductor: 336 kcmil ACSR OHG: 1/2" HSS OPGW: 24 fiber Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky Two pole wood structures about 55-65 feet tall, about 700 foot spans	D-8440	99	wmile	\$100,600.00	\$9,959,400.00
		Per mile calculations:			
	3/c	15,840	ft	\$2.40	
	1/grd	5,280	ft	\$1.00	
	1/op-grd	5,280	ft	\$4.00	
	includes ins	7.54	strut/mi	\$4,800.00	
	Unit cost			\$100,608.00	
2 Electrical equipment at each plant, including engine-generator w/full plant capacity and unit at Treatment Plant		11	ea	\$35,000.00	\$385,000.00
3 Electrical equipment at each turnout		20	ea	\$5,000.00	\$100,000.00
4 SCADA equipment including controller					
Each plant		11	ea	\$5,000.00	\$55,000.00
Each turnout		20	ea	\$5,000.00	\$100,000.00
5 New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
6 Communication equipment:					
Each plant		11	ea	\$20,000.00	\$220,000.00
Each turnout		20	ea	\$20,000.00	\$400,000.00
7 Security system equipment at each plant		11	ea	\$5,000.00	\$55,000.00
8 Substation Tap structure, switch, circuit breaker, transformer		1	LS	\$1,000,000.00	\$1,000,000.00
9 Power tap-poles, transformer					
Each plant		11	ea	\$60,000.00	\$660,000.00
Each turnout		20	ea	\$60,000.00	\$1,200,000.00
10 Additional monitoring equipment at Cutter treatment plant- transducers, etc.		1	LS	\$10,000.00	\$10,000.00
<b>SUBTOTAL</b>					<b>\$14,444,400.00</b>

QUANTITIES		PRICES	
BY D-8440 Lisa Gamuciello	APPROVED	BY D-8170 L. Pedde	CHECKED RKC 10/15/01
DATE PREPARED 07-Sep-2001	DATE	DATE 09-Oct-2001	PRICE LEVEL

**FEATURE:**  
 NIIP Alternatives  
 Moncisco Dam, Coury Lateral & Cutter Dam  
 2020 Demand (26.25 MGD)  
 Quantities for tanks, building and process ponds for  
 2040 demand. All other quantities for 2020 demand  
 Includes Jicarilla Apache Nation Demand

12-Oct-2001

**PROJECT:**  
 Navajo Gallup WSP

**DIVISION:**

**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\NIIP-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2,700 square foot mezzanine.	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		Hollow Fiber UF Water Treatment System		27,640,000	GPD	\$0.46	\$12,714,400.00
3		Concrete Reinforced tanks for UF System		1047	CY	\$400.00	\$418,800.00
4		Concrete for Flocculation tank		310	CY	\$400.00	\$124,000.00
5		Concrete for splitter box		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		10800	CY	\$10.00	\$108,000.00
9		Reinforced Concrete for Clearwell		1162	CY	\$400.00	\$464,800.00
10		Backfill after Clearwell Construction		6327	CY	\$15.00	\$94,905.00
11		Excavation for wastewater polishing ponds		8850	CY	\$8.00	\$70,800.00
12		Mixers for Clearwell		6	EA	\$15,000.00	\$90,000.00
13		Sediment Drying beds Sand for Wastewater Polishing Ponds		125	CY	\$20.00	\$2,500.00
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eaves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		35,500.00 35,500.00	SF SF	\$0.50 \$0.20	\$17,750 \$7,100
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$5,100,000.00 ✓
		Subtotal					\$22,068,055.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$2,210,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$24,478,055.00</b> ✓

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>HP</i> 10-12-01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks as follows: (Capacities from DePauli Report, Appendix H)</b>					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows: (from DePauli Report, Appendix H)</b>					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Apper		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY  
Kevin Moran & Marc DePauli

APPROVED

BY

CHECKED

DATE PREPARED  
19-Feb-2002

DATE

DATE

PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP CUTTER  
ALTERNATIVE - YEAR 2040**

ESTIMATE WORKSHEET

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2040

22-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CS\TESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	2,982,800	CY	\$2.00	\$5,965,600.00
		Excavation, rock	8140	161,100	CY	\$8.00	\$1,288,800.00
		Backfill, common	8140	2,423,000	CY	\$1.50	\$3,634,500.00
		Furnish and install pipe as follows:	8140				
		48B950	300	2,000	FT	\$380.00	\$760,000.00
		48B925	300	6,150	FT	\$380.00	\$2,337,000.00
		48B900	300	5,350	FT	\$380.00	\$2,033,000.00
		48B875	300	3,760	FT	\$380.00	\$1,428,800.00
		48B850	267	31,200	FT	\$330.00	\$10,296,000.00
		48B825	267	8,570	FT	\$330.00	\$2,828,100.00
		48B800	267	14,500	FT	\$330.00	\$4,785,000.00
		48B775	267	14,930	FT	\$330.00	\$4,926,900.00
		48B750	233	28,370	FT	\$290.00	\$8,227,300.00
		48B725	233	15,870	FT	\$290.00	\$4,602,300.00
		48B700	233	4,430	FT	\$290.00	\$1,284,700.00
		48B675	233	29,000	FT	\$290.00	\$8,410,000.00
		48B650	233	12,230	FT	\$290.00	\$3,546,700.00
		48B625	199	4,330	FT	\$250.00	\$1,082,500.00
		48B600	199	9,000	FT	\$250.00	\$2,250,000.00
		48B575	199	13,700	FT	\$250.00	\$3,425,000.00
		48B550	199	18,270	FT	\$250.00	\$4,567,500.00
		48B525	166	25,840	FT	\$210.00	\$5,426,400.00
		48B500	166	22,180	FT	\$210.00	\$4,657,800.00
		48B475	166	22,750	FT	\$210.00	\$4,777,500.00
		48B450	166	5,970	FT	\$210.00	\$1,253,700.00
		48B425	132	16,500	FT	\$170.00	\$2,805,000.00
		48B400	132	22,610	FT	\$170.00	\$3,843,700.00
		48B375	132	14,990	FT	\$170.00	\$2,548,300.00
		48B350	132	18,090	FT	\$170.00	\$3,075,300.00
		48B325	132	13,000	FT	\$170.00	\$2,210,000.00
		48B300	92	5,630	FT	\$120.00	\$675,600.00
		48B275	88	1,000	FT	\$110.00	\$110,000.00
		48B250	88	530	FT	\$110.00	\$58,300.00
		48B225	88	3,000	FT	\$110.00	\$330,000.00
		48B175	88	460	FT	\$110.00	\$50,600.00
		48B150	88	10,000	FT	\$110.00	\$1,100,000.00
		48B125	88	7,180	FT	\$110.00	\$789,800.00
		48B100	88	1,100	FT	\$110.00	\$121,000.00
		PAGE SUBTOTAL					\$111,512,700.00

QUANTITIES		PRICES	
BY	APPROVED	BY	CHECKED
Art Streifel		K. Copeland	<i>Nom Hydon 9/24/01</i>
DATE PREPARED	DATE	DATE	PRICE LEVEL
22-Sep-2001		22-Sep-2001	

ESTIMATE WORKSHEET

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2040

22-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CS\TESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		48B75	88	5,630	FT	\$110.00	\$619,300.00
		48B50	88	2,500	FT	\$110.00	\$275,000.00
		42B825	205	17,000	FT	\$260.00	\$4,420,000.00
		42B800	205	5,000	FT	\$260.00	\$1,300,000.00
		42B775	205	50	FT	\$260.00	\$13,000.00
		42B725	176	1,000	FT	\$220.00	\$220,000.00
		42B700	176	13,310	FT	\$220.00	\$2,928,200.00
		42B675	176	7,000	FT	\$220.00	\$1,540,000.00
		42B650	176	4,000	FT	\$220.00	\$880,000.00
		42B625	176	3,000	FT	\$220.00	\$660,000.00
		42B600	146	4,000	FT	\$180.00	\$720,000.00
		42B575	146	4,960	FT	\$180.00	\$892,800.00
		42B550	146	3,000	FT	\$180.00	\$540,000.00
		42B525	146	3,000	FT	\$180.00	\$540,000.00
		42B500	146	11,000	FT	\$180.00	\$1,980,000.00
		42B475	117	17,950	FT	\$150.00	\$2,692,500.00
		42B450	117	19,000	FT	\$150.00	\$2,850,000.00
		42B425	117	14,840	FT	\$150.00	\$2,226,000.00
		42B400	117	1,330	FT	\$150.00	\$199,500.00
		42B350	83	1,000	FT	\$100.00	\$100,000.00
		42B325	77	590	FT	\$100.00	\$59,000.00
		42B300	71	650	FT	\$90.00	\$58,500.00
		42B275	68	10,140	FT	\$90.00	\$912,600.00
		42B250	68	4050	FT	\$90.00	\$364,500.00
		42B225	68	3970	FT	\$90.00	\$357,300.00
		42B200	68	1000	FT	\$90.00	\$90,000.00
		42B175	68	210	FT	\$90.00	\$18,900.00
		42B25	68	1000	FT	\$90.00	\$90,000.00
		36B725	151	590	FT	\$190.00	\$112,100.00
		36B625	125	90	FT	\$160.00	\$14,400.00
		36B600	125	1500	FT	\$160.00	\$240,000.00
		36B575	125	820	FT	\$160.00	\$131,200.00
		36B525	100	16390	FT	\$130.00	\$2,130,700.00
		36B500	100	15000	FT	\$130.00	\$1,950,000.00
		36B475	100	40230	FT	\$130.00	\$5,229,900.00
		36B450	100	53240	FT	\$130.00	\$6,921,200.00
		36B425	75	4720	FT	\$90.00	\$424,800.00
		36B400	69	2870	FT	\$90.00	\$258,300.00
		36B375	65	4000	FT	\$80.00	\$320,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$45,279,700.00</b>

QUANTITIES		PRICES	
BY	APPROVED	BY	CHECKED
Art Streifel		K. Copeland	<i>Nom Hyndman 9/24/01</i>
DATE PREPARED	DATE	DATE	PRICE LEVEL
22-Sep-2001		22-Sep-2001	

ESTIMATE WORKSHEET

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2040

22-Sep-2001 PROJECT:

NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		36B350	61	52,620	FT	\$80.00	\$4,209,600.00
		36B325	56	4,930	FT	\$70.00	\$345,100.00
		36B275	50	640	FT	\$60.00	\$38,400.00
		36B250	50	9,790	FT	\$60.00	\$587,400.00
		36B200	50	1,330	FT	\$60.00	\$79,800.00
		36B175	50	46,460	FT	\$60.00	\$2,787,600.00
		36B150	50	9,000	FT	\$60.00	\$540,000.00
		36B125	50	250	FT	\$60.00	\$15,000.00
		36B50	50	23,000	FT	\$60.00	\$1,380,000.00
		30B475	58	1,000	FT	\$70.00	\$70,000.00
		30B450	55	13,460	FT	\$70.00	\$942,200.00
		30B425	52	1,000	FT	\$70.00	\$70,000.00
		30B400	49	16,930	FT	\$60.00	\$1,015,800.00
		30B375	46	24,410	FT	\$60.00	\$1,464,600.00
		30B350	43	4,880	FT	\$50.00	\$244,000.00
		30B325	39	15,780	FT	\$50.00	\$789,000.00
		30B300	36	14,190	FT	\$50.00	\$709,500.00
		30B275	35	6,740	FT	\$40.00	\$269,600.00
		30B250	35	18,050	FT	\$40.00	\$722,000.00
		30B225	35	18,510	FT	\$40.00	\$740,400.00
		30B200	35	12,420	FT	\$40.00	\$496,800.00
		30B175	35	6,480	FT	\$40.00	\$259,200.00
		30B150	35	520	FT	\$40.00	\$20,800.00
		30B125	35	1,380	FT	\$40.00	\$55,200.00
		30B75	35	3,640	FT	\$40.00	\$145,600.00
		30B50	35	17,130	FT	\$40.00	\$685,200.00
		30B25	35	3,590	FT	\$40.00	\$143,600.00
		24B925	85	330	FT	\$128.00	\$42,240.00
		24B900	85	2,500	FT	\$128.00	\$320,000.00
		24B875	85	850	FT	\$128.00	\$108,800.00
		24B750	68	13,830	FT	\$102.00	\$1,410,660.00
		24B725	68	24,950	FT	\$102.00	\$2,544,900.00
		24B700	68	17,200	FT	\$102.00	\$1,754,400.00
		24B675	68	830	FT	\$102.00	\$84,660.00
		24B650	68	15,150	FT	\$102.00	\$1,545,300.00
		24B625	51	5,020	FT	\$77.00	\$386,540.00
		24B600	48	15,000	FT	\$72.00	\$1,080,000.00
		24B575	46	14,800	FT	\$69.00	\$1,021,200.00
		24B550	44	20,690	FT	\$66.00	\$1,365,540.00
		<b>PAGE SUBTOTAL</b>					<b>\$30,490,640.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hydman 9/24/01</i>
DATE PREPARED 22-Sep-2001	DATE	DATE 22-Sep-2001	PRICE LEVEL

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2040

22-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CS\TESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		24B525	42	8,390	FT	\$63.00	\$528,570.00
		24B500	40	10,710	FT	\$60.00	\$642,600.00
		24B475	38	7,660	FT	\$57.00	\$436,620.00
		24B450	36	15,120	FT	\$54.00	\$816,480.00
		24B425	34	21,130	FT	\$51.00	\$1,077,630.00
		24B400	32	15,820	FT	\$48.00	\$759,360.00
		24B375	30	66,130	FT	\$45.00	\$2,975,850.00
		24B350	28	22,330	FT	\$42.00	\$937,860.00
		24B325	26	13,800	FT	\$39.00	\$538,200.00
		24B300	24	5,210	FT	\$36.00	\$187,560.00
		24B275	22	24,010	FT	\$33.00	\$792,330.00
		24B250	22	18,110	FT	\$33.00	\$597,630.00
		24B225	22	20,840	FT	\$33.00	\$687,720.00
		24B200	22	1,000	FT	\$33.00	\$33,000.00
		24B175	22	15,790	FT	\$33.00	\$521,070.00
		24B150	22	3,630	FT	\$33.00	\$119,790.00
		24B125	22	1,880	FT	\$33.00	\$62,040.00
		24B100	22	12,000	FT	\$33.00	\$396,000.00
		24B75	22	5,120	FT	\$33.00	\$168,960.00
		24B50	22	6,220	FT	\$33.00	\$205,260.00
		<b>PAGE SUBTOTAL</b>					<b>\$12,484,530.00</b>

BY Art Streifel DATE PREPARED 22-Sep-2001		APPROVED  DATE	BY K. Copeland DATE 22-Sep-2001		CHECKED <i>Norm Hyndson 9/24/01</i> PRICE LEVEL
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FEATURE:  
NIIP CUTTER ALTERNATIVE - 2040

22-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CS\TESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		67.51 cfs, 265 ft. head, 7+1 units/plant		1	EA	\$2,100,000.00	\$2,100,000.00
		67.51 cfs, 364 ft. head, 7+1 units/plant		1	EA	\$2,630,000.00	\$2,630,000.00
		67.51 cfs, 441 ft. head, 7+1 units/plant		1	EA	\$3,090,000.00	\$3,090,000.00
		38.39 cfs, 311 ft. head, 4+1 units/plant		1	EA	\$1,370,000.00	\$1,370,000.00
		36.51 cfs, 371 ft. head, 4+1 units/plant		1	EA	\$1,480,000.00	\$1,480,000.00
		12.49 cfs, 349 ft. head, 2+1 units/plant		1	EA	\$570,000.00	\$570,000.00
		4.44 cfs, 164 ft. head, 1+1 units/plant		1	EA	\$180,000.00	\$180,000.00
		14.71 cfs, 261 ft. head, 2+1 units/plant		1	EA	\$540,000.00	\$540,000.00
		8.34 cfs, 273 ft. head, 1+1 units/plant		1	EA	\$340,000.00	\$340,000.00
		11.51 cfs, 275 ft. head, 2+1 units/plant		1	EA	\$460,000.00	\$460,000.00
		6.79 cfs, 275 ft. head, 1+1 units/plant		1	EA	\$300,000.00	\$300,000.00
				11			
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Sanostee (2.00 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$230,000.00	\$230,000.00
		Newcomb (1.52 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$200,000.00	\$200,000.00
		Sheepsprings (0.70 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Naschitti (1.55 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Tohatchi (1.99 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Twin Lakes (1.88 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Rock Springs (3.19 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$150,000.00	\$150,000.00
		Window Rock (11.51 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$345,000.00	\$345,000.00
		Coyote Canyon (1.24 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Standing Rock (0.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Dalton Pass (3.06 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$150,000.00	\$150,000.00
		Huerfano (0.50 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Nageezi (1.05 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Counselor (2.62 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$140,000.00	\$140,000.00
		Torreon (2.01 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		<b>Furnish and install air chambers</b>	8140				
		(20 ft. Dia. Sphere, 11 total, 1 at each pmp. plt.)		11	EA	\$100,000.00	\$1,100,000.00
		<b>Furnish and install water regulating tanks,</b>					
		<b>as follows:</b>					
		198,083 gallons, 40 ft. Dia. X 21 ft. Height		1	EA	\$160,000.00	\$160,000.00
		143,881 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		102,858 gallons, 40 ft. Dia. X 11 ft. Height		1	EA	\$135,000.00	\$135,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		<b>PAGE SUBTOTAL</b>					\$16,855,000.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nom Hydeman 9/24/01</i>
DATE PREPARED 22-Sep-2001	DATE	DATE 22-Sep-2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
NIIP CUTTER ALTERNATIVE - 2040

22-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water forebay tanks, as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 11 tanks		11	EA	\$55,000.00	\$605,000.00
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Tohatchi (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Twin Lakes (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Rock Springs (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Window Rock (20 ft. H X 500 ft. Dia.)		1	EA	\$9,910,000.00	\$9,910,000.00
		Coyote Canyon (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Standing Rock (20 ft. H X 60 ft. Dia.)		1	EA	\$240,000.00	\$240,000.00
		Dalton Pass (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Naschitti (20 ft. H X 190 ft. Dia.)		1	EA	\$1,680,000.00	\$1,680,000.00
		Sheepsprings (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Newcomb (20ft. H X 180 ft. Dia.)		1	EA	\$1,600,000.00	\$1,600,000.00
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Huerfano (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Nageezi (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Counselor (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Torreon (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
<b>PAGE SUBTOTAL</b>							<b>\$34,445,000.00</b>

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norman H. Lynchman</i> 9/24/01
DATE PREPARED 22-Sep-2001	DATE	DATE 22-Sep-2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**  
**NIIP CUTTER ALTERNATIVE - 2040**

**22-Sep-2001 PROJECT:**

**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Manuelito (20 ft. H X 120 ft. Dia.)		1	EA	\$790,000.00	\$790,000.00
		Red Rock, Breadsprings, Chichiltah (20 ft. H X 290 ft. Dia.)		1	EA	\$3,720,000.00	\$3,720,000.00
		Iyanbito (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Church Rock (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Pinedale, Mariano Lake (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		0.61 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		3.93 cfs, 162 ft. head, 4+1 units/plant		1	EA	\$180,000.00	\$180,000.00
		0.79 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		1.73 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$120,000.00	\$120,000.00
		1.30 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$110,000.00	\$110,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$9,300,000.00</b>
		<b>TOTAL FOR ALL PAGES</b>					<b>\$260,367,570.00</b>

QUANTITIES		PRICES	
BY	APPROVED	BY	CHECKED
Art Streifel		K. Copeland	<i>Nam Hydrom 9/24/01</i>
DATE PREPARED	DATE	DATE	PRICE LEVEL
22-Sep-2001		22-Sep-2001	

PLANT ACCT.		PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
WOID: DUR30			PROJECT: Navajo-Gallup Water Supply					
			DIVISION / REGION: UC - New Mexico					
			CONTRACT/SPEC:					
			FILE: J:\WKSHTS\CY2001\GALLUP2.WK4					
			09:27 AM					
			<b>D-8440</b>					
1			Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire		99	wmile	\$100,600.00	\$9,959,400.00
			Per mile calculations:					
			Conductor: 336 kcmil ACSR	3/c	15,840	ft	\$2.40	
			OHG: 1/2" HSS	1/grd	5,280	ft	\$1.00	
			OPGW: 24 fiber	1/op-grd	5,280	ft	\$4.00	
			Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky	includes ins	7.54	strut/mi	\$4,800.00	
			Two pole wood structures about 55-65 feet tall, about 700 foot spans	Unit cost			\$100,608.00	
2			Electrical equipment at each plant, including engine-generator w/full plant capacity and unit at Treatment Plant		11	ea	\$35,000.00	\$385,000.00
3			Electrical equipment at each turnout		20	ea	\$5,000.00	\$100,000.00
4			SCADA equipment including controller					
			Each plant		11	ea	\$5,000.00	\$55,000.00
			Each turnout		20	ea	\$5,000.00	\$100,000.00
5			New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
6			Communication equipment:					
			Each plant		11	ea	\$20,000.00	\$220,000.00
			Each turnout		20	ea	\$20,000.00	\$400,000.00
7			Security system equipment at each plant		11	ea	\$5,000.00	\$55,000.00
8			<b>Substation</b>		1	LS	\$1,000,000.00	\$1,000,000.00
			Tap structure, switch, circuit breaker, transformer					
9			Power tap-poles, transformer					
			Each plant		11	ea	\$60,000.00	\$660,000.00
			Each turnout		20	ea	\$60,000.00	\$1,200,000.00
10			Additional monitoring equipment at Cutter treatment plant- transducers, etc.		1	LS	\$10,000.00	\$10,000.00
			<b>SUBTOTAL</b>					<b>\$14,444,400.00</b>

QUANTITIES		PRICES	
BY	D-8440 Lisa Gamuciello	APPROVED	BY D-8170 L. Pedde
DATE PREPARED	07-Sep-2001	DATE	09-Oct-2001
		CHECKED	RKC 10/15/01
		PRICE LEVEL	

**FEATURE:**  
 NIIP Alternatives  
 Moncisco Dam, Coury Lateral & Cutter Dam  
 2020 Demand (26.25 MGD)  
 Quantities for tanks, building and process ponds for  
 2040 demand. All other quantities for 2020 demand  
 Includes Jicarilla Apache Nation Demand

12-Oct-2001

**PROJECT:**  
 Navajo Gallup WSP

**DIVISION:**

**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\NIIP-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2,700 square foot mezzanine.	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		Hollow Fiber UF Water Treatment System		27,640,000	GPD	\$0.46	\$12,714,400.00
3		Concrete Reinforced tanks for UF System		1047	CY	\$400.00	\$418,800.00
4		Concrete for Flocculation tank		310	CY	\$400.00	\$124,000.00
5		Concrete for splitter box		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		10800	CY	\$10.00	\$108,000.00
9		Reinforced Concrete for Clearwell		1162	CY	\$400.00	\$464,800.00
10		Backfill after Clearwell Construction		6327	CY	\$15.00	\$94,905.00
11		Excavation for wastewater polishing ponds		8850	CY	\$8.00	\$70,800.00
12		Mixers for Clearwell		6	EA	\$15,000.00	\$90,000.00
13		Sediment Drying beds Sand for Wastewater Polishing Ponds		125	CY	\$20.00	\$2,500.00
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eaves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		35,500.00 35,500.00	SF SF	\$0.50 \$0.20	\$17,750 \$7,100
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$5,100,000.00
		Subtotal					\$22,068,055.00
		Unlisted 10% (for DBP Treatment Systems at service points)					\$2,210,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$24,478,055.00</b>

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>AP</i> 10-12-01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

**FEATURE:**  
 NIIP Alternatives  
 Moncisco Dam, Coury Lateral & Cutter Dam  
 Additional treatment units to  
 to upgrade the plant by 15.99 MGD for a  
 total Production Rate of 43.63 MGD  
 Includes Jicarilla Apache Nation Demand

11-Oct-2001

**PROJECT:**

**DIVISION:**

**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-IUNIP-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		ZeeWeed Water Treatment System		15,990,000	MGD	\$0.46	\$7,355,400 ✓
2		Ultraviolet Disinfection Units		2	EA	\$100,000	\$200,000 ✓
		Unlisted 5%					\$378,000.00 ✓
<b>TOTAL</b>							<b>\$7,933,400.00</b> ✓

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard		BY K. Copeland	CHECKED <i>[Signature]</i> 10/11/01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 11-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks as follows: (Capacities from DePauli Report, Appendix H)</b>					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Appen		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY  
Kevin Moran & Marc DePauli  
DATE PREPARED  
19-Feb-2002

APPROVED  
DATE

BY  
DATE

CHECKED  
PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP AMARILLO  
ALTERNATIVE - YEAR 2020**

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks as follows: (Capacities from DePauli Report, Appendix H)</b>					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Appen		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY  
Kevin Moran & Marc DePauli  
DATE PREPARED  
19-Feb-2002

APPROVED  
DATE

BY  
DATE

CHECKED  
PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP AMARILLO  
ALTERNATIVE - YEAR 2020**

FEATURE:  
NIIP AMARILLO 2020 ALTERNATIVE

06-Dec-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	1,287,700	CY	\$2.00	\$2,575,400.00
		Excavation, rock	8140	85,900	CY	\$8.00	\$687,200.00
		Backfill, common	8140	1,312,700	CY	\$1.50	\$1,969,050.00
		Furnish and install pipe as follows:	8140				
	48B800		267	17,000	FT	\$330.00	\$5,610,000.00
	48B775		267	1,560	FT	\$330.00	\$514,800.00
	48B750		233	16,620	FT	\$290.00	\$4,819,800.00
	48B725		233	6,170	FT	\$290.00	\$1,789,300.00
	48B700		233	8,530	FT	\$290.00	\$2,473,700.00
	48B675		233	3,090	FT	\$290.00	\$896,100.00
	48B650		233	4,360	FT	\$290.00	\$1,264,400.00
	48B625		199	2,300	FT	\$250.00	\$575,000.00
	48B600		199	13,000	FT	\$250.00	\$3,250,000.00
	48B575		199	910	FT	\$250.00	\$227,500.00
	48B550		199	3,840	FT	\$250.00	\$960,000.00
	48B525		166	1,000	FT	\$210.00	\$210,000.00
	48B500		166	2,680	FT	\$210.00	\$562,800.00
	48B475		166	35,000	FT	\$210.00	\$7,350,000.00
	48B450		166	19,220	FT	\$210.00	\$4,036,200.00
	48B400		132	480	FT	\$170.00	\$81,600.00
	48B375		132	1,000	FT	\$170.00	\$170,000.00
	48B350		132	13,000	FT	\$170.00	\$2,210,000.00
	48B325		132	41,980	FT	\$170.00	\$7,136,600.00
	48B300		92	29,000	FT	\$120.00	\$3,480,000.00
	48B275		88	11,850	FT	\$110.00	\$1,303,500.00
	48B250		88	5,000	FT	\$110.00	\$550,000.00
	48B225		88	1,000	FT	\$110.00	\$110,000.00
	48B200		88	550	FT	\$110.00	\$60,500.00
	48B175		88	4,000	FT	\$110.00	\$440,000.00
	48B125		88	3,790	FT	\$110.00	\$416,900.00
	48B75		88	550	FT	\$110.00	\$60,500.00
	48B50		88	1,000	FT	\$110.00	\$110,000.00
	48B25		88	2,960	FT	\$110.00	\$325,600.00
	45B350		124	2,000	FT	\$160.00	\$320,000.00
	45B325		88	7,000	FT	\$110.00	\$770,000.00
	45B300		81	6,000	FT	\$100.00	\$600,000.00
	45B275		77	6,000	FT	\$100.00	\$600,000.00
	<b>Subtotal page</b>						<b>\$58,516,450.00</b>

QUANTITIES

PRICES

BY Art Streifel  
DATE PREPARED 11/20/2001

APPROVED  
DATE

BY K. Copeland  
DATE 12/06/2001

CHECKED [Signature] 12/7/2001  
PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
NIIP AMARILLO 2020 ALTERNATIVE

06-Dec-2001 PROJECT:

NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Furnish and install pipe as follows:	8140				
		45B250	77	6,000	FT	\$100.00	\$600,000.00
		45B225	77	1,000	FT	\$100.00	\$100,000.00
		45B25	77	790	FT	\$100.00	\$79,000.00
		42B275	68	6,000	FT	\$90.00	\$540,000.00
		42B200	68	32,000	FT	\$90.00	\$2,880,000.00
		42B175	68	11,000	FT	\$90.00	\$990,000.00
		42B150	68	4,000	FT	\$90.00	\$360,000.00
		42B75	68	28,000	FT	\$90.00	\$2,520,000.00
		42B50	68	29,000	FT	\$90.00	\$2,610,000.00
		42B25	68	2,920	FT	\$90.00	\$262,800.00
		36B400	69	7,000	FT	\$90.00	\$630,000.00
		36B375	65	17,000	FT	\$80.00	\$1,360,000.00
		36B350	61	16,000	FT	\$80.00	\$1,280,000.00
		36B275	50	2,000	FT	\$60.00	\$120,000.00
		36B250	50	15,000	FT	\$60.00	\$900,000.00
		36B225	50	17,000	FT	\$60.00	\$1,020,000.00
		36B175	50	12,000	FT	\$60.00	\$720,000.00
		36B150	50	5,000	FT	\$60.00	\$300,000.00
		36B75	50	1,000	FT	\$60.00	\$60,000.00
		36B50	50	5,000	FT	\$60.00	\$300,000.00
		36B25	50	3,550	FT	\$60.00	\$213,000.00
		30B425	52	7,000	FT	\$70.00	\$490,000.00
		30B350	43	3,000	FT	\$50.00	\$150,000.00
		30B300	36	2,000	FT	\$50.00	\$100,000.00
		30B250	35	2,000	FT	\$40.00	\$80,000.00
		30B200	35	3,000	FT	\$40.00	\$120,000.00
		30B125	35	1,000	FT	\$40.00	\$40,000.00
		30B100	35	3,000	FT	\$40.00	\$120,000.00
		30B50	35	1,000	FT	\$40.00	\$40,000.00
		30B25	35	6,790	FT	\$40.00	\$271,600.00
		20B350	19	2,000	FT	\$29.00	\$58,000.00
		20B325	18	1,000	FT	\$27.00	\$27,000.00
		20B225	17	10,000	FT	\$26.00	\$260,000.00
		20B200	17	3,000	FT	\$26.00	\$78,000.00
		20B175	17	11,000	FT	\$26.00	\$286,000.00
		20B150	17	1,000	FT	\$26.00	\$26,000.00
		20B25	17	1,440	FT	\$26.00	\$37,440.00

Subtotal page

\$20,028,840.00

QUANTITIES

PRICES

BY  
Art Streifel  
DATE PREPARED  
11/20/2001

APPROVED  
DATE

BY  
K. Copeland  
DATE  
12/06/2001

CHECKED  
PRICE LEVEL

12/7/2001

ESTIMATE WORKSHEET

FEATURE:  
NIIP AMARILLO 2020 ALTERNATIVE

06-Dec-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Furnish and install pipe as follows:	8140				
		18B350	16	5,000	FT	\$24.00	\$120,000.00
		18B325	15	30,000	FT	\$23.00	\$690,000.00
		18B300	15	37,000	FT	\$23.00	\$851,000.00
		18B275	15	41,000	FT	\$23.00	\$943,000.00
		18B250	15	4,000	FT	\$23.00	\$92,000.00
		18B225	15	15,000	FT	\$23.00	\$345,000.00
		18B200	15	9,000	FT	\$23.00	\$207,000.00
		18B175	15	1,000	FT	\$23.00	\$23,000.00
		18B75	15	1,000	FT	\$23.00	\$23,000.00
		18B50	15	16,000	FT	\$23.00	\$368,000.00
		18B25	15	27,510	FT	\$23.00	\$632,730.00
		10B800	12	590	FT	\$18.00	\$10,620.00
		10B650	9	90	FT	\$14.00	\$1,260.00
		10B625	9	190	FT	\$14.00	\$2,660.00
		10B575	9	16,000	FT	\$14.00	\$224,000.00
		10B475	9	34,000	FT	\$14.00	\$476,000.00
		12B400	10	11,000	FT	\$15.00	\$165,000.00
		12B375	10	8,000	FT	\$15.00	\$120,000.00
		12B175	10	4,000	FT	\$15.00	\$60,000.00
		12B150	10	4,000	FT	\$15.00	\$60,000.00
		12B25	10	700	FT	\$15.00	\$10,500.00

Subtotal page

QUANTITIES

PRICES

\$5,424,770.00 ✓

BY  
Art Streifel  
DATE PREPARED  
11/20/2001

APPROVED  
DATE

BY  
K. Copeland  
DATE  
12/06/2001

CHECKED  
PRICE LEVEL

12/7/2001

FEATURE:  
NIIP AMARILLO 2020 ALTERNATIVE

06-Dec-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		36.97 cfs,100 ft. head, 4+1 units/plant		1	EA	\$930,000.00	\$930,000.00
		33.19 cfs,251 ft. head, 4+1 units/plant		1	EA	\$1,060,000.00	\$1,060,000.00
		32.77 cfs,199 ft. head, 4+1 units/plant		1	EA	\$920,000.00	\$920,000.00
		31.88 cfs,372 ft. head, 4+1 units/plant		1	EA	\$1,330,000.00	\$1,330,000.00
		27.78 cfs,241 ft. head, 3+1 units/plant		1	EA	\$870,000.00	\$870,000.00
		26.67 cfs,411 ft. head, 3+1 units/plant		1	EA	\$1,210,000.00	\$1,210,000.00
		8.2 cfs,316 ft. head, 1+1 units/plant		1	EA	\$370,000.00	\$370,000.00
		6.27 cfs,305 ft. head, 1+1 units/plant		1	EA	\$300,000.00	\$300,000.00
		2.94 cfs,178 ft. head, 1+1 units/plant		1	EA	\$150,000.00	\$150,000.00
		2.20 cfs,261 ft. head, 1+1 units/plant		1	EA	\$150,000.00	\$150,000.00
		2.13 cfs,386 ft. head, 1+1 units/plant		1	EA	\$180,000.00	\$180,000.00
				11			
		<b>Furnish and install air chambers</b>	8140	11	EA	\$100,000.00	\$1,100,000.00
		<b>Furnish and install water regulating tanks, as follows:</b>					
		144,708 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		125,343 gallons, 40 ft. Dia. X 13 ft. Height		1	EA	\$140,000.00	\$140,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
				4			
		<b>Furnish and install water forebay tanks, as follows:</b>					
		60,000 gallons, 8 ft. Dia. X 40 ft. Height		11	EA	\$55,000.00	\$605,000.00
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Sanostee (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Newcomb (20ft. H X 140 ft. Dia.)		1	EA	\$1,040,000.00	\$1,040,000.00
		Sheepsprings ( 20 ft. H X 100 ft. Dia.)		1	EA	\$600,000.00	\$600,000.00
		Naschitti (20 ft. H X 140 ft. Dia.)		1	EA	\$1,040,000.00	\$1,040,000.00
		Tohatchi (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Twin Lakes (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Rock Springs (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Window Rock (20 ft. H X 370 ft. Dia.)		1	EA	\$5,780,000.00	\$5,780,000.00
		Coyote Canyon (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Standing Rock (20 ft. H X 40 ft. Dia.)		1	EA	\$130,000.00	\$130,000.00
		Dalton Pass (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		<b>Subtotal page</b>					\$27,040,000.00
		<b>TOTAL</b>					\$111,010,060.00

QUANTITIES

PRICES

BY  
Art Streifel  
DATE PREPARED  
11/20/2001

APPROVED  
DATE

BY  
K. Copeland  
DATE  
12/06/2001

CHECKED  
PRICE LEVEL

12/7/2001

FEATURE: 26-Sep-2001  
 CUTTER 2020 DIVERSION ALTERNATIVE  
 with Jicarilla Apache

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	442,900	CY	\$2.00	\$885,800.00
		Excavation, rock	8140	12,800	CY	\$8.00	\$102,400.00
		Backfill, common	8140	417,400	CY	\$1.50	\$626,100.00
		Furnish and install pipe as follows:	8140				
		20B650	36	1,000	FT	\$54.00	\$54,000.00
		20B625	35	740	FT	\$53.00	\$39,220.00
		20B600	33	1,000	FT	\$50.00	\$50,000.00
		20B575	32	2,960	FT	\$48.00	\$142,080.00
		20B550	30	2,540	FT	\$45.00	\$114,300.00
		20B525	29	5,340	FT	\$44.00	\$234,960.00
		20B500	28	2,750	FT	\$42.00	\$115,500.00
		20B475	26	13,990	FT	\$39.00	\$545,610.00
		20B450	25	7,060	FT	\$38.00	\$268,280.00
		20B425	23	6,480	FT	\$35.00	\$226,800.00
		20B400	22	7,000	FT	\$33.00	\$231,000.00
		20B375	21	7,430	FT	\$32.00	\$237,760.00
		20B350	19	19,390	FT	\$29.00	\$562,310.00
		20B325	18	11,590	FT	\$27.00	\$312,930.00
		20B300	17	16,100	FT	\$26.00	\$418,600.00
		20B275	17	11,970	FT	\$26.00	\$311,220.00
		20B250	17	11,630	FT	\$26.00	\$302,380.00
		20B225	17	4,700	FT	\$26.00	\$122,200.00
		20B200	17	10,370	FT	\$26.00	\$269,620.00
		20B175	17	18,270	FT	\$26.00	\$475,020.00
		20B150	17	13,730	FT	\$26.00	\$356,980.00
		20B125	17	1,020	FT	\$26.00	\$26,520.00
		20B100	17	16,670	FT	\$26.00	\$433,420.00
		20B75	17	2,910	FT	\$26.00	\$75,660.00
		20B50	17	12,200	FT	\$26.00	\$317,200.00
		18B625	28	1,000	FT	\$42.00	\$42,000.00
		18B600	27	1,000	FT	\$41.00	\$41,000.00
		18B575	26	1,000	FT	\$39.00	\$39,000.00
		18B550	25	1,000	FT	\$38.00	\$38,000.00
		18B525	24	1,000	FT	\$36.00	\$36,000.00
		18B500	23	1,000	FT	\$35.00	\$35,000.00
		18B450	20	1,000	FT	\$30.00	\$30,000.00
		18B425	19	12,070	FT	\$29.00	\$350,030.00
		PAGE SUBTOTAL					\$8,468,900.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hayden 9/26/01</i>
DATE PREPARED 26-Sep-2001	DATE	DATE 09/26/2001	PRICE LEVEL

FEATURE: 25-Sep-2001 PROJECT:  
 CUTTER 2020 DIVERSION ALTERNATIVE NAVAJO - GALLUP WATER SUPPLY PROJECT  
 with Jicarilla Apache

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Furnish and install pipe as follows:	8140				
		18B400	18	10,000	FT	\$27.00	\$270,000.00
		18B375	17	1,000	FT	\$26.00	\$26,000.00
		18B350	16	1,000	FT	\$24.00	\$24,000.00
		18B325	15	1,000	FT	\$23.00	\$23,000.00
		18B300	15	1,000	FT	\$23.00	\$23,000.00
		18B275	15	1,000	FT	\$23.00	\$23,000.00
		14B600	17	120	FT	\$26.00	\$3,120.00
		14B475	13	4,000	FT	\$20.00	\$80,000.00
		14B425	12	1,890	FT	\$18.00	\$34,020.00
		14B400	12	650	FT	\$18.00	\$11,700.00
		14B325	12	9,000	FT	\$18.00	\$162,000.00
		14B300	12	6,230	FT	\$18.00	\$112,140.00
		14B275	12	3,760	FT	\$18.00	\$67,680.00
		14B250	12	3,000	FT	\$18.00	\$54,000.00
		14B225	12	1,810	FT	\$18.00	\$32,580.00
		14B200	12	1,000	FT	\$18.00	\$18,000.00
		14B175	12	2,000	FT	\$18.00	\$36,000.00
		14B100	12	3,000	FT	\$18.00	\$54,000.00
		14B75	12	1,450	FT	\$18.00	\$26,100.00
		14B50	12	10,060	FT	\$18.00	\$181,080.00
		14B25	12	5,000	FT	\$18.00	\$90,000.00
		12B525	11	2,120	FT	\$17.00	\$36,040.00
		12B500	10	640	FT	\$15.00	\$9,600.00
		12B475	10	1,670	FT	\$15.00	\$25,050.00
		12B425	10	5,330	FT	\$15.00	\$79,950.00
		12B400	10	6,550	FT	\$15.00	\$98,250.00
		12B375	10	6,790	FT	\$15.00	\$101,850.00
		12B350	10	3,150	FT	\$15.00	\$47,250.00
		12B325	10	17,160	FT	\$15.00	\$257,400.00
		12B300	10	1,010	FT	\$15.00	\$15,150.00
		12B275	10	1,840	FT	\$15.00	\$27,600.00
		12B250	10	4,370	FT	\$15.00	\$65,550.00
		12B225	10	2,140	FT	\$15.00	\$32,100.00
		12B200	10	6,190	FT	\$15.00	\$92,850.00
		12B175	10	9,970	FT	\$15.00	\$149,550.00
		12B150	10	3,000	FT	\$15.00	\$45,000.00
		12B125	10	2,180	FT	\$15.00	\$32,700.00
		12B100	10	4,790	FT	\$15.00	\$71,850.00
		12B75	10	3,000	FT	\$15.00	\$45,000.00
		PAGE SUBTOTAL					\$2,584,160.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hyalra 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

<b>FEATURE:</b> <b>CUTTER 2020 DIVERSION ALTERNATIVE</b> with Jicarilla Apache	25-Sep-2001	<b>PROJECT:</b> NAVAJO - GALLUP WATER SUPPLY PROJECT
		<b>DIVISION:</b>
		<b>UNIT:</b>
H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4		

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		12B50	10	1,850	FT	\$15.00	\$27,750.00
		12B25	10	4,000	FT	\$15.00	\$60,000.00
		8B525	7	1,020	FT	\$11.00	\$11,220.00
		8B475	7	2,080	FT	\$11.00	\$22,880.00
		8B425	7	890	FT	\$11.00	\$9,790.00
		8B400	7	9,900	FT	\$11.00	\$108,900.00
		8B375	7	2,260	FT	\$11.00	\$24,860.00
		8B350	7	10,000	FT	\$11.00	\$110,000.00
		8B325	7	15,000	FT	\$11.00	\$165,000.00
		8B300	7	8,000	FT	\$11.00	\$88,000.00
		8B275	7	3,730	FT	\$11.00	\$41,030.00
		8B250	7	7,000	FT	\$11.00	\$77,000.00
		8B225	7	6,000	FT	\$11.00	\$66,000.00
		8B200	7	4,000	FT	\$11.00	\$44,000.00
		8B150	7	6,000	FT	\$11.00	\$66,000.00
		8B125	7	5,580	FT	\$11.00	\$61,380.00
		8B100	7	4,000	FT	\$11.00	\$44,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		5.78 cfs, 302 ft. head, 1+1 units/plant		1	EA	\$280,000.00	\$280,000.00
		5.78 cfs, 407 ft. head, 1+1 units/plant		1	EA	\$340,000.00	\$340,000.00
		5.78 cfs, 500 ft. head, 1+1 units/plant		1	EA	\$400,000.00	\$400,000.00
		5.52 cfs, 286 ft. head, 1+1 units/plant		1	EA	\$270,000.00	\$270,000.00
		4.90 cfs, 453 ft. head, 1+1 units/plant		1	EA	\$320,000.00	\$320,000.00
		2.75 cfs, 357 ft. head, 1+1 units/plant		1	EA	\$200,000.00	\$200,000.00
				6			
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 6 total, 1 at each pmp. plt.)	8140	6	EA	\$100,000.00	\$600,000.00
		<b>Furnish and install water regulating tanks,</b> <b>as follows:</b>	8140				
		84,602 gallons, 40 ft. Dia. X 9 ft. Height, 2 tanks		2	EA	\$130,000.00	\$260,000.00
		<b>Furnish and install water forebay tanks,</b> <b>as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 6 tanks		6	EA	\$55,000.00	\$330,000.00
		<b>PAGE SUBTOTAL</b>					\$4,027,810.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nora Hydolona 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL



FEATURE: NAVAJO GALLUP WATER SUPPLY  
 APPRAISAL-GRADE ESTIMATE  
 SJR PNM Alternative

PROJECT: Navajo-Gallup Water Supply  
 DIVISION / REGION: UC - New Mexico  
 CONTRACT/SPEC:  
 FILE: J\WKSHTS\CY2001\GALLUP2.WK4

WOID: DUR30

PLANT ACCT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
			<b>D-8440</b>				
	1	Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire		107	wmile	\$100,600.00	\$10,764,200.00
		Conductor: 336 kcmil ACSR	3/c	15,840	ft	\$2.40	
		OHG: 1/2" HSS	1/grd	5,280	ft	\$1.00	
		OPGW: 24 fiber	1/op-grd	5,280	ft	\$4.00	
		Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky	includes ins	7.54	strut/mi	\$4,800.00	
		Two-pole wood structures about 55-65 feet tall, about 700 foot spans	Unit cost			\$100,608.00	
	2a	Electrical equipment at each plant, including engine-generator w/full plant capacity		20	ea	\$35,000.00	\$700,000.00
	2b	Electrical equipment at each water treatment plant		2	ea	\$35,000.00	\$70,000.00
	3	Electrical equipment at each turnout		21	ea	\$5,000.00	\$105,000.00
	4	SCADA equipment including controller					
		Each plant		20	ea	\$5,000.00	\$100,000.00
		Each turnout		21	ea	\$5,000.00	\$105,000.00
	5	New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
	6	Communication equipment:					
		Each plant		20	ea	\$20,000.00	\$400,000.00
		Each turnout		21	ea	\$20,000.00	\$420,000.00
	7	Security system equipment at each plant		20	ea	\$5,000.00	\$100,000.00
	8	Substation near Huerfano		1	LS	\$1,000,000.00	\$1,000,000.00
		Tap structure, switch, circuit breaker, transformer					
	9	Power tap-poles, transformer					
		Each plant		20	ea	\$60,000.00	\$1,200,000.00
		Each turnout		21	ea	\$60,000.00	\$1,260,000.00
<b>SUBTOTAL</b>							<b>\$16,524,200.00</b>

QUANTITIES		PRICES	
BY Lisa Gamuciello D-8440	APPROVED	BY D-8170 L. Pedde	CHECKED Ricc 10/15/01
DATE PREPARED 09/07/2001	DATE	DATE 09-Oct-2001	PRICE LEVEL

<b>FEATURE:</b> 07-Dec-2001 <b>NIIP Amarillo Alternative</b> <b>2020 Demand (23.89 MGD)</b> Quantities for tanks, buildings, and process ponds for 2040 demand. All other quantities for 2020 demand	<b>PROJECT:</b> Navajo Gallup WSP <hr/> <b>DIVISION:</b> <hr/> <b>FILE:</b> H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\NIP-AMAR.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2.700 SF of Mezzanine.	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		ZeeWeed Water Treatment System		23,890,000	GPD	\$0.46	\$10,989,400.00
3		Concrete Reinforced tanks for ZeeWeed Systems		1047	CY	\$400.00	\$418,800.00
4		Concrete Flocculation tank		198	CY	\$400.00	\$79,200.00
5		Concrete for Splitter Tank		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		7700	CY	\$10.00	\$77,000.00
9		Backfill around clearwell after construction		2900	CY	\$15.00	\$43,500.00
10		Construction of Clearwell		1053	CY	\$400.00	\$421,200.00
11		Excavation for wastewater treatment ponds		8570	CY	\$8.00	\$68,560.00
12		Clear Well Mixers		6	Ea	\$15,000.00	\$90,000.00
13		Regional Operations and Maintenance Bldg. Prefab, slab on grade, 14 feet eves		2500	SF	\$110.00	\$275,000.00
14		45 mil Polypropylene Liner for wastewater ponds		34,500	SF	\$0.50	\$17,250.00
		Liner Installation		34,500	SF	\$0.20	\$6,900.00
		Unlisted 30% (Mixer for Rapid Mix Tank, chlorinators, ammoniators, misc. piping, blending studies etc.)					\$4,520,000.00
		Subtotal					\$19,586,810.00
		Unlisted 10% for DBP Treatment Systems at service points					\$1,960,000.00
		Pilot System Construction and Operation for 12 months		1	LS		\$200,000.00
		<b>TOTAL</b>					<b>\$21,746,810.00</b>

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard	CHECKED BY	BY K. Copeland	CHECKED <i>DCW</i> 12-7-01
DATE PREPARED November 20, 2001	APPROVED	DATE 07-Dec-2001	PRICE LEVEL

<b>FEATURE:</b> 12-Oct-2001 San Juan Alternative Cutter Diversion Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand Includes Jicarilla Apache Nation Demand	<b>PROJECT:</b> Navajo Gallup WSP <hr/> <b>DIVISION:</b> <hr/> <b>FILE:</b> H:\D8170\ESTSPREADSH\COPELAND\NAVAJO-1\CUT-ESTA.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building	D8230	4,600	SF	\$90.00	\$414,000
2		ZeeWeed Water Treatment System		3,740,000	GPD	\$0.70	\$2,618,000
3		Concrete Reinforced tanks for ZeeWeed Systems		110	CY	\$500	\$55,000
4		Concrete Flocculation tank		61	CY	\$500	\$30,500
5		Reinforced Concrete for Splitter Tank		20	CY	\$500	\$10,000
6		Reinforced Concrete for Rapid mix tank		20	CY	\$500	\$10,000
7		Ultraviolet Disinfection Units Model 1250		3	Ea	\$120,000	\$360,000
8		Excavation of Clearwell		1,820	CY	\$10	\$18,200
9		Backfill around clearwell after construction		1,270	CY	\$15	\$19,050
10		Reinforced concrete for clearwell		213	CY	\$500	\$106,500
11		Excavation of Wastewater Polishing Ponds		2,100	CY	\$9	\$18,900
12		Mixers for ClearWell		6	Ea	\$15,000	\$90,000
13		Sediment Drying Beds					
		Sand for Wastewater Polishing Ponds		25	CY	\$20	\$500
14		Regional Operations and Maintenance Bldg		2,500.00	SF	\$110.00	\$275,000.00
		Prefab, slab on grade with 14 feet eves					
15		45 mil Polypropylene Liner for Wastewater Ponds		11,500.00	SF	\$0.50	\$5,750
		Installation		11,500.00	SF	\$0.20	\$2,300
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc. )					\$1,210,000.00 ✓
		Subtotal					\$5,243,700.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$520,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$5,963,700.00</b> ✓

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>LP 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

# ESTIMATE WORKSHEET

## FEATURE:

4500 Acre-Foot Storage Pond  
NIIP Coury Lateral Alternative  
NIIP Amarillo Alternative

07-Dec-2001

## PROJECT:

Navajo-Gallup Water Supply Project

## DIVISION:

## FILE:

H:\D8170\EST\SPREADSH\ICOPELAND\NAVAJO~1\POND.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation	8140	6,530,000	CY	\$1.70	\$11,101,000.00
		Compacted Embankment	8140	19,700	CY	\$6.00	\$118,200.00
		Liner (40 mil PPE-R)	8140	10,080,000	SQ FT	\$0.45	\$4,536,000.00
		6" Riprap	8140	186,700	CY	\$25.00	\$4,667,500.00
		<b>TOTAL</b>					<b>\$20,422,700.00</b>

### QUANTITIES

APPROVED

DATE

BY

David Gesundheit  
DATE PREPARED  
11/29/2001

### PRICES

BY

DATE

K. Copeland

07-Dec-2001

CHECKED

PRICE LEVEL

12/7/2001

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks</b> <b>as follows: (Capacities from DePauli Report, Appendix H)</b>					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> <b>(from DePauli Report, Appendix H)</b>					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Apper		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY Kevin Moran & Marc DePauli	APPROVED	BY	CHECKED
DATE PREPARED 19-Feb-2002	DATE	DATE	PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR NIIP AMARILLO  
ALTERNATIVE - YEAR 2040**

FEATURE:

06-Dec-2001

PROJECT:

NIIP AMARILLO 2040 ALTERNATIVE

NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	1,633,800	CY	\$2.00	\$3,267,600.00
		Excavation, rock	8140	135,400	CY	\$8.00	\$1,083,200.00
		Backfill, common	8140	1,483,200	CY	\$1.50	\$2,224,800.00
		Furnish and install pipe as follows:	8140				
	48B750		233	17,000	FT	\$290.00	\$4,930,000.00
	48B725		233	1,560	FT	\$290.00	\$452,400.00
	48B700		233	17,030	FT	\$290.00	\$4,938,700.00
	48B675		233	3,800	FT	\$290.00	\$1,102,000.00
	48B650		233	4,960	FT	\$290.00	\$1,438,400.00
	48B625		199	8,620	FT	\$250.00	\$2,155,000.00
	48B600		199	1,100	FT	\$250.00	\$275,000.00
	48B575		199	4,250	FT	\$250.00	\$1,062,500.00
	48B550		199	2,210	FT	\$250.00	\$552,500.00
	48B525		166	13,000	FT	\$210.00	\$2,730,000.00
	48B500		166	3,000	FT	\$210.00	\$630,000.00
	48B475		166	1,180	FT	\$210.00	\$247,800.00
	48B450		166	6,000	FT	\$210.00	\$1,260,000.00
	48B425		132	20,910	FT	\$170.00	\$3,554,700.00
	48B400		132	1,000	FT	\$170.00	\$170,000.00
	48B375		132	27,480	FT	\$170.00	\$4,671,600.00
	48B350		132	15,650	FT	\$170.00	\$2,660,500.00
	48B300		92	9,520	FT	\$120.00	\$1,142,400.00
	48B275		88	1,850	FT	\$110.00	\$203,500.00
	48B250		88	12,000	FT	\$110.00	\$1,320,000.00
	48B225		88	4,000	FT	\$110.00	\$440,000.00
	48B200		88	1,550	FT	\$110.00	\$170,500.00
	48B175		88	3,660	FT	\$110.00	\$402,600.00
	48B150		88	52,000	FT	\$110.00	\$5,720,000.00
	48B125		88	4,790	FT	\$110.00	\$526,900.00
	48B100		88	9,820	FT	\$110.00	\$1,080,200.00
	48B75		88	2,490	FT	\$110.00	\$273,900.00
	48B50		88	1,000	FT	\$110.00	\$110,000.00
	45B500		156	1,000	FT	\$200.00	\$200,000.00
	45B475		156	1,000	FT	\$200.00	\$200,000.00
	45B425		124	9,000	FT	\$160.00	\$1,440,000.00
	45B400		124	12,000	FT	\$160.00	\$1,920,000.00

Subtotal page

QUANTITIES

\$54,556,700.00

PRICES

BY Art Streifel

APPROVED

BY

CHECKED

DATE PREPARED

DATE

DATE

K. Copeland

DUM 12/6/01

11/20/2001

PRICE LEVEL

12/06/2001

ESTIMATE WORKSHEET

FEATURE:  
NIIP AMARILLO 2040 ALTERNATIVE

06-Dec-2001 PROJECT:

NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
	45B375		124	9,000	FT	\$160.00	\$1,440,000.00
	45B350		124	1,000	FT	\$160.00	\$160,000.00
	45B300		81	1,000	FT	\$100.00	\$100,000.00
	45B225		77	16,000	FT	\$100.00	\$1,600,000.00
	45B200		77	16,000	FT	\$100.00	\$1,600,000.00
	45B175		77	16,160	FT	\$100.00	\$1,616,000.00
	45B150		77	10	FT	\$100.00	\$1,000.00
	45B125		77	460	FT	\$100.00	\$46,000.00
	45B75		77	30,910	FT	\$100.00	\$3,091,000.00
	45B50		77	28,170	FT	\$100.00	\$2,817,000.00
	42B400		117	3,000	FT	\$150.00	\$450,000.00
	42B375		117	19,000	FT	\$150.00	\$2,850,000.00
	42B350		83	7,000	FT	\$100.00	\$700,000.00
	42B250		68	11,000	FT	\$90.00	\$990,000.00
	42B225		68	21,000	FT	\$90.00	\$1,890,000.00
	42B150		68	330	FT	\$90.00	\$29,700.00
	42B25		68	650	FT	\$90.00	\$58,500.00
	39B500		109	350	FT	\$140.00	\$49,000.00
	39B450		109	4,840	FT	\$140.00	\$677,600.00
	39B425		109	3,000	FT	\$140.00	\$420,000.00
	39B375		77	590	FT	\$100.00	\$59,000.00
	39B350		72	11,000	FT	\$90.00	\$990,000.00
	39B250		58	1,050	FT	\$70.00	\$73,500.00
	39B225		58	1,000	FT	\$70.00	\$70,000.00
	39B200		58	970	FT	\$70.00	\$67,900.00
	39B175		58	12,000	FT	\$70.00	\$840,000.00
	39B150		58	5,000	FT	\$70.00	\$350,000.00
	39B125		58	210	FT	\$70.00	\$14,700.00
	39B75		58	1,140	FT	\$70.00	\$79,800.00
	39B50		58	5,600	FT	\$70.00	\$392,000.00
	30B475		58	900	FT	\$70.00	\$63,000.00
	30B400		49	50	FT	\$60.00	\$3,000.00
	30B375		46	3,000	FT	\$60.00	\$180,000.00
	30B350		43	1,120	FT	\$50.00	\$56,000.00
	30B325		39	2,440	FT	\$50.00	\$122,000.00
	30B300		36	23,890	FT	\$50.00	\$1,194,500.00
	30B275		35	3,240	FT	\$40.00	\$129,600.00
	30B225		35	2,420	FT	\$40.00	\$96,800.00
	<b>Subtotal page</b>						<b>\$25,367,600.00</b>

QUANTITIES

PRICES

BY Art Streifel  
DATE PREPARED 11/20/2001

APPROVED  
DATE

BY K. Copeland  
DATE 12/06/2001

CHECKED *DCM* 12/6/01  
PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
NIIP AMARILLO 2040 ALTERNATIVE

06-Dec-2001 PROJECT:

NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CESTSTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
	30B200		35	15,050	FT	\$40.00	\$602,000.00
	30B175		35	9,480	FT	\$40.00	\$379,200.00
	30B150		35	4,000	FT	\$40.00	\$160,000.00
	30B125		35	5,260	FT	\$40.00	\$210,400.00
	30B100		35	2,000	FT	\$40.00	\$80,000.00
	30B75		35	710	FT	\$40.00	\$28,400.00
	30B50		35	3,600	FT	\$40.00	\$144,000.00
	30B25		35	1,410	FT	\$40.00	\$56,400.00
	24B375		30	1,740	FT	\$45.00	\$78,300.00
	24B300		24	31,560	FT	\$36.00	\$1,136,160.00
	24B275		22	3,000	FT	\$33.00	\$99,000.00
	24B250		22	2,050	FT	\$33.00	\$67,650.00
	24B225		22	4,380	FT	\$33.00	\$144,540.00
	24B9375		22	9,380	FT	\$33.00	\$309,540.00
	24B150		22	380	FT	\$33.00	\$12,540.00
	24B50		22	3,540	FT	\$33.00	\$116,820.00
	24B25		22	10,340	FT	\$33.00	\$341,220.00
	21B325		20	1,530	FT	\$30.00	\$45,900.00
	21B300		18	26,000	FT	\$27.00	\$702,000.00
	21B275		17	32,470	FT	\$26.00	\$844,220.00
	21B200		17	8,570	FT	\$26.00	\$222,820.00
	21B175		17	1,150	FT	\$26.00	\$29,900.00
	21B100		17	590	FT	\$26.00	\$15,340.00
	21B50		17	6,000	FT	\$26.00	\$156,000.00
	21B25		17	5,000	FT	\$26.00	\$130,000.00
	16B525		19	190	FT	\$29.00	\$5,510.00
	16B500		18	590	FT	\$27.00	\$15,930.00
	16B475		17	90	FT	\$26.00	\$2,340.00
	16B375		13	50,000	FT	\$20.00	\$1,000,000.00
	15B425		13	6,000	FT	\$20.00	\$120,000.00
	15B400		13	9,000	FT	\$20.00	\$180,000.00
	15B375		13	4,000	FT	\$20.00	\$80,000.00
	15B250		13	7,000	FT	\$20.00	\$140,000.00
	15B225		13	3,000	FT	\$20.00	\$60,000.00
	15B175		13	5,320	FT	\$20.00	\$106,400.00
	15B150		13	3,000	FT	\$20.00	\$60,000.00
	15B125		13	160	FT	\$20.00	\$3,200.00
	15B100		13	540	FT	\$20.00	\$10,800.00
	<b>Subtotal page</b>						<b>\$7,896,530.00</b>

QUANTITIES

PRICES

BY  
Art Streifel  
DATE PREPARED  
11/20/2001

APPROVED  
DATE

BY  
K. Copeland  
DATE  
12/06/2001

CHECKED  
DUM 12/6/01  
PRICE LEVEL

FEATURE:  
NIIP AMARILLO 2040 ALTERNATIVE

06-Dec-2001 PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		59.18 cfs, 100 ft. head, 6+1 units/plant		1	EA	\$1,450,000.00	\$1,450,000.00
		47.70 cfs, 265 ft. head, 5+1 units/plant		1	EA	\$1,520,000.00	\$1,520,000.00
		47.00 cfs, 216 ft. head, 5+1 units/plant		1	EA	\$1,320,000.00	\$1,320,000.00
		45.46 cfs, 366 ft. head, 5+1 units/plant		1	EA	\$1,810,000.00	\$1,810,000.00
		38.41 cfs, 336 ft. head, 4+1 units/plant		1	EA	\$1,450,000.00	\$1,450,000.00
		36.53 cfs, 418 ft. head, 4+1 units/plant		1	EA	\$1,650,000.00	\$1,650,000.00
		14.71 cfs, 280 ft. head, 2+1 units/plant		1	EA	\$560,000.00	\$560,000.00
		11.51 cfs, 255 ft. head, 2+1 units/plant		1	EA	\$440,000.00	\$440,000.00
		5.06 cfs, 168 ft. head, 1+1 units/plant		1	EA	\$200,000.00	\$200,000.00
		3.81 cfs, 278 ft. head, 1+1 units/plant		1	EA	\$210,000.00	\$210,000.00
		3.68 cfs, 382 ft. head, 1+1 units/plant		1	EA	\$240,000.00	\$240,000.00
				11			
		<b>Furnish and install air chambers</b>	8140	11	EA	\$100,000.00	\$1,100,000.00
		<b>Furnish and install water regulating tanks, as follows:</b>	8140				
		186,464 gallons, 40 ft. Dia. X 20 ft. Height		1	EA	\$155,000.00	\$155,000.00
		143,881 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		96,842 gallons, 40 ft. Dia. X 10 ft. Height		1	EA	\$135,000.00	\$135,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
				4			
		<b>Furnish and install water forebay tanks, as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height		11	EA	\$55,000.00	\$605,000.00
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Newcomb (20ft. H X 180 ft. Dia.)		1	EA	\$1,600,000.00	\$1,600,000.00
		Sheepsprings ( 20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Naschitti (20 ft. H X 190 ft. Dia.)		1	EA	\$1,680,000.00	\$1,680,000.00
		Tohatchi (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Twin Lakes (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Rock Springs (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Window Rock (20 ft. H X 500 ft. Dia.)		1	EA	\$9,910,000.00	\$9,910,000.00
		Coyote Canyon (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Standing Rock (20 ft. H X 60 ft. Dia.)		1	EA	\$240,000.00	\$240,000.00
		Dalton Pass (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		<b>Subtotal page</b>					<b>\$40,940,000.00</b> ✓
		<b>TOTAL</b>					<b>\$128,760,830.00</b> ✓

QUANTITIES

PRICES

BY  
Art Streifel  
DATE PREPARED  
11/20/2001

APPROVED  
DATE

BY  
K. Copeland

CHECKED  
DLM 12/6/01

DATE  
12/06/2001  
PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: 25-Sep-2001  
 CUTTER 2040 DIVERSION ALTERNATIVE

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	500,100	CY	\$2.00	\$1,000,200.00
		Excavation, rock	8140	14,400	CY	\$8.00	\$115,200.00
		Backfill, common	8140	463,800	CY	\$1.50	\$695,700.00
		Furnish and install pipe as follows:	8140				
		24B625	51	1,000	FT	\$77.00	\$77,000.00
		24B600	48	740	FT	\$72.00	\$53,280.00
		24B575	46	2,500	FT	\$69.00	\$172,500.00
		24B550	44	2,250	FT	\$66.00	\$148,500.00
		24B525	42	1,920	FT	\$63.00	\$120,960.00
		24B500	40	6,990	FT	\$60.00	\$419,400.00
		24B475	38	2,790	FT	\$57.00	\$159,030.00
		24B450	36	14,130	FT	\$54.00	\$763,020.00
		24B425	34	10,380	FT	\$51.00	\$529,380.00
		24B400	32	8,160	FT	\$48.00	\$391,680.00
		24B375	30	4,000	FT	\$45.00	\$180,000.00
		24B350	28	15,830	FT	\$42.00	\$664,860.00
		24B325	26	15,740	FT	\$39.00	\$613,860.00
		24B300	24	18,940	FT	\$36.00	\$681,840.00
		24B275	22	11,970	FT	\$33.00	\$395,010.00
		24B250	22	11,630	FT	\$33.00	\$383,790.00
		24B225	22	4,040	FT	\$33.00	\$133,320.00
		24B200	22	6,670	FT	\$33.00	\$220,110.00
		24B175	22	22,640	FT	\$33.00	\$747,120.00
		24B150	22	4,360	FT	\$33.00	\$143,880.00
		24B125	22	10,380	FT	\$33.00	\$342,540.00
		24B100	22	16,670	FT	\$33.00	\$550,110.00
		24B75	22	2,910	FT	\$33.00	\$96,030.00
		24B50	22	12,200	FT	\$33.00	\$402,600.00
		20B625	35	1,000	FT	\$53.00	\$53,000.00
		20B600	33	1,000	FT	\$50.00	\$50,000.00
		20B575	32	1,000	FT	\$48.00	\$48,000.00
		20B550	30	1,000	FT	\$45.00	\$45,000.00
		20B525	29	1,000	FT	\$44.00	\$44,000.00
		20B500	28	1,000	FT	\$42.00	\$42,000.00
		20B475	26	1,000	FT	\$39.00	\$39,000.00
		20B450	25	5,060	FT	\$38.00	\$192,280.00
		20B425	23	12,010	FT	\$35.00	\$420,350.00
		PAGE SUBTOTAL					\$11,134,550.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hydeman 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

FEATURE: 25-Sep-2001 PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT  
 CUTTER 2040 DIVERSION ALTERNATIVE  
 DIVISION:  
 UNIT:  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Furnish and install pipe as follows:	8140				
		20B400	22	5,000	FT	\$33.00	\$165,000.00
		20B375	21	1,000	FT	\$32.00	\$32,000.00
		20B350	19	1,000	FT	\$29.00	\$29,000.00
		20B325	18	1,000	FT	\$27.00	\$27,000.00
		20B300	17	1,000	FT	\$26.00	\$26,000.00
		20B275	17	1,000	FT	\$26.00	\$26,000.00
		16B600	22	120	FT	\$33.00	\$3,960.00
		16B475	17	4,000	FT	\$26.00	\$104,000.00
		16B425	15	1,890	FT	\$23.00	\$43,470.00
		16B400	14	650	FT	\$21.00	\$13,650.00
		16B325	13	10,000	FT	\$20.00	\$200,000.00
		16B300	13	7,230	FT	\$20.00	\$144,600.00
		16B275	13	1,760	FT	\$20.00	\$35,200.00
		16B250	13	3,000	FT	\$20.00	\$60,000.00
		16B225	13	1,810	FT	\$20.00	\$36,200.00
		16B200	13	1,000	FT	\$20.00	\$20,000.00
		16B175	13	2,000	FT	\$20.00	\$40,000.00
		16B100	13	3,000	FT	\$20.00	\$60,000.00
		16B75	13	1,450	FT	\$20.00	\$29,000.00
		16B50	13	10,060	FT	\$20.00	\$201,200.00
		16B25	13	5,000	FT	\$20.00	\$100,000.00
		14B525	15	2,550	FT	\$23.00	\$58,650.00
		14B500	14	920	FT	\$21.00	\$19,320.00
		14B475	13	970	FT	\$20.00	\$19,400.00
		14B450	12	570	FT	\$18.00	\$10,260.00
		14B425	12	8,910	FT	\$18.00	\$160,380.00
		14B400	12	4,180	FT	\$18.00	\$75,240.00
		14B375	12	6,000	FT	\$18.00	\$108,000.00
		14B350	12	11,180	FT	\$18.00	\$201,240.00
		14B325	12	10,040	FT	\$18.00	\$180,720.00
		14B275	12	4,370	FT	\$18.00	\$78,660.00
		14B250	12	4,820	FT	\$18.00	\$86,760.00
		14B225	12	5,570	FT	\$18.00	\$100,260.00
		14B200	12	4,860	FT	\$18.00	\$87,480.00
		14B175	12	6,920	FT	\$18.00	\$124,560.00
		14B150	12	2,000	FT	\$18.00	\$36,000.00
		14B125	12	4,790	FT	\$18.00	\$86,220.00
		14B100	12	3,260	FT	\$18.00	\$58,680.00
		14B75	12	1,850	FT	\$18.00	\$33,300.00
		PAGE SUBTOTAL					\$2,921,410.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Goodman 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

<b>FEATURE:</b> CUTTER 2040 DIVERSION ALTERNATIVE	25-Sep-2001	<b>PROJECT:</b> NAVAJO - GALLUP WATER SUPPLY PROJECT
		<b>DIVISION:</b>
		<b>UNIT:</b>
H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4		

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		14B25	12	4,000	FT	\$18.00	\$72,000.00
		10B525	9	1,020	FT	\$14.00	\$14,280.00
		10B475	9	1,080	FT	\$14.00	\$15,120.00
		10B450	9	1,000	FT	\$14.00	\$14,000.00
		10B400	9	9,790	FT	\$14.00	\$137,060.00
		10B375	9	1,000	FT	\$14.00	\$14,000.00
		10B350	9	7,260	FT	\$14.00	\$101,640.00
		10B325	9	15,000	FT	\$14.00	\$210,000.00
		10B300	9	13,000	FT	\$14.00	\$182,000.00
		10B275	9	1,000	FT	\$14.00	\$14,000.00
		10B250	9	8,730	FT	\$14.00	\$122,220.00
		10B225	9	6,000	FT	\$14.00	\$84,000.00
		10B200	9	5,000	FT	\$14.00	\$70,000.00
		10B150	9	5,000	FT	\$14.00	\$70,000.00
		10B125	9	6,580	FT	\$14.00	\$92,120.00
		10B100	9	4,000	FT	\$14.00	\$56,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		8.34 cfs, 291 ft. head, 1+1 units/plant		1	EA	\$360,000.00	\$360,000.00
		8.34 cfs, 420 ft. head, 1+1 units/plant		1	EA	\$450,000.00	\$450,000.00
		8.34 cfs, 471 ft. head, 1+1 units/plant		1	EA	\$500,000.00	\$500,000.00
		7.84 cfs, 277 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
		6.79 cfs, 450 ft. head, 1+1 units/plant		1	EA	\$410,000.00	\$410,000.00
		4.64 cfs, 400 ft. head, 1+1 units/plant		1	EA	\$290,000.00	\$290,000.00
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 6 total, 1 at each pmp. plt.)	8140	6	EA	\$100,000.00	\$600,000.00
		<b>Furnish and install water regulating tanks,</b> <b>as follows:</b>	8140				
		84,602 gallons, 40 ft. Dia. X 9 ft. Height, 2 tanks		2	EA	\$130,000.00	\$260,000.00
		<b>Furnish and install water forebay tanks,</b> <b>as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 6 tanks		6	EA	\$55,000.00	\$330,000.00
<b>PAGE SUBTOTAL</b>							<b>\$4,798,440.00</b>

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hyndman 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL



PLANT ACCT.		PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
WOID: DUR30			PROJECT: Navajo-Gallup Water Supply					
			DIVISION / REGION: UC - New Mexico					
			CONTRACT/SPEC:					
			FILE: JAWKSHTS\CY2001\GALLUP2.WK4					
			D-8440					
1			Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire		107	wmile	\$100,600.00	\$10,764,200.00
			Per mile calculations:					
			Conductor: 336 kcmil ACSR	3/c	15,840	ft	\$2.40	
			OHG: 1/2" HSS	1/grd	5,280	ft	\$1.00	
			OPGW: 24 fiber	1/op-grd	5,280	ft	\$4.00	
			Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky	includes ins	7.54	strut/mi	\$4,800.00	
			Two-pole wood structures about 55-65 feet tall, about 700 foot spans	Unit cost			\$100,608.00	
2a			Electrical equipment at each plant, including engine-generator w/full plant capacity		20	ea	\$35,000.00	\$700,000.00
2b			Electrical equipment at each water treatment plant		2	ea	\$35,000.00	\$70,000.00
3			Electrical equipment at each turnout		21	ea	\$5,000.00	\$105,000.00
4			SCADA equipment including controller					
			Each plant		20	ea	\$5,000.00	\$100,000.00
			Each turnout		21	ea	\$5,000.00	\$105,000.00
5			New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
6			Communication equipment:					
			Each plant		20	ea	\$20,000.00	\$400,000.00
			Each turnout		21	ea	\$20,000.00	\$420,000.00
7			Security system equipment at each plant		20	ea	\$5,000.00	\$100,000.00
8			Substation near Huerfano		1	LS	\$1,000,000.00	\$1,000,000.00
			Tap structure, switch, circuit breaker, transformer					
9			Power tap-poles, transformer					
			Each plant		20	ea	\$60,000.00	\$1,200,000.00
			Each turnout		21	ea	\$60,000.00	\$1,260,000.00
			<b>SUBTOTAL</b>					<b>\$16,524,200.00</b>

QUANTITIES			PRICES		
BY Lisa Gamuciello D-8440	APPROVED	BY D-8170 L. Pedde	CHECKED	Ricc 10/15/01	
DATE PREPARED 09/07/2001	DATE	DATE 09-Oct-2001	PRICE LEVEL		

<b>FEATURE:</b> NIIP Amarillo Alternative 2020 Demand (23.89 MGD) Quantities for tanks, buildings, and process ponds for 2040 demand. All other quantities for 2020 demand	07-Dec-2001	<b>PROJECT:</b> Navajo Gallup WSP
		<b>DIVISION:</b>
		<b>FILE:</b> H:\D8170\ESTSPREADSH\COPELAND\NAVAJO-1\NIIP-AMAR.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2.700 SF of Mezzanine	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		ZeeWeed Water Treatment System		23,890,000	GPD	\$0.46	\$10,989,400.00
3		Concrete Reinforced tanks for ZeeWeed Systems		1047	CY	\$400.00	\$418,800.00
4		Concrete Flocculation tank		198	CY	\$400.00	\$79,200.00
5		Concrete for Splitter Tank		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		7700	CY	\$10.00	\$77,000.00
9		Backfill around clearwell after construction		2900	CY	\$15.00	\$43,500.00
10		Construction of Clearwell		1053	CY	\$400.00	\$421,200.00
11		Excavation for wastewater treatment ponds		8570	CY	\$8.00	\$68,560.00
12		Clear Well Mixers		6	Ea	\$15,000.00	\$90,000.00
13		Regional Operations and Maintenance Bldg. Prefab, slab on grade, 14 feet eves		2500	SF	\$110.00	\$275,000.00
14		45 mil Polypropylene Liner for wastewater ponds					
		Liner		34,500	SF	\$0.50	\$17,250.00
		Installation		34,500	SF	\$0.20	\$6,900.00
		Unlisted 30% (Mixer for Rapid Mix Tank, chlorinators, ammoniators, misc. piping, blending studies etc.)					\$4,520,000.00
		Subtotal					\$19,586,810.00
		Unlisted 10% for DBP Treatment Systems at service points					\$1,960,000.00
		Pilot System Construction and Operation for 12 months		1	LS		\$200,000.00
		<b>TOTAL</b>					<b>\$21,746,810.00</b>

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard	CHECKED BY	BY K. Copeland	CHECKED <i>KC</i> 12-7-01
DATE PREPARED November 20, 2001	APPROVED	DATE 07-Dec-2001	PRICE LEVEL

<b>FEATURE:</b> NIP Amarillo Alternative Additional treatment units to upgrade the plant by 14.36 MGD with a total capacity of 38.25 MGD	07-Dec-2001 <b>PROJECT:</b> <hr/> <b>DIVISION:</b> <hr/> <b>FILE:</b> H:\08170\EST\SPREADSH\COPELAND\NAVAJO-INIP-AMAR.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	1	ZeeWeed Water Treatment System		14,360,000		\$0.46	\$6,605,600
	2	Ultraviolet Disinfection Units		2		\$100,000	\$200,000
		Unlisted 5%					\$340,000
<b>TOTAL</b>							<b>\$7,145,600.00</b>

QUANTITIES		PRICES	
BY Glenn Howard	Checked BY	BY K. Copeland	CHECKED <i>[Signature]</i> 12/7/2001
DATE PREPARED November APRIL 16, 1993	APPROVED	DATE 07-Dec-2001	PRICE LEVEL

**FEATURE:**  
 12-Oct-2001  
**San Juan Alternative Cutter Diversion**  
 Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand  
 Includes Jicarilla Apache Nation Demand

**PROJECT:**  
 Navajo Gallup WSP  
**DIVISION:**  
**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-ICUT-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building	D8230	4,600	SF	\$90.00	\$414,000
2		ZeeWeed Water Treatment System		3,740,000	GPD	\$0.70	\$2,618,000
3		Concrete Reinforced tanks for ZeeWeed Systems		110	CY	\$500	\$55,000
4		Concrete Flocculation tank		61	CY	\$500	\$30,500
5		Reinforced Concrete for Splitter Tank		20	CY	\$500	\$10,000
6		Reinforced Concrete for Rapid mix tank		20	CY	\$500	\$10,000
7		Ultraviolet Disinfection Units Model 1250		3	Ea	\$120,000	\$360,000
8		Excavation of Clearwell		1,820	CY	\$10	\$18,200
9		Backfill around clearwell after construction		1,270	CY	\$15	\$19,050
10		Reinforced concrete for clearwell		213	CY	\$500	\$106,500
11		Excavation of Wastewater Polishing Ponds		2,100	CY	\$9	\$18,900
12		Mixers for ClearWell		6	Ea	\$15,000	\$90,000
13		Sediment Drying Beds Sand for Wastewater Polishing Ponds		25	CY	\$20	\$500
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		11,500.00 11,500.00	SF SF	\$0.50 \$0.20	\$5,750 \$2,300
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc. )					\$1,210,000.00 ✓
		Subtotal					\$5,243,700.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$520,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$5,963,700.00</b> ✓

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>LP 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

**FEATURE:**  
 11-Oct-2001  
**San Juan Alternative Cutter Diversion**  
 Additional treatment units to upgrade the treatment plant by 1.65 MGD to a total capacity of 5.39 MGD  
 Includes Jicarilla Apache Nation Demand

**PROJECT:**  
**DIVISION:**  
**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\CUT-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		ZeeWeed Water Treatment System		1,650,000.00	GPD	\$0.70	\$1,155,000.00
		Unlisted 5%					\$58,000.00
<b>TOTAL</b>							<b>\$1,213,000.00</b>

QUANTITIES		PRICES	
BY Glenn Howard		BY K. Copeland	CHECKED <i>KL</i> 10/11/01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 11-Oct-2001	PRICE LEVEL

<b>FEATURE:</b> 4500 Acre-Foot Storage Pond NIIP Coury Lateral Alternative NIIP Amarillo Alternative	07-Dec-2001	<b>PROJECT:</b> Navajo-Gallup Water Supply Project  <b>DIVISION:</b>  <b>FILE:</b> H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\POND.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation	8140	6,530,000	CY	\$1.70	\$11,101,000.00
		Compacted Embankment	8140	19,700	CY	\$6.00	\$118,200.00
		Liner (40 mil PPE-R)	8140	10,080,000	SQ FT	\$0.45	\$4,536,000.00
		6" Riprap	8140	186,700	CY	\$25.00	\$4,667,500.00
<b>TOTAL</b>							<b>\$20,422,700.00</b>

QUANTITIES		PRICES	
BY David Gesundheit	APPROVED	BY K. Copeland	CHECKED <i>[Signature]</i> 12/7/2001
DATE PREPARED 11/29/2001	DATE	DATE 07-Dec-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks as follows: (Capacities from DePauli Report, Appendix H)</b>					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		<b>Valve and Metering Stations (from DePauli Report, Appendix H)</b>		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Apper		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY  
Kevin Moran & Marc DePauli

APPROVED

BY

CHECKED

DATE PREPARED  
19-Feb-2002

DATE

DATE

PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR SJR PNM ALTERNATIVE -  
YEAR 2020**

**ESTIMATE WORKSHEET**

**FEATURE:** 26-Sep-2001  
**SJR- PNM 2020 DIVERSION ALTERNATIVE**

**PROJECT:**  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Excavation, common</b>	8140	1,420,500	CY	\$2.00	\$2,841,000.00
		<b>Excavation, rock</b>	8140	167,800	CY	\$8.00	\$1,342,400.00
		<b>Backfill, common</b>	8140	1,348,400	CY	\$1.50	\$2,022,600.00
		<b>Furnish and install pipe as follows:</b>	8140				
	48B300		92	1,000	FT	\$120.00	\$120,000.00
	48B275		88	1,000	FT	\$110.00	\$110,000.00
	48B250		88	1,000	FT	\$110.00	\$110,000.00
	48B225		88	1,000	FT	\$110.00	\$110,000.00
	48B200		88	1,000	FT	\$110.00	\$110,000.00
	48B175		88	1,000	FT	\$110.00	\$110,000.00
	48B150		88	19,000	FT	\$110.00	\$2,090,000.00
	48B125		88	32,000	FT	\$110.00	\$3,520,000.00
	48B100		88	10,000	FT	\$110.00	\$1,100,000.00
	48B75		88	1,000	FT	\$110.00	\$110,000.00
	48B25		88	2,150	FT	\$110.00	\$236,500.00
	45B350		124	28,000	FT	\$160.00	\$4,480,000.00
	45B275		77	6,000	FT	\$100.00	\$600,000.00
	45B150		77	15,000	FT	\$100.00	\$1,500,000.00
	45B75		77	3,000	FT	\$100.00	\$300,000.00
	45B50		77	26,000	FT	\$100.00	\$2,600,000.00
	45B25		77	2,840	FT	\$100.00	\$284,000.00
	42B525		146	200	FT	\$180.00	\$36,000.00
	42B500		146	1,140	FT	\$180.00	\$205,200.00
	42B475		117	3,860	FT	\$150.00	\$579,000.00
	42B450		117	14,350	FT	\$150.00	\$2,152,500.00
	42B425		117	2,000	FT	\$150.00	\$300,000.00
	42B400		117	1,000	FT	\$150.00	\$150,000.00
	42B375		117	13,730	FT	\$150.00	\$2,059,500.00
	42B350		83	22,000	FT	\$100.00	\$2,200,000.00
	42B325		77	15,000	FT	\$100.00	\$1,500,000.00
	42B300		71	33,600	FT	\$90.00	\$3,024,000.00
	42B275		68	4,940	FT	\$90.00	\$444,600.00
	42B250		68	28,590	FT	\$90.00	\$2,573,100.00
	42B225		68	53,130	FT	\$90.00	\$4,781,700.00
	42B200		68	44,080	FT	\$90.00	\$3,967,200.00
	42B175		68	4,680	FT	\$90.00	\$421,200.00

**QUANTITIES**

**PRICES**

BY Art Streifel  
 DATE PREPARED 26-Sep-2001

APPROVED  
 DATE

BY K. Copeland  
 DATE 26-Sep-2001

CHECKED *Norman S. Hyndman* 9/26/01  
 PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: 26-Sep-2001  
 SJR - PNM 2020 DIVERSION ALTERNATIVE

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		42B150	68	31,780	FT	\$90.00	\$2,860,200.00
		42B125	68	8,610	FT	\$90.00	\$774,900.00
		42B100	68	820	FT	\$90.00	\$73,800.00
		42B75	68	28,720	FT	\$90.00	\$2,584,800.00
		42B50	68	8,000	FT	\$90.00	\$720,000.00
		42B25	68	11,640	FT	\$90.00	\$1,047,600.00
		30B425	52	7,000	FT	\$70.00	\$490,000.00
		30B350	43	3,000	FT	\$50.00	\$150,000.00
		30B300	36	2,000	FT	\$50.00	\$100,000.00
		30B275	35	2,000	FT	\$40.00	\$80,000.00
		30B250	35	2,000	FT	\$40.00	\$80,000.00
		30B200	35	13,000	FT	\$40.00	\$520,000.00
		30B175	35	2,000	FT	\$40.00	\$80,000.00
		30B150	35	5,000	FT	\$40.00	\$200,000.00
		30B100	35	4,000	FT	\$40.00	\$160,000.00
		30B75	35	2,000	FT	\$40.00	\$80,000.00
		30B25	35	9,760	FT	\$40.00	\$390,400.00
		21B325	20	3,000	FT	\$30.00	\$90,000.00
		21B300	18	28,000	FT	\$27.00	\$756,000.00
		21B250	17	2,000	FT	\$26.00	\$52,000.00
		21B225	17	7,000	FT	\$26.00	\$182,000.00
		21B200	17	7,000	FT	\$26.00	\$182,000.00
		21B175	17	11,000	FT	\$26.00	\$286,000.00
		21B150	17	2,000	FT	\$26.00	\$52,000.00
		21B50	17	7,000	FT	\$26.00	\$182,000.00
		21B25	17	21,420	FT	\$26.00	\$556,920.00
		18B300	15	52,000	FT	\$23.00	\$1,196,000.00
		18B275	15	33,000	FT	\$23.00	\$759,000.00
		18B200	15	15,000	FT	\$23.00	\$345,000.00
		18B25	15	17,220	FT	\$23.00	\$396,060.00
		12B400	10	11,000	FT	\$15.00	\$165,000.00
		12B375	10	8,000	FT	\$15.00	\$120,000.00
		12B250	10	10,000	FT	\$15.00	\$150,000.00
		12B175	10	4,000	FT	\$15.00	\$60,000.00
		12B150	10	4,000	FT	\$15.00	\$60,000.00
		12B25	10	1,020	FT	\$15.00	\$15,300.00
				778,280	FT		

QUANTITIES

PRICES

BY Art Streifel  
 DATE PREPARED 26-Sep-2001  
 APPROVED  
 DATE

BY K. Copeland  
 DATE 26-Sep-2001  
 CHECKED *[Signature]* 9/26/01  
 PRICE LEVEL

FEATURE: 26-Sep-2001  
 SJR - PNM 2020 DIVERSION ALTERNATIVE

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CASTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		36.97 cfs,438 ft. head, 4+1 units/plant		1	EA	\$1,720,000.00	\$1,720,000.00
		35.42 cfs,439 ft. head, 4+1 units/plant		1	EA	\$1,660,000.00	\$1,660,000.00
		35.42 cfs,196 ft. head, 4+1 units/plant		1	EA	\$980,000.00	\$980,000.00
		33.19 cfs,316 ft. head, 4+1 units/plant		1	EA	\$1,230,000.00	\$1,230,000.00
		32.77 cfs,199 ft. head, 4+1 units/plant		1	EA	\$920,000.00	\$920,000.00
		31.88 cfs,326 ft. head, 4+1 units/plant		1	EA	\$1,200,000.00	\$1,200,000.00
		27.78 cfs,352 ft. head, 3+1 units/plant		1	EA	\$1,120,000.00	\$1,120,000.00
		26.67 cfs,406 ft. head, 3+1 units/plant		1	EA	\$1,200,000.00	\$1,200,000.00
		8.2 cfs,303 ft. head, 1+1 units/plant		1	EA	\$370,000.00	\$370,000.00
		6.27 cfs,268 ft. head, 1+1 units/plant		1	EA	\$280,000.00	\$280,000.00
		2.94 cfs,173 ft. head, 1+1 units/plant		1	EA	\$150,000.00	\$150,000.00
		2.20 cfs,280 ft. head, 1+1 units/plant		1	EA	\$150,000.00	\$150,000.00
		2.13 cfs,386 ft. head, 1+1 units/plant		1	EA	\$180,000.00	\$180,000.00
				13			
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 13 total, 1 at each pmp. plt.)	8140	13	EA	\$100,000.00	\$1,300,000.00
		<b>Furnish and install water regulating tanks, as follows:</b>					
		144,708 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		125,343 gallons, 40 ft. Dia. X 13 ft. Height		1	EA	\$140,000.00	\$140,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		<b>Furnish and install water forebay tanks, as follows:</b>					
		60,000 gallons, 8 ft. Dia. X 40 ft. Height		13	EA	\$55,000.00	\$715,000.00
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Sanostee (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Newcomb (20ft. H X 140 ft. Dia.)		1	EA	\$1,040,000.00	\$1,040,000.00
		Sheepsprings ( 20 ft. H X 100 ft. Dia.)		1	EA	\$600,000.00	\$600,000.00
		Naschitti (20 ft. H X 140 ft. Dia.)		1	EA	\$1,040,000.00	\$1,040,000.00
		Tohatchi (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Twin Lakes (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Rock Springs (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Window Rock (20 ft. H X 370 ft. Dia.)		1	EA	\$5,780,000.00	\$5,780,000.00
		Coyote Canyon (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Standing Rock (20 ft. H X 40 ft. Dia.)		1	EA	\$130,000.00	\$130,000.00
		Dalton Pass (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00

QUANTITIES

PRICES

BY Art Streifel  
 DATE PREPARED 26-Sep-2001  
 APPROVED  
 DATE

BY K. Copeland  
 DATE 26-Sep-2001  
 CHECKED *Norm L. Hydon 7/26/01*  
 PRICE LEVEL

<b>FEATURE:</b>  NAVAJO GALLOP WATER SUPPLY  Turnout Structure - SJR PNM Alternative	26-Sep-2001	<b>PROJECT:</b> Navajo Gallop - New Mexico DIVISION: Civil Engineering UNIT: D-8120 AND D-8140
--	-------------	---

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
D-8140		Coffer Dam 200 ft. long 8 ft high		1	LS	\$40,000.00	\$40,000.00
D-8140		Dewatering for Inlet Structure (ASSUME 2 MONTHS)		1	LS	\$50,000.00	\$50,000.00
D-8120		PUMPING PLANT - four vertical turbine pumps - total capacity 60 cfs -.45 ft head, fish screen flow rate 1/2 ft/sec 14'x22' plan dimensions		1	LS	\$610,000.00	\$610,000.00
D-8120		Excavation for structures		390	CY	\$15.00	\$5,850.00
D-8120		Placing and compacting backfill		100	CY	\$20.00	\$2,000.00
D-8120		Concrete in structures		150	CY	\$600.00	\$90,000.00
D-8120		Furnishing and handling cementitious materials		42	TONS	\$130.00	\$5,460.00
D-8120		Furnishing and placing reinforcing bars		23,000	LB	\$1.00	\$23,000.00
D-8120		Furnishing and installing miscellaneous metalwork		2800	LB	\$7.00	\$19,600.00
D-8120		Furnishing and erecting 7-foot high chain link fence		260	LF	\$25.00	\$6,500.00
<b>TOTAL</b>							<b>\$852,410.00</b>

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Gerald Sherard	CHECKED	BY K. Copeland	CHECKED <i>Craig A. Lusk</i> 9/26/2001
DATE PREPARED 09/04/01	APPROVED	DATE 09/26/2001	PRICE LEVEL

ESTIMATE WORKSHEET

**FEATURE:**  
**CUTTER 2020 DIVERSION ALTERNATIVE**  
 with Jicarilla Apache

26-Sep-2001

**PROJECT:**  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	442,900	CY	\$2.00	\$885,800.00
		Excavation, rock	8140	12,800	CY	\$8.00	\$102,400.00
		Backfill, common	8140	417,400	CY	\$1.50	\$626,100.00
		<b>Furnish and install pipe as follows:</b>	8140				
		20B650	36	1,000	FT	\$54.00	\$54,000.00
		20B625	35	740	FT	\$53.00	\$39,220.00
		20B600	33	1,000	FT	\$50.00	\$50,000.00
		20B575	32	2,960	FT	\$48.00	\$142,080.00
		20B550	30	2,540	FT	\$45.00	\$114,300.00
		20B525	29	5,340	FT	\$44.00	\$234,960.00
		20B500	28	2,750	FT	\$42.00	\$115,500.00
		20B475	26	13,990	FT	\$39.00	\$545,610.00
		20B450	25	7,060	FT	\$38.00	\$268,280.00
		20B425	23	6,480	FT	\$35.00	\$226,800.00
		20B400	22	7,000	FT	\$33.00	\$231,000.00
		20B375	21	7,430	FT	\$32.00	\$237,760.00
		20B350	19	19,390	FT	\$29.00	\$562,310.00
		20B325	18	11,590	FT	\$27.00	\$312,930.00
		20B300	17	16,100	FT	\$26.00	\$418,600.00
		20B275	17	11,970	FT	\$26.00	\$311,220.00
		20B250	17	11,630	FT	\$26.00	\$302,380.00
		20B225	17	4,700	FT	\$26.00	\$122,200.00
		20B200	17	10,370	FT	\$26.00	\$269,620.00
		20B175	17	18,270	FT	\$26.00	\$475,020.00
		20B150	17	13,730	FT	\$26.00	\$356,980.00
		20B125	17	1,020	FT	\$26.00	\$26,520.00
		20B100	17	16,670	FT	\$26.00	\$433,420.00
		20B75	17	2,910	FT	\$26.00	\$75,660.00
		20B50	17	12,200	FT	\$26.00	\$317,200.00
		18B625	28	1,000	FT	\$42.00	\$42,000.00
		18B600	27	1,000	FT	\$41.00	\$41,000.00
		18B575	26	1,000	FT	\$39.00	\$39,000.00
		18B550	25	1,000	FT	\$38.00	\$38,000.00
		18B525	24	1,000	FT	\$36.00	\$36,000.00
		18B500	23	1,000	FT	\$35.00	\$35,000.00
		18B450	20	1,000	FT	\$30.00	\$30,000.00
		18B425	19	12,070	FT	\$29.00	\$350,030.00
		<b>PAGE SUBTOTAL</b>					<b>\$8,468,900.00</b>

QUANTITIES

PRICES

<b>BY</b> Art Streifel	<b>APPROVED</b>	<b>BY</b> K. Copeland	<b>CHECKED</b> <i>Non Hydrom 9/26/01</i>
<b>DATE PREPARED</b> 26-Sep-2001	<b>DATE</b>	<b>DATE</b> 09/26/2001	<b>PRICE LEVEL</b>

ESTIMATE WORKSHEET

FEATURE: CUTTER 2020 DIVERSION ALTERNATIVE  
with Jicarilla Apache

25-Sep-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		18B400	18	10,000	FT	\$27.00	\$270,000.00
		18B375	17	1,000	FT	\$26.00	\$26,000.00
		18B350	16	1,000	FT	\$24.00	\$24,000.00
		18B325	15	1,000	FT	\$23.00	\$23,000.00
		18B300	15	1,000	FT	\$23.00	\$23,000.00
		18B275	15	1,000	FT	\$23.00	\$23,000.00
		14B600	17	120	FT	\$26.00	\$3,120.00
		14B475	13	4,000	FT	\$20.00	\$80,000.00
		14B425	12	1,890	FT	\$18.00	\$34,020.00
		14B400	12	650	FT	\$18.00	\$11,700.00
		14B325	12	9,000	FT	\$18.00	\$162,000.00
		14B300	12	6,230	FT	\$18.00	\$112,140.00
		14B275	12	3,760	FT	\$18.00	\$67,680.00
		14B250	12	3,000	FT	\$18.00	\$54,000.00
		14B225	12	1,810	FT	\$18.00	\$32,580.00
		14B200	12	1,000	FT	\$18.00	\$18,000.00
		14B175	12	2,000	FT	\$18.00	\$36,000.00
		14B100	12	3,000	FT	\$18.00	\$54,000.00
		14B75	12	1,450	FT	\$18.00	\$26,100.00
		14B50	12	10,060	FT	\$18.00	\$181,080.00
		14B25	12	5,000	FT	\$18.00	\$90,000.00
		12B525	11	2,120	FT	\$17.00	\$36,040.00
		12B500	10	640	FT	\$15.00	\$9,600.00
		12B475	10	1,670	FT	\$15.00	\$25,050.00
		12B425	10	5,330	FT	\$15.00	\$79,950.00
		12B400	10	6,550	FT	\$15.00	\$98,250.00
		12B375	10	6,790	FT	\$15.00	\$101,850.00
		12B350	10	3,150	FT	\$15.00	\$47,250.00
		12B325	10	17,160	FT	\$15.00	\$257,400.00
		12B300	10	1,010	FT	\$15.00	\$15,150.00
		12B275	10	1,840	FT	\$15.00	\$27,600.00
		12B250	10	4,370	FT	\$15.00	\$65,550.00
		12B225	10	2,140	FT	\$15.00	\$32,100.00
		12B200	10	6,190	FT	\$15.00	\$92,850.00
		12B175	10	9,970	FT	\$15.00	\$149,550.00
		12B150	10	3,000	FT	\$15.00	\$45,000.00
		12B125	10	2,180	FT	\$15.00	\$32,700.00
		12B100	10	4,790	FT	\$15.00	\$71,850.00
		12B75	10	3,000	FT	\$15.00	\$45,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$2,584,160.00</b>

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nom H. Copeland 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

**FEATURE:**  
**CUTTER 2020 DIVERSION ALTERNATIVE**  
 with Jicarilla Apache

25-Sep-2001

**PROJECT:**  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		12B50	10	1,850	FT	\$15.00	\$27,750.00
		12B25	10	4,000	FT	\$15.00	\$60,000.00
		8B525	7	1,020	FT	\$11.00	\$11,220.00
		8B475	7	2,080	FT	\$11.00	\$22,880.00
		8B425	7	890	FT	\$11.00	\$9,790.00
		8B400	7	9,900	FT	\$11.00	\$108,900.00
		8B375	7	2,260	FT	\$11.00	\$24,860.00
		8B350	7	10,000	FT	\$11.00	\$110,000.00
		8B325	7	15,000	FT	\$11.00	\$165,000.00
		8B300	7	8,000	FT	\$11.00	\$88,000.00
		8B275	7	3,730	FT	\$11.00	\$41,030.00
		8B250	7	7,000	FT	\$11.00	\$77,000.00
		8B225	7	6,000	FT	\$11.00	\$66,000.00
		8B200	7	4,000	FT	\$11.00	\$44,000.00
		8B150	7	6,000	FT	\$11.00	\$66,000.00
		8B125	7	5,580	FT	\$11.00	\$61,380.00
		8B100	7	4,000	FT	\$11.00	\$44,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		5.78 cfs, 302 ft. head, 1+1 units/plant		1	EA	\$280,000.00	\$280,000.00
		5.78 cfs, 407 ft. head, 1+1 units/plant		1	EA	\$340,000.00	\$340,000.00
		5.78 cfs, 500 ft. head, 1+1 units/plant		1	EA	\$400,000.00	\$400,000.00
		5.52 cfs, 286 ft. head, 1+1 units/plant		1	EA	\$270,000.00	\$270,000.00
		4.90 cfs, 453 ft. head, 1+1 units/plant		1	EA	\$320,000.00	\$320,000.00
		2.75 cfs, 357 ft. head, 1+1 units/plant		1	EA	\$200,000.00	\$200,000.00
				6			
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 6 total, 1 at each pmp. plt.)	8140	6	EA	\$100,000.00	\$600,000.00
		<b>Furnish and install water regulating tanks,</b> as follows:	8140				
		84,602 gallons, 40 ft. Dia. X 9 ft. Height, 2 tanks		2	EA	\$130,000.00	\$260,000.00
		<b>Furnish and install water forebay tanks,</b> as follows:	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 6 tanks		6	EA	\$55,000.00	\$330,000.00
		<b>PAGE SUBTOTAL</b>					\$4,027,810.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nom Hydrona 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

**FEATURE:**  
**CUTTER 2020 DIVERSION ALTERNATIVE**  
 with Jicarilla Apache

26-Sep-2001

**PROJECT:**  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Huerfano (20 ft. H X 80 ft. Dia.)		1	EA	\$420,000.00	\$420,000.00
		Nageezi (20 ft. H X 120 ft. Dia.)		1	EA	\$790,000.00	\$790,000.00
		Counselor (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Torreon (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Huerfano (0.26 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Nageezi (0.62 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Counselor (1.61 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Torreon (1.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Jicarilla Apache (2.15 cfs, 162 ft. head,, 1 + 1 stdby.)		1	EA	\$130,000.00	\$130,000.00
		<b>PAGE SUBTOTAL</b>					\$4,420,000.00
		<b>TOTAL FOR ALL PAGES</b>					\$19,500,870.00

QUANTITIES

PRICES

BY  
 Art Streifel

APPROVED

BY

K. Copeland

CHECKED

*Non Hyndan 9/26/01*

DATE PREPARED

26-Sep-2001

DATE

DATE

09/26/2001

PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: **NAVAJO GALLUP WATER SUPPLY  
APPRAISAL-GRADE ESTIMATE  
SJR PNM Alternative**

PROJECT: **Navajo-Gallup Water Supply**  
DIVISION / REGION: **UC - New Mexico**  
CONTRACT/SPEC:

WOID: **DUR30**

FILE: J:\WKSHTS\VCY2001\GALLUP2.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
			<b>D-8440</b>				
	1	Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire Conductor: 336 kcmil ACSR OHG: 1/2" HSS OPGW: 24 fiber Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky Two-pole wood structures about 55-65 feet tall, about 700 foot spans		107	wmile	\$100,600.00	\$10,764,200.00
				Per mile calculations:			
			3/c	15,840	ft	\$2.40	
			1/grd	5,280	ft	\$1.00	
			1/op-grd	5,280	ft	\$4.00	
			includes ins	7.54	strut/mi	\$4,800.00	
			Unit cost			\$100,608.00	
	2a	Electrical equipment at each plant, including engine-generator w/full plant capacity		20	ea	\$35,000.00	\$700,000.00
	2b	Electrical equipment at each water treatment plant		2	ea	\$35,000.00	\$70,000.00
	3	Electrical equipment at each turnout		21	ea	\$5,000.00	\$105,000.00
	4	SCADA equipment including controller					
		Each plant		20	ea	\$5,000.00	\$100,000.00
		Each turnout		21	ea	\$5,000.00	\$105,000.00
	5	New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
	6	Communication equipment:					
		Each plant		20	ea	\$20,000.00	\$400,000.00
		Each turnout		21	ea	\$20,000.00	\$420,000.00
	7	Security system equipment at each plant		20	ea	\$5,000.00	\$100,000.00
	8	Substation near Huerfano Tap structure, switch, circuit breaker, transformer		1	LS	\$1,000,000.00	\$1,000,000.00
	9	Power tap-poles, transformer					
		Each plant		20	ea	\$60,000.00	\$1,200,000.00
		Each turnout		21	ea	\$60,000.00	\$1,260,000.00
		<b>SUBTOTAL</b>					<b>\$16,524,200.00</b>

QUANTITIES		PRICES	
BY Lisa Gamuciello D-8440	APPROVED	BY D-8170 L. Pedde	CHECKED <i>RICC 10/15/01</i>
DATE PREPARED 09/07/2001	DATE	DATE 09-Oct-2001	PRICE LEVEL

<b>FEATURE:</b> 12-Oct-2001 <b>SJR PNM Alternative</b> <b>2020 Demand (23.89 MGD)</b> Quantities for tanks, buildings, and process ponds for 2040 demand. All other quantities for 2020 demand	<b>PROJECT:</b> Navajo Gallup WSP <hr/> <b>DIVISION:</b> <hr/> <b>FILE:</b> H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-j\PMN-ESTF.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2.700 SF of Mezzanine	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		ZeeWeed Water Treatment System		23,890,000.00	GPD	\$0.42	\$10,033,800
3		Concrete Reinforced tanks for ZeeWeed Systems		1047	CY	\$400.00	\$418,800
4		Concrete Flocculation tank		198	CY	\$400.00	\$79,200
5		Concrete for Splitter Tank		50	CY	\$400.00	\$20,000
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000
7		Ultraviolet Disinfection Units		5	EA	\$88,200.00	\$441,000
8		Excavation of Clearwell		7700	CY	\$10.00	\$77,000
9		Backfill around clearwell after construction		2900	CY	\$15.00	\$43,500
10		Construction of Clearwell		1053	CY	\$400.00	\$421,200
11		Excavation for wastewater treatment ponds		8570	CY	\$8.00	\$68,560
12		Excavation for settling ponds		53,000	CY	\$6.00	\$318,000
13		Clear Well Mixers		6	Ea	\$15,000.00	\$90,000
14		Sediment Drying Beds					
		Gravel		20,400	CY	\$20.00	\$408,000
		Sand for Settling Pond Sediment		10,200	CY	\$15.00	\$153,000
		Concrete for sides		84	CY	\$400.00	\$33,600
		4-inch PVC perforated pipe		25,000	LF	\$6.00	\$150,000
15		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eaves		2,500.00	SF	\$110.00	\$275,000.00
16		45 mil Polypropylene Liner for Wastewater Ponds		34,500.00	SF	\$0.50	\$17,250
		Installation		34,500.00	SF	\$0.20	\$6,900
17		6-inch thick reinforced concrete liner for settling ponds		4100	CY	\$150.00	\$615,000
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$4,720,000.00 ✓
		Subtotal					\$20,449,810.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$2,040,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$22,689,810.00</b> ✓

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard	CHECKED BY	BY K. Copeland	CHECKED <i>SP</i> 10-12-01
DATE PREPARED October 9, 2001	APPROVED	DATE 12-Oct-2001	PRICE LEVEL

**FEATURE:** 12-Oct-2001  
**San Juan Alternative Cutter Diversion**  
 Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand  
 Includes Jicarilla Apache Nation Demand

**PROJECT:**  
 Navajo Gallup WSP  
**DIVISION:**  
**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\CUT-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building	D8230	4,600	SF	\$90.00	\$414,000
2		ZeeWeed Water Treatment System		3,740,000	GPD	\$0.70	\$2,618,000
3		Concrete Reinforced tanks for ZeeWeed Systems		110	CY	\$500	\$55,000
4		Concrete Flocculation tank		61	CY	\$500	\$30,500
5		Reinforced Concrete for Splitter Tank		20	CY	\$500	\$10,000
6		Reinforced Concrete for Rapid mix tank		20	CY	\$500	\$10,000
7		Ultraviolet Disinfection Units Model 1250		3	Ea	\$120,000	\$360,000
8		Excavation of Clearwell		1,820	CY	\$10	\$18,200
9		Backfill around clearwell after construction		1,270	CY	\$15	\$19,050
10		Reinforced concrete for clearwell		213	CY	\$500	\$106,500
11		Excavation of Wastewater Polishing Ponds		2,100	CY	\$9	\$18,900
12		Mixers for ClearWell		6	Ea	\$15,000	\$90,000
13		Sediment Drying Beds					
		Sand for Wastewater Polishing Ponds		25	CY	\$20	\$500
14		Regional Operations and Maintenance Bldg		2,500.00	SF	\$110.00	\$275,000.00
		Prefab, slab on grade with 14 feet eaves					
15		45 mil Polypropylene Liner for Wastewater Ponds		11,500.00	SF	\$0.50	\$5,750
		Installation		11,500.00	SF	\$0.20	\$2,300
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$1,210,000.00 ✓
		Subtotal					\$5,243,700.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$520,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$5,963,700.00</b> ✓

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>AP 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks</b> as follows: (Capacities from DePauli Report, Appendix H)					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Appen		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES

PRICES

BY  
Kevin Moran & Marc DePauli  
DATE PREPARED  
19-Feb-2002

APPROVED  
DATE

BY  
DATE

CHECKED  
PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR SJR PNM ALTERNATIVE -  
YEAR 2040**

ESTIMATE WORKSHEET

FEATURE: SJR-PNM 2040 DIVERSION ALTERNATIVE

06-Dec-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CESTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	1,578,400	CY	\$2.00	\$3,156,800.00
		Excavation, rock	8140	182,200	CY	\$8.00	\$1,457,600.00
		Backfill, common	8140	1,471,400	CY	\$1.50	\$2,207,100.00
		Furnish and install pipe as follows:	8140				
		48B525	166	190	FT	\$210.00	\$39,900.00
		48B500	166	2,140	FT	\$210.00	\$449,400.00
		48B475	166	6,460	FT	\$210.00	\$1,356,600.00
		48B450	166	11,350	FT	\$210.00	\$2,383,500.00
		48B425	132	2,000	FT	\$170.00	\$340,000.00
		48B400	132	2,000	FT	\$170.00	\$340,000.00
		48B375	132	2,330	FT	\$170.00	\$396,100.00
		48B350	132	2,400	FT	\$170.00	\$408,000.00
		48B325	132	10,000	FT	\$170.00	\$1,700,000.00
		48B300	92	31,140	FT	\$120.00	\$3,736,800.00
		48B275	88	2,900	FT	\$110.00	\$319,000.00
		48B250	88	16,630	FT	\$110.00	\$1,829,300.00
		48B225	88	26,900	FT	\$110.00	\$2,959,000.00
		48B200	88	21,830	FT	\$110.00	\$2,401,300.00
		48B175	88	10,080	FT	\$110.00	\$1,108,800.00
		48B150	88	76,760	FT	\$110.00	\$8,443,600.00
		48B125	88	14,230	FT	\$110.00	\$1,565,300.00
		48B100	88	10,730	FT	\$110.00	\$1,180,300.00
		48B75	88	4,660	FT	\$110.00	\$512,600.00
		48B50	88	2,000	FT	\$110.00	\$220,000.00
		48B25	88	6,840	FT	\$110.00	\$752,400.00
		45B500	156	1,000	FT	\$200.00	\$200,000.00
		45B475	156	1,000	FT	\$200.00	\$200,000.00
		48B425	124	9,000	FT	\$160.00	\$1,440,000.00
		45B400	124	12,000	FT	\$160.00	\$1,920,000.00
		45B375	124	9,000	FT	\$160.00	\$1,440,000.00
		45B350	124	1,000	FT	\$160.00	\$160,000.00
		45B300	81	1,000	FT	\$100.00	\$100,000.00
		45B225	77	16,000	FT	\$100.00	\$1,600,000.00
		45B200	77	16,000	FT	\$100.00	\$1,600,000.00
		45B175	77	16,170	FT	\$100.00	\$1,617,000.00
		45B125	77	460	FT	\$100.00	\$46,000.00
		45B75	77	30,910	FT	\$100.00	\$3,091,000.00
		45B50	77	28,170	FT	\$100.00	\$2,817,000.00

QUANTITIES

PRICES

BY Art Streifel  
DATE PREPARED 06-Dec-2001

APPROVED  
DATE

BY K. Copeland  
DATE 06-Dec-2001

CHECKED *ag* 12/7/2001  
PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**  
SJR-PNM 2040 DIVERSION ALTERNATIVE

**06-Dec-2001 PROJECT:**

NAVAJO - GALLUP WATER SUPPLY PROJECT

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
	42B400		117	3,000	FT	\$150.00	\$450,000.00
	42B375		117	19,000	FT	\$150.00	\$2,850,000.00
	42B350		83	7,000	FT	\$100.00	\$700,000.00
	42B250		68	11,000	FT	\$90.00	\$990,000.00
	42B225		68	21,000	FT	\$90.00	\$1,890,000.00
	42B150		68	330	FT	\$90.00	\$29,700.00
	42B25		68	650	FT	\$90.00	\$58,500.00
	39B500		109	350	FT	\$140.00	\$49,000.00
	39B450		109	4,840	FT	\$140.00	\$677,600.00
	39B425		109	3,000	FT	\$140.00	\$420,000.00
	39B375		77	590	FT	\$100.00	\$59,000.00
	39B350		72	11,000	FT	\$90.00	\$990,000.00
	39B250		58	1,050	FT	\$70.00	\$73,500.00
	39B225		58	1,000	FT	\$70.00	\$70,000.00
	39B200		58	970	FT	\$70.00	\$67,900.00
	39B175		58	12,000	FT	\$70.00	\$840,000.00
	39B150		58	5,000	FT	\$70.00	\$350,000.00
	39B125		58	210	FT	\$70.00	\$14,700.00
	39B75		58	1,140	FT	\$70.00	\$79,800.00
	39B50		58	5,600	FT	\$70.00	\$392,000.00
	30B475		58	900	FT	\$70.00	\$63,000.00
	30B400		49	50	FT	\$60.00	\$3,000.00
	30B375		46	3,000	FT	\$60.00	\$180,000.00
	30B350		43	1,120	FT	\$50.00	\$56,000.00
	30B325		39	2,440	FT	\$50.00	\$122,000.00
	30B300		36	23,890	FT	\$50.00	\$1,194,500.00
	30B275		35	3,240	FT	\$40.00	\$129,600.00
	30B225		35	2,420	FT	\$40.00	\$96,800.00
	30B200		35	15,050	FT	\$40.00	\$602,000.00
	30B175		35	9,480	FT	\$40.00	\$379,200.00
	30B150		35	4,000	FT	\$40.00	\$160,000.00
	30B125		35	5,260	FT	\$40.00	\$210,400.00
	30B100		35	2,000	FT	\$40.00	\$80,000.00
	30B75		35	710	FT	\$40.00	\$28,400.00
	30B50		35	2,600	FT	\$40.00	\$104,000.00
	30B25		35	2,410	FT	\$40.00	\$96,400.00

**QUANTITIES**

**PRICES**

BY  
Art Streifel  
DATE PREPARED  
06-Dec-2001

APPROVED  
DATE

BY  
K. Copeland  
DATE  
06-Dec-2001

CHECKED  
*[Signature]* 12/7/2001  
PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:**  
**SJR-PNM 2040 DIVERSION ALTERNATIVE**

**06-Dec-2001**

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		24B375	30	1,740	FT	\$45.00	\$78,300.00
		24B300	24	31,560	FT	\$36.00	\$1,136,160.00
		24B275	22	3,000	FT	\$33.00	\$99,000.00
		24B250	22	2,050	FT	\$33.00	\$67,650.00
		24B225	22	4,380	FT	\$33.00	\$144,540.00
		24B200	22	9,380	FT	\$33.00	\$309,540.00
		24B150	22	380	FT	\$33.00	\$12,540.00
		24B50	22	3,540	FT	\$33.00	\$116,820.00
		24B25	22	10,340	FT	\$33.00	\$341,220.00
		21B325	20	1,530	FT	\$30.00	\$45,900.00
		21B300	18	26,000	FT	\$27.00	\$702,000.00
		21B275	17	32,470	FT	\$26.00	\$844,220.00
		21B200	17	8,570	FT	\$26.00	\$222,820.00
		21B175	17	810	FT	\$26.00	\$21,060.00
		21B150	17	340	FT	\$26.00	\$8,840.00
		21B100	17	590	FT	\$26.00	\$15,340.00
		21B25	17	11,000	FT	\$26.00	\$286,000.00
		14B425	12	6,000	FT	\$18.00	\$108,000.00
		14B400	12	9,000	FT	\$18.00	\$162,000.00
		14B375	12	4,000	FT	\$18.00	\$72,000.00
		14B250	12	7,000	FT	\$18.00	\$126,000.00
		14B225	12	3,000	FT	\$18.00	\$54,000.00
		14B175	12	5,320	FT	\$18.00	\$95,760.00
		14B150	12	3,000	FT	\$18.00	\$54,000.00
		14B125	12	160	FT	\$18.00	\$2,880.00
		14B100	12	540	FT	\$18.00	\$9,720.00
				<b>778,280</b>	<b>FT</b>		
		<b>Furnish and install pumping plants as follows:</b>	8140				
		59.18 cfs, 442 ft. head, 6+1 units/plant		1	EA	\$2,710,000.00	\$2,710,000.00
		51.49 cfs, 442 ft. head, 6+1 units/plant		1	EA	\$2,380,000.00	\$2,380,000.00
		51.49 cfs, 220 ft. head, 6+1 units/plant		1	EA	\$1,470,000.00	\$1,470,000.00
		47.70 cfs, 265 ft. head, 5+1 units/plant		1	EA	\$1,520,000.00	\$1,520,000.00
		47.00 cfs, 216 ft. head, 5+1 units/plant		1	EA	\$1,320,000.00	\$1,320,000.00
		45.46 cfs, 366 ft. head, 5+1 units/plant		1	EA	\$1,810,000.00	\$1,810,000.00
		38.41 cfs, 336 ft. head, 4+1 units/plant		1	EA	\$1,450,000.00	\$1,450,000.00
		36.53 cfs, 418 ft. head, 4+1 units/plant		1	EA	\$1,650,000.00	\$1,650,000.00
		14.71 cfs, 280 ft. head, 2+1 units/plant		1	EA	\$560,000.00	\$560,000.00
		11.51 cfs, 255 ft. head, 2+1 units/plant		1	EA	\$440,000.00	\$440,000.00
		5.06 cfs, 168 ft. head, 1+1 units/plant		1	EA	\$200,000.00	\$200,000.00
		3.81 cfs, 278 ft. head, 1+1 units/plant		1	EA	\$210,000.00	\$210,000.00
		3.68 cfs, 382 ft. head, 1+1 units/plant		1	EA	\$240,000.00	\$240,000.00

QUANTITIES

PRICES

BY  
 Art Streifel  
 DATE PREPARED  
 06-Dec-2001

APPROVED  
 DATE

BY  
 K. Copeland  
 DATE  
 06-Dec-2001

CHECKED  
 PRICE LEVEL  
 12/7/2001

**ESTIMATE WORKSHEET**

**FEATURE:**  
**SJR-PNM 2040 DIVERSION ALTERNATIVE**

**06-Dec-2001 PROJECT:**

**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

**H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\STESTX.WK4**

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 13 total, 1 at each pmp. plt.)	8140	13	EA	\$100,000.00	\$1,300,000.00
		<b>Furnish and install water regulating tanks, as follows:</b>	8140				
		186,464 gallons, 40 ft. Dia. X 20 ft. Height		1	EA	\$155,000.00	\$155,000.00
		143,881 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		96,842 gallons, 40 ft. Dia. X 10 ft. Height		1	EA	\$135,000.00	\$135,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		<b>Furnish and install water forebay tanks, as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height		13	EA	\$55,000.00	\$715,000.00
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Newcomb (20ft. H X 180 ft. Dia.)		1	EA	\$1,600,000.00	\$1,600,000.00
		Sheepsprings ( 20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Naschitti (20 ft. H X 190 ft. Dia.)		1	EA	\$1,680,000.00	\$1,680,000.00
		Tohatchi (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Twin Lakes (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Rock Springs (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Window Rock (20 ft. H X 500 ft. Dia.)		1	EA	\$9,910,000.00	\$9,910,000.00
		Coyote Canyon (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Standing Rock (20 ft. H X 60 ft. Dia.)		1	EA	\$240,000.00	\$240,000.00
		Dalton Pass (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		Manuelito (20 ft. H X 120 ft. Dia.)		1	EA	\$790,000.00	\$790,000.00
		Red Rock, Breadsprings, Chichiltah (20 ft. H X 290 ft. Dia.)		1	EA	\$3,720,000.00	\$3,720,000.00
		Iyanbito (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Church Rock (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Pinedale, Mariano Lake (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		0.61 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		3.93 cfs, 162 ft. head, 4+1 units/plant		1	EA	\$180,000.00	\$180,000.00
		0.79 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		1.73 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$120,000.00	\$120,000.00
		1.30 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$110,000.00	\$110,000.00

**QUANTITIES**

**PRICES**

**BY**  
 Art Streifel  
**DATE PREPARED**  
 06-Dec-2001

**APPROVED**  
  
**DATE**

**BY**  
 K. Copeland  
**DATE**  
 06-Dec-2001

**CHECKED**  
 [Signature] 12/7/2001  
**PRICE LEVEL**

FEATURE: SJR-PNM 2040 DIVERSION ALTERNATIVE

06-Dec-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CESTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>Furnish and install pumping plants as follows:</b>			8140				
		Sanostee (2.00 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Newcomb (1.52 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Sheepsprings (0.70 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Naschitti (1.55 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Tohatchi (1.99 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Twin Lakes (1.88 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Rock Springs (3.19 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$150,000.00	\$150,000.00
		Window Rock (11.51 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$340,000.00	\$340,000.00
		Coyote Canyon (1.24 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Standing Rock (0.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Dalton Pass (3.68 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$170,000.00	\$170,000.00
<b>Furnish and install pumping plants as follows:</b>			8140				
		PNM Diversion (59.18 cfs, 50 ft. head, 6 + 1 stdby.)		1	EA	\$890,000.00	\$890,000.00

TOTAL

\$133,237,710.00 ✓

BY Art Streifel  
 DATE PREPARED 06-Dec-2001

QUANTITIES APPROVED  
 DATE

PRICES CHECKED  
 BY K. Copeland  
 DATE 06-Dec-2001  
 PRICE LEVEL 12/7/2001

ESTIMATE WORKSHEET

<b>FEATURE:</b>  NAVAJO GALLOP WATER SUPPLY  Turnout Structure - SJR PNM Alternative	26-Sep-2001	<b>PROJECT:</b> Navajo Gallop - New Mexico DIVISION: Civil Engineering UNIT: D-8120 AND D-8140
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
D-8140		Coffer Dam 200 ft. long 8 ft high		1	LS	\$40,000.00	\$40,000.00
D-8140		Dewatering for Inlet Structure (ASSUME 2 MONTHS)		1	LS	\$50,000.00	\$50,000.00
D-8120		PUMPING PLANT - four vertical turbine pumps - total capacity 60 cfs -.45 ft head, fish screen flow rate 1/2 ft/sec 14'x22' plan dimensions		1	LS	\$610,000.00	\$610,000.00
D-8120		Excavation for structures		390	CY	\$15.00	\$5,850.00
D-8120		Placing and compacting backfill		100	CY	\$20.00	\$2,000.00
D-8120		Concrete in structures		150	CY	\$600.00	\$90,000.00
D-8120		Furnishing and handling cementitious materials		42	TONS	\$130.00	\$5,460.00
D-8120		Furnishing and placing reinforcing bars		23,000	LB	\$1.00	\$23,000.00
D-8120		Furnishing and installing miscellaneous metalwork		2800	LB	\$7.00	\$19,600.00
D-8120		Furnishing and erecting 7-foot high chain link fence		260	LF	\$25.00	\$6,500.00
<b>TOTAL</b>							<b>\$852,410.00</b>

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Gerald Sherard	CHECKED	BY K. Copeland	CHECKED <i>Craig A. Lusk</i> 9/26/2001
DATE PREPARED 09/04/01	APPROVED	DATE 09/26/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: CUTTER 2040 DIVERSION ALTERNATIVE

25-Sep-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	500,100	CY	\$2.00	\$1,000,200.00
		Excavation, rock	8140	14,400	CY	\$8.00	\$115,200.00
		Backfill, common	8140	463,800	CY	\$1.50	\$695,700.00
		Furnish and install pipe as follows:	8140				
		24B625	51	1,000	FT	\$77.00	\$77,000.00
		24B600	48	740	FT	\$72.00	\$53,280.00
		24B575	46	2,500	FT	\$69.00	\$172,500.00
		24B550	44	2,250	FT	\$66.00	\$148,500.00
		24B525	42	1,920	FT	\$63.00	\$120,960.00
		24B500	40	6,990	FT	\$60.00	\$419,400.00
		24B475	38	2,790	FT	\$57.00	\$159,030.00
		24B450	36	14,130	FT	\$54.00	\$763,020.00
		24B425	34	10,380	FT	\$51.00	\$529,380.00
		24B400	32	8,160	FT	\$48.00	\$391,680.00
		24B375	30	4,000	FT	\$45.00	\$180,000.00
		24B350	28	15,830	FT	\$42.00	\$664,860.00
		24B325	26	15,740	FT	\$39.00	\$613,860.00
		24B300	24	18,940	FT	\$36.00	\$681,840.00
		24B275	22	11,970	FT	\$33.00	\$395,010.00
		24B250	22	11,630	FT	\$33.00	\$383,790.00
		24B225	22	4,040	FT	\$33.00	\$133,320.00
		24B200	22	6,670	FT	\$33.00	\$220,110.00
		24B175	22	22,640	FT	\$33.00	\$747,120.00
		24B150	22	4,360	FT	\$33.00	\$143,880.00
		24B125	22	10,380	FT	\$33.00	\$342,540.00
		24B100	22	16,670	FT	\$33.00	\$550,110.00
		24B75	22	2,910	FT	\$33.00	\$96,030.00
		24B50	22	12,200	FT	\$33.00	\$402,600.00
		20B625	35	1,000	FT	\$53.00	\$53,000.00
		20B600	33	1,000	FT	\$50.00	\$50,000.00
		20B575	32	1,000	FT	\$48.00	\$48,000.00
		20B550	30	1,000	FT	\$45.00	\$45,000.00
		20B525	29	1,000	FT	\$44.00	\$44,000.00
		20B500	28	1,000	FT	\$42.00	\$42,000.00
		20B475	26	1,000	FT	\$39.00	\$39,000.00
		20B450	25	5,060	FT	\$38.00	\$192,280.00
		20B425	23	12,010	FT	\$35.00	\$420,350.00
		PAGE SUBTOTAL					\$11,134,550.00

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nom Hyndman 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE:  
CUTTER 2040 DIVERSION ALTERNATIVE

25-Sep-2001 PROJECT:

NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		20B400	22	5,000	FT	\$33.00	\$165,000.00
		20B375	21	1,000	FT	\$32.00	\$32,000.00
		20B350	19	1,000	FT	\$29.00	\$29,000.00
		20B325	18	1,000	FT	\$27.00	\$27,000.00
		20B300	17	1,000	FT	\$26.00	\$26,000.00
		20B275	17	1,000	FT	\$26.00	\$26,000.00
		16B600	22	120	FT	\$33.00	\$3,960.00
		16B475	17	4,000	FT	\$26.00	\$104,000.00
		16B425	15	1,890	FT	\$23.00	\$43,470.00
		16B400	14	650	FT	\$21.00	\$13,650.00
		16B325	13	10,000	FT	\$20.00	\$200,000.00
		16B300	13	7,230	FT	\$20.00	\$144,600.00
		16B275	13	1,760	FT	\$20.00	\$35,200.00
		16B250	13	3,000	FT	\$20.00	\$60,000.00
		16B225	13	1,810	FT	\$20.00	\$36,200.00
		16B200	13	1,000	FT	\$20.00	\$20,000.00
		16B175	13	2,000	FT	\$20.00	\$40,000.00
		16B100	13	3,000	FT	\$20.00	\$60,000.00
		16B75	13	1,450	FT	\$20.00	\$29,000.00
		16B50	13	10,060	FT	\$20.00	\$201,200.00
		16B25	13	5,000	FT	\$20.00	\$100,000.00
		14B525	15	2,550	FT	\$23.00	\$58,650.00
		14B500	14	920	FT	\$21.00	\$19,320.00
		14B475	13	970	FT	\$20.00	\$19,400.00
		14B450	12	570	FT	\$18.00	\$10,260.00
		14B425	12	8,910	FT	\$18.00	\$160,380.00
		14B400	12	4,180	FT	\$18.00	\$75,240.00
		14B375	12	6,000	FT	\$18.00	\$108,000.00
		14B350	12	11,180	FT	\$18.00	\$201,240.00
		14B325	12	10,040	FT	\$18.00	\$180,720.00
		14B275	12	4,370	FT	\$18.00	\$78,660.00
		14B250	12	4,820	FT	\$18.00	\$86,760.00
		14B225	12	5,570	FT	\$18.00	\$100,260.00
		14B200	12	4,860	FT	\$18.00	\$87,480.00
		14B175	12	6,920	FT	\$18.00	\$124,560.00
		14B150	12	2,000	FT	\$18.00	\$36,000.00
		14B125	12	4,790	FT	\$18.00	\$86,220.00
		14B100	12	3,260	FT	\$18.00	\$58,680.00
		14B75	12	1,850	FT	\$18.00	\$33,300.00
		<b>PAGE SUBTOTAL</b>					<b>\$2,921,410.00</b>

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm H. Goodman 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: CUTTER 2040 DIVERSION ALTERNATIVE

25-Sep-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		14B25	12	4,000	FT	\$18.00	\$72,000.00
		10B525	9	1,020	FT	\$14.00	\$14,280.00
		10B475	9	1,080	FT	\$14.00	\$15,120.00
		10B450	9	1,000	FT	\$14.00	\$14,000.00
		10B400	9	9,790	FT	\$14.00	\$137,060.00
		10B375	9	1,000	FT	\$14.00	\$14,000.00
		10B350	9	7,260	FT	\$14.00	\$101,640.00
		10B325	9	15,000	FT	\$14.00	\$210,000.00
		10B300	9	13,000	FT	\$14.00	\$182,000.00
		10B275	9	1,000	FT	\$14.00	\$14,000.00
		10B250	9	8,730	FT	\$14.00	\$122,220.00
		10B225	9	6,000	FT	\$14.00	\$84,000.00
		10B200	9	5,000	FT	\$14.00	\$70,000.00
		10B150	9	5,000	FT	\$14.00	\$70,000.00
		10B125	9	6,580	FT	\$14.00	\$92,120.00
		10B100	9	4,000	FT	\$14.00	\$56,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		8.34 cfs, 291 ft. head, 1+1 units/plant		1	EA	\$360,000.00	\$360,000.00
		8.34 cfs, 420 ft. head, 1+1 units/plant		1	EA	\$450,000.00	\$450,000.00
		8.34 cfs, 471 ft. head, 1+1 units/plant		1	EA	\$500,000.00	\$500,000.00
		7.84 cfs, 277 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
		6.79 cfs, 450 ft. head, 1+1 units/plant		1	EA	\$410,000.00	\$410,000.00
		4.64 cfs, 400 ft. head, 1+1 units/plant		1	EA	\$290,000.00	\$290,000.00
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 6 total, 1 at each pmp. plt.)	8140	6	EA	\$100,000.00	\$600,000.00
		<b>Furnish and install water regulating tanks,</b> <b>as follows:</b>	8140				
		84,602 gallons, 40 ft. Dia. X 9 ft. Height, 2 tanks		2	EA	\$130,000.00	\$260,000.00
		<b>Furnish and install water forebay tanks,</b> <b>as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 6 tanks		6	EA	\$55,000.00	\$330,000.00
<b>PAGE SUBTOTAL</b>							<b>\$4,798,440.00</b>

BY Art Streifel		APPROVED		BY K. Copeland		CHECKED <i>Norm Hyndman 9/26/01</i>	
DATE PREPARED 25-Sep-2001		DATE		DATE 09/25/2001		PRICE LEVEL	

FEATURE:  
CUTTER 2040 DIVERSION ALTERNATIVE

25-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Huerfano (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Nageezi (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		Counselor (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Torreon (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Huerfano (0.50 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Nageezi (1.05 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Counselor (2.62 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$140,000.00	\$140,000.00
		Torreon (2.01 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Jicarilla Apache (2.15 cfs, 162 ft. head,, 1 + 1 stdby.)		1	EA	\$130,000.00	\$130,000.00
		PAGE SUBTOTAL					\$6,590,000.00
		TOTAL FOR ALL PAGES					\$25,444,400.00

QUANTITIES

PRICES

BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm / Copeland 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

FEATURE: NAVAJO GALLUP WATER SUPPLY  
 APPRAISAL-GRADE ESTIMATE  
 SJR PNM Alternative

PROJECT: Navajo-Gallup Water Supply

DIVISION / REGION: UC - New Mexico

CONTRACT/SPEC:

FILE: JAWKSHTS\CY2001\GALLUP2.WK4

WOID: DUR30

PLANT ACCT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
			<b>D-8440</b>				
	1	Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire		107	wmile	\$100,600.00	\$10,764,200.00
		Conductor: 336 kcmil ACSR	3/c	15,840	ft	\$2.40	
		OHG: 1/2" HSS	1/grd	5,280	ft	\$1.00	
		OPGW: 24 fiber	1/op-grd	5,280	ft	\$4.00	
		Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky	includes ins	7.54	strut/mi	\$4,800.00	
		Two-pole wood structures about 55-65 feet tall, about 700 foot spans	Unit cost			\$100,608.00	
	2a	Electrical equipment at each plant, including engine-generator w/full plant capacity		20	ea	\$35,000.00	\$700,000.00
	2b	Electrical equipment at each water treatment plant		2	ea	\$35,000.00	\$70,000.00
	3	Electrical equipment at each turnout		21	ea	\$5,000.00	\$105,000.00
	4	SCADA equipment including controller					
		Each plant		20	ea	\$5,000.00	\$100,000.00
		Each turnout		21	ea	\$5,000.00	\$105,000.00
	5	New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
	6	Communication equipment:					
		Each plant		20	ea	\$20,000.00	\$400,000.00
		Each turnout		21	ea	\$20,000.00	\$420,000.00
	7	Security system equipment at each plant		20	ea	\$5,000.00	\$100,000.00
	8	Substation near Huerfano		1	LS	\$1,000,000.00	\$1,000,000.00
		Tap structure, switch, circuit breaker, transformer					
	9	Power tap-poles, transformer					
		Each plant		20	ea	\$60,000.00	\$1,200,000.00
		Each turnout		21	ea	\$60,000.00	\$1,260,000.00
		<b>SUBTOTAL</b>					<b>\$16,524,200.00</b>

QUANTITIES		PRICES	
BY Lisa Gamuciello D-8440	APPROVED	BY D-8170 L. Pedde	CHECKED RICC 10/15/01
DATE PREPARED 09/07/2001	DATE	DATE 09-Oct-2001	PRICE LEVEL

FEATURE:

12-Oct-2001

PROJECT:

Navajo Gallup WSP

SJR PNM Alternative  
2020 Demand (23.89 MGD)

Quantities for tanks, buildings, and process ponds for  
2040 demand. All other quantities for 2020 demand

DIVISION:

FILE:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\PMN-ESTF.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2.700 SF of Mezzanine	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		ZeeWeed Water Treatment System		23,890,000.00	GPD	\$0.42	\$10,033,800
3		Concrete Reinforced tanks for ZeeWeed Systems		1047	CY	\$400.00	\$418,800
4		Concrete Flocculation tank		198	CY	\$400.00	\$79,200
5		Concrete for Splitter Tank		50	CY	\$400.00	\$20,000
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000
7		Ultraviolet Disinfection Units		5	EA	\$88,200.00	\$441,000
8		Excavation of Clearwell		7700	CY	\$10.00	\$77,000
9		Backfill around clearwell after construction		2900	CY	\$15.00	\$43,500
10		Construction of Clearwell		1053	CY	\$400.00	\$421,200
11		Excavation for wastewater treatment ponds		8570	CY	\$8.00	\$68,560
12		Excavation for settling ponds		53,000	CY	\$6.00	\$318,000
13		Clear Well Mixers		6	Ea	\$15,000.00	\$90,000
14		Sediment Drying Beds					
		Gravel		20,400	CY	\$20.00	\$408,000
		Sand for Settling Pond Sediment		10,200	CY	\$15.00	\$153,000
		Concrete for sides		84	CY	\$400.00	\$33,600
		4-inch PVC perforated pipe		25,000	LF	\$6.00	\$150,000
15		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eves		2,500.00	SF	\$110.00	\$275,000.00
16		45 mil Polypropylene Liner for Wastewater Ponds Installation		34,500.00	SF	\$0.50	\$17,250
				34,500.00	SF	\$0.20	\$6,900
17		6-inch thick reinforced concrete liner for settling ponds		4100	CY	\$150.00	\$615,000
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$4,720,000.00 ✓
		Subtotal					\$20,449,810.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$2,040,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$22,689,810.00</b> ✓

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED BY	BY K. Copeland	CHECKED <i>JP 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED	DATE 12-Oct-2001	PRICE LEVEL

<b>FEATURE:</b>  SJR PNM Alternative Additional treatment units to upgrade the plant by 14.36 MGD with a total capacity of 38.25 MGD	11-Oct-2001	<b>PROJECT:</b>  DIVISION:  FILE: H:\D8170\EST\SPREADSH\CPELAND\NAVAJO-1\PMN-EST\WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		ZeeWeed Water Treatment System		14,360,000		\$0.46	\$6,605,600
2		Ultraviolet Disinfection Units		2		\$100,000	\$200,000
		Unlisted 5%					\$340,000
<b>TOTAL</b>							<b>\$7,145,600.00</b>

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard	Checked BY	BY K. Copeland	CHECKED <i>LP</i> 10/11/01
DATE PREPARED October 9, 2001	APPROVED	DATE 11-Oct-2001	PRICE LEVEL

<b>FEATURE:</b> 12-Oct-2001 <b>San Juan Alternative Cutter Diversion</b> Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand Includes Jicarilla Apache Nation Demand	<b>PROJECT:</b> Navajo Gallup WSP <hr/> <b>DIVISION:</b> <hr/> <b>FILE:</b> H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1CUT-ESTA.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building	D8230	4,600	SF	\$90.00	\$414,000
2		ZeeWeed Water Treatment System		3,740,000	GPD	\$0.70	\$2,618,000
3		Concrete Reinforced tanks for ZeeWeed Systems		110	CY	\$500	\$55,000
4		Concrete Flocculation tank		61	CY	\$500	\$30,500
5		Reinforced Concrete for Splitter Tank		20	CY	\$500	\$10,000
6		Reinforced Concrete for Rapid mix tank		20	CY	\$500	\$10,000
7		Ultraviolet Disinfection Units Model 1250		3	Ea	\$120,000	\$360,000
8		Excavation of Clearwell		1,820	CY	\$10	\$18,200
9		Backfill around clearwell after construction		1,270	CY	\$15	\$19,050
10		Reinforced concrete for clearwell		213	CY	\$500	\$106,500
11		Excavation of Wastewater Polishing Ponds		2,100	CY	\$9	\$18,900
12		Mixers for ClearWell		6	Ea	\$15,000	\$90,000
13		Sediment Drying Beds					
		Sand for Wastewater Polishing Ponds		25	CY	\$20	\$500
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds		11,500.00	SF	\$0.50	\$5,750
		Installation		11,500.00	SF	\$0.20	\$2,300
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc. )					\$1,210,000.00 ✓
		Subtotal					\$5,243,700.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$520,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$5,963,700.00</b> ✓

QUANTITIES		PRICES	
BY Glen Howard	CHECKED	BY K. Copeland	CHECKED <i>AP 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

**FEATURE:**  
 11-Oct-2001  
**San Juan Alternative Cutter Diversion**  
 Additional treatment units to upgrade the treatment plant by 1.65 MGD to a total capacity of 5.39 MGD  
 Includes Jicarilla Apache Nation Demand

**PROJECT:**  
**DIVISION:**  
**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\CUT-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		ZeeWeed Water Treatment System		1,650,000.00	GPD	\$0.70	\$1,155,000.00
		Unlisted 5%					\$58,000.00
<b>TOTAL</b>							<b>\$1,213,000.00</b>

QUANTITIES		PRICES	
BY Glenn Howard		BY K. Copeland	CHECKED <i>[Signature]</i> 10/11/01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 11-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks</b> as follows: (Capacities from DePauli Report, Appendix H)					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Appen		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used - assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES		PRICES	
BY	APPROVED	BY	CHECKED
Kevin Moran & Marc DePauli			
DATE PREPARED	DATE	DATE	PRICE LEVEL
19-Feb-2002			

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR SJR INFILTRATION  
ALTERNATIVE - YEAR 2020**

FEATURE:  
GJR INFILTRATION 2020 ALTERNATIVE

26-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	1,239,500	CY	\$2.00	\$2,479,000.00
		Excavation, rock	8140	178,500	CY	\$8.00	\$1,428,000.00
		Backfill, common	8140	1,166,700	CY	\$1.50	\$1,750,050.00
		Furnish and install pipe as follows:	8140				
		48B300	92	1,000	FT	\$120.00	\$120,000.00
		48B275	88	1,000	FT	\$110.00	\$110,000.00
		48B250	88	1,000	FT	\$110.00	\$110,000.00
		48B225	88	1,000	FT	\$110.00	\$110,000.00
		48B200	88	1,000	FT	\$110.00	\$110,000.00
		48B175	88	1,000	FT	\$110.00	\$110,000.00
		48B150	88	19,000	FT	\$110.00	\$2,090,000.00
		48B125	88	32,000	FT	\$110.00	\$3,520,000.00
		48B100	88	10,000	FT	\$110.00	\$1,100,000.00
		48B75	88	1,000	FT	\$110.00	\$110,000.00
		48B25	88	2,150	FT	\$110.00	\$236,500.00
		45B350	124	28,000	FT	\$160.00	\$4,480,000.00
		45B275	77	6,000	FT	\$100.00	\$600,000.00
		45B150	77	15,000	FT	\$100.00	\$1,500,000.00
		45B75	77	3,000	FT	\$100.00	\$300,000.00
		45B50	77	26,000	FT	\$100.00	\$2,600,000.00
		45B25	77	2,840	FT	\$100.00	\$284,000.00
		42B475	117	2,000	FT	\$150.00	\$300,000.00
		42B450	117	14,000	FT	\$150.00	\$2,100,000.00
		42B375	117	11,000	FT	\$150.00	\$1,650,000.00
		42B350	83	20,000	FT	\$100.00	\$2,000,000.00
		42B325	77	11,000	FT	\$100.00	\$1,100,000.00
		42B300	71	32,000	FT	\$90.00	\$2,880,000.00
		42B275	68	2,000	FT	\$90.00	\$180,000.00
		42B250	68	15,000	FT	\$90.00	\$1,350,000.00
		42B225	68	25,000	FT	\$90.00	\$2,250,000.00
		42B200	68	37,410	FT	\$90.00	\$3,366,900.00
		42B175	68	3,720	FT	\$90.00	\$334,800.00

QUANTITIES

PRICES

BY t Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hydeman 9/26/01</i>
DATE PREPARED 26-Sep-2001	DATE	DATE 26-Sep-2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: 26-Sep-2001  
 SJR INFILTRATION 2020 ALTERNATIVE

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		42B150	68	29,000	FT	\$90.00	\$2,610,000.00
		42B125	68	12,610	FT	\$90.00	\$1,134,900.00
		42B100	68	7,000	FT	\$90.00	\$630,000.00
		42B75	68	31,420	FT	\$90.00	\$2,827,800.00
		42B50	68	8,770	FT	\$90.00	\$789,300.00
		42B25	68	11,750	FT	\$90.00	\$1,057,500.00
		30B425	52	7,000	FT	\$70.00	\$490,000.00
		30B350	43	3,000	FT	\$50.00	\$150,000.00
		30B300	36	2,000	FT	\$50.00	\$100,000.00
		30B275	35	2,000	FT	\$40.00	\$80,000.00
		30B250	35	2,000	FT	\$40.00	\$80,000.00
		30B200	35	13,000	FT	\$40.00	\$520,000.00
		30B175	35	2,000	FT	\$40.00	\$80,000.00
		30B150	35	5,000	FT	\$40.00	\$200,000.00
		30B100	35	4,000	FT	\$40.00	\$160,000.00
		30B75	35	2,000	FT	\$40.00	\$80,000.00
		30B25	35	9,760	FT	\$40.00	\$390,400.00
		21B325	20	3,000	FT	\$30.00	\$90,000.00
		21B300	18	28,000	FT	\$27.00	\$756,000.00
		21B250	17	2,000	FT	\$26.00	\$52,000.00
		21B225	17	7,000	FT	\$26.00	\$182,000.00
		21B200	17	7,000	FT	\$26.00	\$182,000.00
		21B175	17	11,000	FT	\$26.00	\$286,000.00
		21B150	17	2,000	FT	\$26.00	\$52,000.00
		21B50	17	7,000	FT	\$26.00	\$182,000.00
		21B25	17	21,420	FT	\$26.00	\$556,920.00
		18B300	15	52,000	FT	\$23.00	\$1,196,000.00
		18B275	15	33,000	FT	\$23.00	\$759,000.00
		18B200	15	15,000	FT	\$23.00	\$345,000.00
		18B25	15	17,220	FT	\$23.00	\$396,060.00
		12B400	10	11,000	FT	\$15.00	\$165,000.00
		12B375	10	8,000	FT	\$15.00	\$120,000.00
		12B250	10	10,000	FT	\$15.00	\$150,000.00
		12B175	10	4,000	FT	\$15.00	\$60,000.00
		12B150	10	4,000	FT	\$15.00	\$60,000.00
		12B25	10	1,020	FT	\$15.00	\$15,300.00
				720,090	FT		

QUANTITIES

PRICES

BY rt Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hyndman 7/26/01</i>
DATE PREPARED 26-Sep-2001	DATE	DATE 26-Sep-2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

<b>FEATURE:</b> SJR INFILTRATION 2020 ALTERNATIVE	<b>26-Sep-2001</b>	<b>PROJECT:</b> NAVAJO - GALLUP WATER SUPPLY PROJECT
		<b>DIVISION:</b>
		<b>UNIT:</b>
H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4		

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		40.222 cfs,155 ft. head, 5+1 units/plant		1	EA	\$970,000.00	\$970,000.00
		36.97 cfs,145 ft. head, 4+1 units/plant		1	EA	\$870,000.00	\$870,000.00
		35.42 cfs,439 ft. head, 4+1 units/plant		1	EA	\$1,660,000.00	\$1,660,000.00
		35.42 cfs,196 ft. head, 4+1 units/plant		1	EA	\$980,000.00	\$980,000.00
		33.19 cfs,316 ft. head, 4+1 units/plant		1	EA	\$1,230,000.00	\$1,230,000.00
		32.77 cfs,199 ft. head, 4+1 units/plant		1	EA	\$920,000.00	\$920,000.00
		31.88 cfs,326 ft. head, 4+1 units/plant		1	EA	\$1,200,000.00	\$1,200,000.00
		27.78 cfs,352 ft. head, 3+1 units/plant		1	EA	\$1,120,000.00	\$1,120,000.00
		26.67 cfs,406 ft. head, 3+1 units/plant		1	EA	\$1,200,000.00	\$1,200,000.00
		8.2 cfs,303 ft. head, 1+1 units/plant		1	EA	\$370,000.00	\$370,000.00
		6.27 cfs,268 ft. head, 1+1 units/plant		1	EA	\$280,000.00	\$280,000.00
		2.94 cfs,173 ft. head, 1+1 units/plant		1	EA	\$150,000.00	\$150,000.00
		2.20 cfs,280 ft. head, 1+1 units/plant		1	EA	\$150,000.00	\$150,000.00
		2.13 cfs,386 ft. head, 1+1 units/plant		1	EA	\$180,000.00	\$180,000.00
				14			
		<b>Furnish and install air chambers</b>	8140	14	EA	\$100,000.00	\$1,400,000.00
		(20 ft. Dia. Sphere, 14 total, 1 at each pmp. plt.)					
		<b>Furnish and install water regulating tanks,</b>					
		<b>as follows:</b>					
		144,708 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		125,343 gallons, 40 ft. Dia. X 13 ft. Height		1	EA	\$140,000.00	\$140,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		<b>Furnish and install water forebay tanks,</b>					
		<b>as follows:</b>					
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 14 tanks		14	EA	\$55,000.00	\$770,000.00
		<b>Furnish and install water storage tanks,</b>	8140				
		<b>as follows:</b>					
		Sanostee (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Newcomb (20ft. H X 140 ft. Dia.)		1	EA	\$1,040,000.00	\$1,040,000.00
		Sheepsprings ( 20 ft. H X 100 ft. Dia.)		1	EA	\$600,000.00	\$600,000.00
		Naschitti (20 ft. H X 140 ft. Dia.)		1	EA	\$1,040,000.00	\$1,040,000.00
		Tohatchi (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Twin Lakes (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		Rock Springs (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Window Rock (20 ft. H X 370 ft. Dia.)		1	EA	\$5,780,000.00	\$5,780,000.00
		Coyote Canyon (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Standing Rock (20 ft. H X 40 ft. Dia.)		1	EA	\$130,000.00	\$130,000.00
		Dalton Pass (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00

<b>QUANTITIES</b>		<b>PRICES</b>	
BY	APPROVED	BY	CHECKED
rt Streifel		K. Copeland	<i>Nam Hyndman 9/26/01</i>
DATE PREPARED	DATE	DATE	PRICE LEVEL
26-Sep-2001		26-Sep-2001	

**ESTIMATE WORKSHEET**

<b>FEATURE:</b> SJR INFILTRATION 2020 ALTERNATIVE	<b>26-Sep-2001</b>	<b>PROJECT:</b> NAVAJO - GALLUP WATER SUPPLY PROJECT
		<b>DIVISION:</b>
		<b>UNIT:</b>
H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4		

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>Ranney Infiltration Well Collection System</b>							
		Furnish and install Ranney Infiltration Wells	8140	16	EA	\$1,000,000.00	\$16,000,000.00
		Furnish and install well pumps, 2.32 cfs, 50 ft. TDH	8140	32	EA	\$25,000.00	\$800,000.00
<b>Pipeline Collection System</b>							
		Furnish and install pipe as follows:	8140				
		30B50	35	610	FT	\$40.00	\$24,400.00
		24B50	22	8,480	FT	\$33.00	\$279,840.00
		18B50	15	1,470	FT	\$23.00	\$33,810.00
		16B50	13	1,300	FT	\$20.00	\$26,000.00
		14B50	12	1,520	FT	\$18.00	\$27,360.00
		10B50	9	2,320	FT	\$14.00	\$32,480.00
				15,700			
		Furnish and install Collection Tank 40 ft. Diameter X 15 ft. Height, 141,000 gallons	8140	1	EA	\$145,000.00	\$145,000.00
		Furnish and install Pumping Plant, 5 (4+1 STBY) 36.97 cfs, 155 ft. head	8140	1	EA	\$900,000.00	\$900,000.00
		<b>Furnish and install water storage tanks, as follows:</b>	8140				
		Manuelito (20 ft. H X 90 ft. Dia.)		1	EA	\$490,000.00	\$490,000.00
		Red Rock, Breadsprings, Chichiltah (20 ft. H X 230 ft. Dia.)		1	EA	\$2,460,000.00	\$2,460,000.00
		Iyanbito (20 ft. H X 110 ft. Dia.)		1	EA	\$690,000.00	\$690,000.00
		Pinedale, Mariano Lake (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Church Rock (20 ft. H X 150 ft. Dia.)		1	EA	\$1,170,000.00	\$1,170,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		0.38 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$70,000.00	\$70,000.00
		2.36 cfs, 162 ft. head, 3+1 units/plant		1	EA	\$140,000.00	\$140,000.00
		0.52 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		0.71 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		1.03 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$100,000.00	\$100,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Sanostee (1.18 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Newcomb (0.89 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Sheepsprings (0.42 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Naschitti (0.89 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Tohatchi (1.16 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Twin Lakes (1.10 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Rock Springs (1.93 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Window Rock (6.27 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$230,000.00	\$230,000.00

<b>QUANTITIES</b>		<b>PRICES</b>	
BY rt Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hydman 9/26/01</i>
DATE PREPARED 26-Sep-2001	DATE	DATE 26-Sep-2001	PRICE LEVEL



**FEATURE:**  
**CUTTER 2020 DIVERSION ALTERNATIVE**  
**with Jicarilla Apache**

26-Sep-2001

**PROJECT:**  
**NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	442,900	CY	\$2.00	\$885,800.00
		Excavation, rock	8140	12,800	CY	\$8.00	\$102,400.00
		Backfill, common	8140	417,400	CY	\$1.50	\$626,100.00
		<b>Furnish and install pipe as follows:</b>	8140				
		20B650	36	1,000	FT	\$54.00	\$54,000.00
		20B625	35	740	FT	\$53.00	\$39,220.00
		20B600	33	1,000	FT	\$50.00	\$50,000.00
		20B575	32	2,960	FT	\$48.00	\$142,080.00
		20B550	30	2,540	FT	\$45.00	\$114,300.00
		20B525	29	5,340	FT	\$44.00	\$234,960.00
		20B500	28	2,750	FT	\$42.00	\$115,500.00
		20B475	26	13,990	FT	\$39.00	\$545,610.00
		20B450	25	7,060	FT	\$38.00	\$268,280.00
		20B425	23	6,480	FT	\$35.00	\$226,800.00
		20B400	22	7,000	FT	\$33.00	\$231,000.00
		20B375	21	7,430	FT	\$32.00	\$237,760.00
		20B350	19	19,390	FT	\$29.00	\$562,310.00
		20B325	18	11,590	FT	\$27.00	\$312,930.00
		20B300	17	16,100	FT	\$26.00	\$418,600.00
		20B275	17	11,970	FT	\$26.00	\$311,220.00
		20B250	17	11,630	FT	\$26.00	\$302,380.00
		20B225	17	4,700	FT	\$26.00	\$122,200.00
		20B200	17	10,370	FT	\$26.00	\$269,620.00
		20B175	17	18,270	FT	\$26.00	\$475,020.00
		20B150	17	13,730	FT	\$26.00	\$356,980.00
		20B125	17	1,020	FT	\$26.00	\$26,520.00
		20B100	17	16,670	FT	\$26.00	\$433,420.00
		20B75	17	2,910	FT	\$26.00	\$75,660.00
		20B50	17	12,200	FT	\$26.00	\$317,200.00
		18B625	28	1,000	FT	\$42.00	\$42,000.00
		18B600	27	1,000	FT	\$41.00	\$41,000.00
		18B575	26	1,000	FT	\$39.00	\$39,000.00
		18B550	25	1,000	FT	\$38.00	\$38,000.00
		18B525	24	1,000	FT	\$36.00	\$36,000.00
		18B500	23	1,000	FT	\$35.00	\$35,000.00
		18B450	20	1,000	FT	\$30.00	\$30,000.00
		18B425	19	12,070	FT	\$29.00	\$350,030.00
		<b>PAGE SUBTOTAL</b>					<b>\$8,468,900.00</b>

**QUANTITIES**

**PRICES**

<b>BY</b> Art Streifel	<b>APPROVED</b>	<b>BY</b> K. Copeland	<b>CHECKED</b> <i>Non Hayden 9/26/01</i>
<b>DATE PREPARED</b> 26-Sep-2001	<b>DATE</b>	<b>DATE</b> 09/26/2001	<b>PRICE LEVEL</b>

**FEATURE:** 25-Sep-2001 **PROJECT:**  
**CUTTER 2020 DIVERSION ALTERNATIVE** NAVAJO - GALLUP WATER SUPPLY PROJECT  
 with Jicarilla Apache

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		18B400	18	10,000	FT	\$27.00	\$270,000.00
		18B375	17	1,000	FT	\$26.00	\$26,000.00
		18B350	16	1,000	FT	\$24.00	\$24,000.00
		18B325	15	1,000	FT	\$23.00	\$23,000.00
		18B300	15	1,000	FT	\$23.00	\$23,000.00
		18B275	15	1,000	FT	\$23.00	\$23,000.00
		14B600	17	120	FT	\$26.00	\$3,120.00
		14B475	13	4,000	FT	\$20.00	\$80,000.00
		14B425	12	1,890	FT	\$18.00	\$34,020.00
		14B400	12	650	FT	\$18.00	\$11,700.00
		14B325	12	9,000	FT	\$18.00	\$162,000.00
		14B300	12	6,230	FT	\$18.00	\$112,140.00
		14B275	12	3,760	FT	\$18.00	\$67,680.00
		14B250	12	3,000	FT	\$18.00	\$54,000.00
		14B225	12	1,810	FT	\$18.00	\$32,580.00
		14B200	12	1,000	FT	\$18.00	\$18,000.00
		14B175	12	2,000	FT	\$18.00	\$36,000.00
		14B100	12	3,000	FT	\$18.00	\$54,000.00
		14B75	12	1,450	FT	\$18.00	\$26,100.00
		14B50	12	10,060	FT	\$18.00	\$181,080.00
		14B25	12	5,000	FT	\$18.00	\$90,000.00
		12B525	11	2,120	FT	\$17.00	\$36,040.00
		12B500	10	640	FT	\$15.00	\$9,600.00
		12B475	10	1,670	FT	\$15.00	\$25,050.00
		12B425	10	5,330	FT	\$15.00	\$79,950.00
		12B400	10	6,550	FT	\$15.00	\$98,250.00
		12B375	10	6,790	FT	\$15.00	\$101,850.00
		12B350	10	3,150	FT	\$15.00	\$47,250.00
		12B325	10	17,160	FT	\$15.00	\$257,400.00
		12B300	10	1,010	FT	\$15.00	\$15,150.00
		12B275	10	1,840	FT	\$15.00	\$27,600.00
		12B250	10	4,370	FT	\$15.00	\$65,550.00
		12B225	10	2,140	FT	\$15.00	\$32,100.00
		12B200	10	6,190	FT	\$15.00	\$92,850.00
		12B175	10	9,970	FT	\$15.00	\$149,550.00
		12B150	10	3,000	FT	\$15.00	\$45,000.00
		12B125	10	2,180	FT	\$15.00	\$32,700.00
		12B100	10	4,790	FT	\$15.00	\$71,850.00
		12B75	10	3,000	FT	\$15.00	\$45,000.00
		<b>PAGE SUBTOTAL</b>					<b>\$2,584,160.00</b>

QUANTITIES		PRICES	
BY rt Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non / Hypelma 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

**FEATURE:**  
**CUTTER 2020 DIVERSION ALTERNATIVE**  
 with Jicarilla Apache

25-Sep-2001

**PROJECT:**  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		12B50	10	1,850	FT	\$15.00	\$27,750.00
		12B25	10	4,000	FT	\$15.00	\$60,000.00
		8B525	7	1,020	FT	\$11.00	\$11,220.00
		8B475	7	2,080	FT	\$11.00	\$22,880.00
		8B425	7	890	FT	\$11.00	\$9,790.00
		8B400	7	9,900	FT	\$11.00	\$108,900.00
		8B375	7	2,260	FT	\$11.00	\$24,860.00
		8B350	7	10,000	FT	\$11.00	\$110,000.00
		8B325	7	15,000	FT	\$11.00	\$165,000.00
		8B300	7	8,000	FT	\$11.00	\$88,000.00
		8B275	7	3,730	FT	\$11.00	\$41,030.00
		8B250	7	7,000	FT	\$11.00	\$77,000.00
		8B225	7	6,000	FT	\$11.00	\$66,000.00
		8B200	7	4,000	FT	\$11.00	\$44,000.00
		8B150	7	6,000	FT	\$11.00	\$66,000.00
		8B125	7	5,580	FT	\$11.00	\$61,380.00
		8B100	7	4,000	FT	\$11.00	\$44,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		5.78 cfs, 302 ft. head, 1+1 units/plant		1	EA	\$280,000.00	\$280,000.00
		5.78 cfs, 407 ft. head, 1+1 units/plant		1	EA	\$340,000.00	\$340,000.00
		5.78 cfs, 500 ft. head, 1+1 units/plant		1	EA	\$400,000.00	\$400,000.00
		5.52 cfs, 286 ft. head, 1+1 units/plant		1	EA	\$270,000.00	\$270,000.00
		4.90 cfs, 453 ft. head, 1+1 units/plant		1	EA	\$320,000.00	\$320,000.00
		2.75 cfs, 357 ft. head, 1+1 units/plant		1	EA	\$200,000.00	\$200,000.00
				6			
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 6 total, 1 at each pmp. plt.)	8140	6	EA	\$100,000.00	\$600,000.00
		<b>Furnish and install water regulating tanks,</b> <b>as follows:</b>	8140				
		84,602 gallons, 40 ft. Dia. X 9 ft. Height, 2 tanks		2	EA	\$130,000.00	\$260,000.00
		<b>Furnish and install water forebay tanks,</b> <b>as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 6 tanks		6	EA	\$55,000.00	\$330,000.00
		<b>PAGE SUBTOTAL</b>					\$4,027,810.00

QUANTITIES		PRICES	
BY rt Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nom Hydona 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: 26-Sep-2001  
 CUTTER 2020 DIVERSION ALTERNATIVE  
 with Jicarilla Apache

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSSTSTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks,</b>	8140				
		<b>as follows:</b>					
		Huerfano (20 ft. H X 80 ft. Dia.)		1	EA	\$420,000.00	\$420,000.00
		Nageezi (20 ft. H X 120 ft. Dia.)		1	EA	\$790,000.00	\$790,000.00
		Counselor (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Torreon (20 ft. H X 160 ft. Dia.)		1	EA	\$1,290,000.00	\$1,290,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Huerfano (0.26 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Nageezi (0.62 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$80,000.00	\$80,000.00
		Counselor (1.61 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Torreon (1.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Jicarilla Apache (2.15 cfs, 162 ft. head., 1 + 1 stdby.)		1	EA	\$130,000.00	\$130,000.00
		PAGE SUBTOTAL					\$4,420,000.00
		TOTAL FOR ALL PAGES					\$19,500,870.00

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hydon 9/26/01</i>
DATE PREPARED 26-Sep-2001	DATE	DATE 09/26/2001	PRICE LEVEL

FEATURE: **NAVAJO GALLUP WATER SUPPLY APPRAISAL-GRADE ESTIMATE**  
**SJR Infiltration Alternative**

PROJECT: **Navajo-Gallup Water Supply**  
 DIVISION / REGION: **UC - New Mexico**  
 CONTRACT/SPEC:  
 FILE: J:\WKSHTS\CY2001\GALLUP2.WK4

WOID: **DUR30**

PLANT PAY 09:27 AM  
 ACCT. ITEM DESCRIPTION

CODE QUANTITY UNIT UNIT PRICE AMOUNT

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
			<b>D-8440</b>				
	1	Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire		<b>115</b>	wmile	<b>\$100,600.00</b>	<b>\$11,569,000.00</b>
		Conductor: 336 kcmil ACSR	3/c	15,840	ft	\$2.40	
		OHG: 1/2" HSS	1/grd	5,280	ft	\$1.00	
		OPGW: 24 fiber	1/op-grd	5,280	ft	\$4.00	
		Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky	includes ins	7.54	strut/mi	\$4,800.00	
		Two pole wood structures about 55-65 feet tall, about 700 foot spans	Unit cost			\$100,608.00	
	2a	Electrical equipment at each plant, including engine-generator w/full plant capacity		21	ea	\$35,000.00	\$735,000.00
	2b	Electrical equipment at each treatment plant		2	ea	\$35,000.00	\$70,000.00
	3	Electrical equipment at each turnout		6	ea	\$5,000.00	\$30,000.00
	4	SCADA equipment including controller					
		Each plant		21	ea	\$5,000.00	\$105,000.00
		Each turnout		21	ea	\$5,000.00	\$105,000.00
		Infiltration system		1	ea	\$5,000.00	\$5,000.00
	5	New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
	6	Communication equipment:					
		Each plant		21	ea	\$20,000.00	\$420,000.00
		Each turnout		21	ea	\$20,000.00	\$420,000.00
		Infiltration system		1	ea	\$10,000.00	\$10,000.00
	7	Security system equipment at each plant		21	ea	\$5,000.00	\$105,000.00
	8	Substation near Huerfano		1	LS	\$1,000,000.00	\$1,000,000.00
		Tap structure, switch, circuit breaker, transformer					
	9	Power tap-poles, transformer					
		Each plant		21	ea	\$60,000.00	\$1,260,000.00
		Each turnout		21	ea	\$60,000.00	\$1,260,000.00
		Infiltration system		1	ea	\$60,000.00	\$60,000.00

QUANTITIES

PRICES

BY Lisa Gamuciello  
 D-8440

APPROVED

BY D-8170  
 L. Pedde

CHECKED

DATE PREPARED  
 07-Sep-2001

DATE

DATE  
 09-Oct-2001

PRICE LEVEL

FEATURE: NAVAJO GALLUP WATER SUPPLY  
 APPRAISAL-GRADE ESTIMATE  
 SJR Infiltration Alternative

PROJECT: Navajo-Gallup Water Supply

DIVISION / REGION: UC - New Mexico

CONTRACT/SPEC:

FILE: J:\WKSHTS\CY2001\GALLUP2.WK4

WOID: DUR30

PLANT ACCT PAY ITEM 09:27 AM

DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT
<b>INFILTRATION SYSTEM:</b>					
10 Furnishing and installing	D-8440				
2" plastic-coated rigid steel conduit		16,000	ft	\$22.00	\$352,000.00
1/C #1 AWG cable		32,000	ft	\$1.80	\$57,600.00
1/C #12 AWG cable		243,000	ft	\$0.60	\$145,800.00
11 Infiltration monitoring equipment-transducers, etc.		26	ea	\$5,000.00	\$130,000.00
<b>SUBTOTAL</b>					<b>\$18,139,400.00</b>

QUANTITIES

PRICES

BY D-8440  
 Lisa Gamuciello

APPROVED

DATE PREPARED 09/07/2001

BY D-8170  
 L. Pedde

CHECKED RK C 10/15/01

DATE 09-Oct-2001

PRICE LEVEL

<b>FEATURE:</b> 12-Oct-2001 <b>SJR Infiltration Alternative</b> <b>2020 Demand (23.89 MGD)</b> Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand	<b>PROJECT:</b> Navajo Gallup WSP <hr/> <b>DIVISION:</b> <hr/> <b>FILE:</b> H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\SJR-ESTF.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2.700 SF of Mezzanine	D8230	27.200	SF	\$75.00	\$2,040,000.00
2		ZeeWeed Water Treatment System		23,890,000.00	GPD	\$0.46	\$10,989,400.00
3		Concrete Reinforced tanks for ZeeWeed Systems		1047	CY	\$400.00	\$418,800.00
4		Concrete Flocculation tank		198	CY	\$400.00	\$79,200.00
5		Concrete for Splitter Tank		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		7700	CY	\$10.00	\$77,000.00
9		Backfill around clearwell after construction		2900	CY	\$15.00	\$43,500.00
10		Construction of Clearwell		1053	CY	\$400.00	\$421,200.00
11		Excavation for wastewater treatment ponds		8570	CY	\$8.00	\$68,560.00
12		Clear Well Mixers		6	Ea	\$15,000.00	\$90,000.00
13		Sediment Drying Beds Sand for Wastewater Polishing Ponds Sediment		125	CY	\$15.00	\$1,875.00
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eaves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		34,500.00 34,500.00	SF SF	\$0.50 \$0.20	\$17,250 \$6,900
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc. )					\$4,520,000.00 ✓
		Subtotal					\$19,588,685.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$1,960,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$21,748,685.00</b> ✓

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard	CHECKED BY	BY K. Copeland	CHECKED <i>dp 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED	DATE 12-Oct-2001	PRICE LEVEL

**FEATURE:** 12-Oct-2001  
**San Juan Alternative Cutter Diversion**  
 Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand  
 Includes Jicarilla Apache Nation Demand

**PROJECT:**  
 Navajo Gallup WSP  
**DIVISION:**  
**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\CUT-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building	D8230	4,600	SF	\$90.00	\$414,000
2		ZeeWeed Water Treatment System		3,740,000	GPD	\$0.70	\$2,618,000
3		Concrete Reinforced tanks for ZeeWeed Systems		110	CY	\$500	\$55,000
4		Concrete Flocculation tank		61	CY	\$500	\$30,500
5		Reinforced Concrete for Splitter Tank		20	CY	\$500	\$10,000
6		Reinforced Concrete for Rapid mix tank		20	CY	\$500	\$10,000
7		Ultraviolet Disinfection Units Model 1250		3	Ea	\$120,000	\$360,000
8		Excavation of Clearwell		1,820	CY	\$10	\$18,200
9		Backfill around clearwell after construction		1,270	CY	\$15	\$19,050
10		Reinforced concrete for clearwell		213	CY	\$500	\$106,500
11		Excavation of Wastewater Polishing Ponds		2,100	CY	\$9	\$18,900
12		Mixers for ClearWell		6	Ea	\$15,000	\$90,000
13		Sediment Drying Beds Sand for Wastewater Polishing Ponds		25	CY	\$20	\$500
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		11,500.00	SF	\$0.50	\$5,750
				11,500.00	SF	\$0.20	\$2,300
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc.)					\$1,210,000.00 ✓
		Subtotal					\$5,243,700.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$520,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$5,963,700.00</b> ✓

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED LP 10-12-01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks</b> as follows: (Capacities from DePauli Report, Appendix H)					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Appen		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used - assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES		PRICES	
BY Kevin Moran & Marc DePauli	APPROVED	BY	CHECKED
DATE PREPARED 19-Feb-2002	DATE	DATE	PRICE LEVEL

**NAVAJO GALLUP WATER SUPPLY PROJECT**

**APPRAISAL LEVEL DESIGNS AND COST ESTIMATES**

**APPENDIX B**

**COST ESTIMATE WORKSHEETS FOR SJR INFILTRATION  
ALTERNATIVE - YEAR 2040**

FEATURE: 26-Sep-2001  
 SJR INFILTRATION 2040 ALTERNATIVE

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	1,413,100	CY	\$2.00	\$2,826,200.00
		Excavation, rock	8140	182,200	CY	\$8.00	\$1,457,600.00
		Backfill, common	8140	1,337,700	CY	\$1.50	\$2,006,550.00
		Furnish and install pipe as follows:	8140				
		48B500	166	590	FT	\$210.00	\$123,900.00
		48B475	166	5,000	FT	\$210.00	\$1,050,000.00
		48B450	166	11,000	FT	\$210.00	\$2,310,000.00
		48B400	132	1,000	FT	\$170.00	\$170,000.00
		48B350	132	1,000	FT	\$170.00	\$170,000.00
		48B325	132	5,000	FT	\$170.00	\$850,000.00
		48B300	92	30,540	FT	\$120.00	\$3,664,800.00
		48B275	88	1,000	FT	\$110.00	\$110,000.00
		48B250	88	9,000	FT	\$110.00	\$990,000.00
		48B225	88	4,000	FT	\$110.00	\$440,000.00
		48B200	88	4,410	FT	\$110.00	\$485,100.00
		48B175	88	6,380	FT	\$110.00	\$701,800.00
		48B150	88	80,000	FT	\$110.00	\$8,800,000.00
		48B125	88	14,450	FT	\$110.00	\$1,589,500.00
		48B100	88	14,910	FT	\$110.00	\$1,640,100.00
		48B75	88	7,360	FT	\$110.00	\$809,600.00
		48B50	88	2,770	FT	\$110.00	\$304,700.00
		48B25	88	6,960	FT	\$110.00	\$765,600.00
		45B500	156	1,000	FT	\$200.00	\$200,000.00
		45B475	156	1,000	FT	\$200.00	\$200,000.00
		48B425	124	9,000	FT	\$160.00	\$1,440,000.00
		45B400	124	12,000	FT	\$160.00	\$1,920,000.00
		45B375	124	9,000	FT	\$160.00	\$1,440,000.00
		45B350	124	1,000	FT	\$160.00	\$160,000.00
		45B300	81	1,000	FT	\$100.00	\$100,000.00
		45B225	77	16,000	FT	\$100.00	\$1,600,000.00
		45B200	77	16,000	FT	\$100.00	\$1,600,000.00
		45B175	77	16,170	FT	\$100.00	\$1,617,000.00
		45B125	77	460	FT	\$100.00	\$46,000.00
		45B75	77	30,910	FT	\$100.00	\$3,091,000.00
		45B50	77	28,170	FT	\$100.00	\$2,817,000.00

QUANTITIES

PRICES

BY t Streifel	APPROVED	BY K. Copeland	CHECKED Norm Hyslop 9/26/01
DATE PREPARED 26-Sep-2001	DATE	DATE 26-Sep-2001	PRICE LEVEL

ESTIMATE WORKSHEET

<b>FEATURE:</b> SJR INFILTRATION 2040 ALTERNATIVE	<b>26-Sep-2001</b>	<b>PROJECT:</b> NAVAJO - GALLUP WATER SUPPLY PROJECT
		<b>DIVISION:</b>
		<b>UNIT:</b>
H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4		

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		42B400	117	3,000	FT	\$150.00	\$450,000.00
		42B375	117	19,000	FT	\$150.00	\$2,850,000.00
		42B350	83	7,000	FT	\$100.00	\$700,000.00
		42B250	68	11,000	FT	\$90.00	\$990,000.00
		42B225	68	21,000	FT	\$90.00	\$1,890,000.00
		42B150	68	330	FT	\$90.00	\$29,700.00
		42B25	68	650	FT	\$90.00	\$58,500.00
		39B500	109	350	FT	\$140.00	\$49,000.00
		39B450	109	4,840	FT	\$140.00	\$677,600.00
		39B425	109	3,000	FT	\$140.00	\$420,000.00
		39B375	77	590	FT	\$100.00	\$59,000.00
		39B350	72	11,000	FT	\$90.00	\$990,000.00
		39B250	58	1,050	FT	\$70.00	\$73,500.00
		39B225	58	1,000	FT	\$70.00	\$70,000.00
		39B200	58	970	FT	\$70.00	\$67,900.00
		39B175	58	12,000	FT	\$70.00	\$840,000.00
		39B150	58	5,000	FT	\$70.00	\$350,000.00
		39B125	58	210	FT	\$70.00	\$14,700.00
		39B75	58	1,140	FT	\$70.00	\$79,800.00
		39B50	58	5,600	FT	\$70.00	\$392,000.00
		30B475	58	900	FT	\$70.00	\$63,000.00
		30B400	49	50	FT	\$60.00	\$3,000.00
		30B375	46	3,000	FT	\$60.00	\$180,000.00
		30B350	43	1,120	FT	\$50.00	\$56,000.00
		30B325	39	2,440	FT	\$50.00	\$122,000.00
		30B300	36	23,890	FT	\$50.00	\$1,194,500.00
		30B275	35	3,240	FT	\$40.00	\$129,600.00
		30B225	35	2,420	FT	\$40.00	\$96,800.00
		30B200	35	15,050	FT	\$40.00	\$602,000.00
		30B175	35	9,480	FT	\$40.00	\$379,200.00
		30B150	35	4,000	FT	\$40.00	\$160,000.00
		30B125	35	5,260	FT	\$40.00	\$210,400.00
		30B100	35	2,000	FT	\$40.00	\$80,000.00
		30B75	35	710	FT	\$40.00	\$28,400.00
		30B50	35	2,600	FT	\$40.00	\$104,000.00
		30B25	35	2,410	FT	\$40.00	\$96,400.00

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nam Hydman 9/26/01</i>
DATE PREPARED 26-Sep-2001	DATE	DATE 26-Sep-2001	PRICE LEVEL

ESTIMATE WORKSHEET

FEATURE: 26-Sep-2001  
 SJR INFILTRATION 2040 ALTERNATIVE

PROJECT:  
 NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		24B375	30	1,750	FT	\$45.00	\$78,750.00
		24B300	24	31,560	FT	\$36.00	\$1,136,160.00
		24B275	22	3,000	FT	\$33.00	\$99,000.00
		24B250	22	2,050	FT	\$33.00	\$67,650.00
		24B225	22	4,380	FT	\$33.00	\$144,540.00
		24B200	22	9,380	FT	\$33.00	\$309,540.00
		24B150	22	380	FT	\$33.00	\$12,540.00
		24B50	22	3,540	FT	\$33.00	\$116,820.00
		24B25	22	10,340	FT	\$33.00	\$341,220.00
		21B325	20	1,530	FT	\$30.00	\$45,900.00
		21B300	18	26,000	FT	\$27.00	\$702,000.00
		21B275	17	32,470	FT	\$26.00	\$844,220.00
		21B200	17	8,570	FT	\$26.00	\$222,820.00
		21B175	17	810	FT	\$26.00	\$21,060.00
		21B150	17	340	FT	\$26.00	\$8,840.00
		21B100	17	590	FT	\$26.00	\$15,340.00
		21B25	17	11,000	FT	\$26.00	\$286,000.00
		15B425	13	6,000	FT	\$20.00	\$120,000.00
		15B400	13	9,000	FT	\$20.00	\$180,000.00
		15B375	13	4,000	FT	\$20.00	\$80,000.00
		15B250	13	7,000	FT	\$20.00	\$140,000.00
		15B225	13	3,000	FT	\$20.00	\$60,000.00
		15B175	13	5,320	FT	\$20.00	\$106,400.00
		15B150	13	3,000	FT	\$20.00	\$60,000.00
		15B125	13	160	FT	\$20.00	\$3,200.00
		15B100	13	540	FT	\$20.00	\$10,800.00
				720,090	FT		

QUANTITIES		PRICES	
BY Art Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nora Hernandez</i> 9/26/01
DATE PREPARED 26-Sep-2001	DATE	DATE 26-Sep-2001	PRICE LEVEL

**ESTIMATE WORKSHEET**

**FEATURE:** 26-Sep-2001 **PROJECT:**  
**BJR INFILTRATION 2040 ALTERNATIVE** **NAVAJO - GALLUP WATER SUPPLY PROJECT**

**DIVISION:**

**UNIT:**

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CASTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pumping plants as follows:</b>	8140				
		59.18 cfs, 140 ft. head, 6+1 units/plant		1	EA	\$1,310,000.00	\$1,310,000.00
		51.49 cfs, 150 ft. head, 6+1 units/plant		1	EA	\$1,200,000.00	\$1,200,000.00
		51.49 cfs, 442 ft. head, 6+1 units/plant		1	EA	\$2,380,000.00	\$2,380,000.00
		51.49 cfs, 220 ft. head, 6+1 units/plant		1	EA	\$1,470,000.00	\$1,470,000.00
		47.70 cfs, 265 ft. head, 5+1 units/plant		1	EA	\$1,520,000.00	\$1,520,000.00
		47.00 cfs, 216 ft. head, 5+1 units/plant		1	EA	\$1,320,000.00	\$1,320,000.00
		45.46 cfs, 366 ft. head, 5+1 units/plant		1	EA	\$1,810,000.00	\$1,810,000.00
		38.41 cfs, 336 ft. head, 4+1 units/plant		1	EA	\$1,450,000.00	\$1,450,000.00
		36.53 cfs, 418 ft. head, 4+1 units/plant		1	EA	\$1,650,000.00	\$1,650,000.00
		14.71 cfs, 280 ft. head, 2+1 units/plant		1	EA	\$560,000.00	\$560,000.00
		11.51 cfs, 255 ft. head, 2+1 units/plant		1	EA	\$440,000.00	\$440,000.00
		5.06 cfs, 168 ft. head, 1+1 units/plant		1	EA	\$200,000.00	\$200,000.00
		3.81 cfs, 278 ft. head, 1+1 units/plant		1	EA	\$210,000.00	\$210,000.00
		3.68 cfs, 382 ft. head, 1+1 units/plant		1	EA	\$240,000.00	\$240,000.00
				14			
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 14 total, 1 at each pmp. plt.)	8140	14	EA	\$100,000.00	\$1,400,000.00
		<b>Furnish and install water regulating tanks,</b> <b>as follows:</b>	8140				
		186,464 gallons, 40 ft. Dia. X 20 ft. Height		1	EA	\$155,000.00	\$155,000.00
		143,881 gallons, 40 ft. Dia. X 15 ft. Height		1	EA	\$145,000.00	\$145,000.00
		96,842 gallons, 40 ft. Dia. X 10 ft. Height		1	EA	\$135,000.00	\$135,000.00
		84,602 gallons, 40 ft. Dia. X 9 ft. Height		1	EA	\$130,000.00	\$130,000.00
		<b>Furnish and install water forebay tanks,</b> <b>as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 14 tanks		14	EA	\$55,000.00	\$770,000.00
		<b>Furnish and install water storage tanks,</b> <b>as follows:</b>	8140				
		Sanostee (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Newcomb (20ft. H X 180 ft. Dia.)		1	EA	\$1,600,000.00	\$1,600,000.00
		Sheepsprings ( 20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Naschitti (20 ft. H X 190 ft. Dia.)		1	EA	\$1,680,000.00	\$1,680,000.00
		Tohatchi (20 ft. H X 210 ft. Dia.)		1	EA	\$2,080,000.00	\$2,080,000.00
		Twin Lakes (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Rock Springs (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00

**QUANTITIES**

**PRICES**

BY t Streifel	APPROVED	BY K. Copeland	CHECKED <i>Non Hyndman 9/26/01</i>
DATE PREPARED 26-Sep-2001	DATE	DATE 26-Sep-2001	PRICE LEVEL

FEATURE:  
SJR INFILTRATION 2040 ALTERNATIVE

26-Sep-2001

PROJECT:  
NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install water storage tanks,</b>	8140				
		<b>as follows:</b>					
		Window Rock (20 ft. H X 500 ft. Dia.)		1	EA	\$9,910,000.00	\$9,910,000.00
		Coyote Canyon (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		Standing Rock (20 ft. H X 60 ft. Dia.)		1	EA	\$240,000.00	\$240,000.00
		Dalton Pass (20 ft. H X 260 ft. Dia.)		1	EA	\$3,010,000.00	\$3,010,000.00
		<b>Furnish and install water storage tanks,</b>	8140				
		<b>as follows:</b>					
		Manuelito (20 ft. H X 120 ft. Dia.)		1	EA	\$790,000.00	\$790,000.00
		Red Rock, Breadsprings, Chichiltah (40 ft. H X 290 ft. Dia.)		1	EA	\$3,720,000.00	\$3,720,000.00
		Iyanbito (20 ft. H X 130 ft. Dia.)		1	EA	\$910,000.00	\$910,000.00
		Church Rock (20 ft. H X 200 ft. Dia.)		1	EA	\$1,870,000.00	\$1,870,000.00
		Pinedale, Mariano Lake (20 ft. H X 170 ft. Dia.)		1	EA	\$1,430,000.00	\$1,430,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		0.61 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$80,000.00	\$80,000.00
		3.93 cfs, 162 ft. head, 4+1 units/plant		1	EA	\$180,000.00	\$180,000.00
		0.79 cfs, 162 ft. head, 1+1 units/plant		1	EA	\$90,000.00	\$90,000.00
		1.73 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$120,000.00	\$120,000.00
		1.30 cfs, 162 ft. head, 2+1 units/plant		1	EA	\$110,000.00	\$110,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		Sanostee (2.00 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Newcomb (1.52 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Sheepsprings (0.70 cfs 162 ft. head, 1 + 1 stdby.)		1	EA	\$90,000.00	\$90,000.00
		Naschitti (1.55 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$110,000.00	\$110,000.00
		Tohatchi (1.99 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Twin Lakes (1.88 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$120,000.00	\$120,000.00
		Rock Springs (3.19 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$150,000.00	\$150,000.00
		Window Rock (11.51 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$340,000.00	\$340,000.00
		Coyote Canyon (1.24 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$100,000.00	\$100,000.00
		Standing Rock (0.14 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$70,000.00	\$70,000.00
		Dalton Pass (3.68 cfs, 162 ft. head, 1 + 1 stdby.)		1	EA	\$170,000.00	\$170,000.00

QUANTITIES

PRICES

BY  
t Streifel  
DATE PREPARED  
26-Sep-2001

APPROVED  
DATE

BY  
K. Copeland  
DATE  
26-Sep-2001

CHECKED  
*Non Hydrom 9/26/01*  
PRICE LEVEL

FEATURE: **SJR INFILTRATION 2040 ALTERNATIVE**      26-Sep-2001      PROJECT: **NAVAJO - GALLUP WATER SUPPLY PROJECT**

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>Ranney Infiltration Well Collection System</b>							
		Furnish and install Ranney Infiltration Wells	8140	26	EA	\$1,000,000.00	\$26,000,000.00
		Furnish and install well pumps, 2.32 cfs, 50 ft. TDH	8140	52	EA	\$25,000.00	\$1,300,000.00
<b>Pipeline Collection System</b>							
		Furnish and install pipe as follows:	8140				
		36B50	50	8,560	FT	\$60.00	\$513,600.00
		30B50	35	2,640	FT	\$40.00	\$105,600.00
		24B50	22	8,230	FT	\$33.00	\$271,590.00
		18B50	15	2,060	FT	\$23.00	\$47,380.00
		16B50	13	820	FT	\$20.00	\$16,400.00
		14B50	12	1,600	FT	\$18.00	\$28,800.00
		10B50	9	2,770	FT	\$14.00	\$38,780.00
				26,680			
		Furnish and install Collection Tank 40 ft. Diameter X 15 ft. Height, 141,000 gallons	8140	1	EA	\$145,000.00	\$145,000.00
		Furnish and install Pumping Plant, 6 (5+1 STBY), 59.18 cfs, 150 ft. head	8140	1	EA	\$1,340,000.00	\$1,340,000.00
		<b>TOTAL</b>					<b>\$154,188,400.00</b>

QUANTITIES		PRICES	
BY t Streifel	APPROVED	BY K. Copeland	CHECKED <i>Nan Hyndman 9/26/01</i>
DATE PREPARED 26-Sep-2001	DATE	DATE 26-Sep-2001	PRICE LEVEL

FEATURE: 25-Sep-2001  
 CUTTER 2040 DIVERSION ALTERNATIVE

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT  
 DIVISION:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common	8140	500,100	CY	\$2.00	\$1,000,200.00
		Excavation, rock	8140	14,400	CY	\$8.00	\$115,200.00
		Backfill, common	8140	463,800	CY	\$1.50	\$695,700.00
		Furnish and install pipe as follows:	8140				
		24B625	51	1,000	FT	\$77.00	\$77,000.00
		24B600	48	740	FT	\$72.00	\$53,280.00
		24B575	46	2,500	FT	\$69.00	\$172,500.00
		24B550	44	2,250	FT	\$66.00	\$148,500.00
		24B525	42	1,920	FT	\$63.00	\$120,960.00
		24B500	40	6,990	FT	\$60.00	\$419,400.00
		24B475	38	2,790	FT	\$57.00	\$159,030.00
		24B450	36	14,130	FT	\$54.00	\$763,020.00
		24B425	34	10,380	FT	\$51.00	\$529,380.00
		24B400	32	8,160	FT	\$48.00	\$391,680.00
		24B375	30	4,000	FT	\$45.00	\$180,000.00
		24B350	28	15,830	FT	\$42.00	\$664,860.00
		24B325	26	15,740	FT	\$39.00	\$613,860.00
		24B300	24	18,940	FT	\$36.00	\$681,840.00
		24B275	22	11,970	FT	\$33.00	\$395,010.00
		24B250	22	11,630	FT	\$33.00	\$383,790.00
		24B225	22	4,040	FT	\$33.00	\$133,320.00
		24B200	22	6,670	FT	\$33.00	\$220,110.00
		24B175	22	22,640	FT	\$33.00	\$747,120.00
		24B150	22	4,360	FT	\$33.00	\$143,880.00
		24B125	22	10,380	FT	\$33.00	\$342,540.00
		24B100	22	16,670	FT	\$33.00	\$550,110.00
		24B75	22	2,910	FT	\$33.00	\$96,030.00
		24B50	22	12,200	FT	\$33.00	\$402,600.00
		20B625	35	1,000	FT	\$53.00	\$53,000.00
		20B600	33	1,000	FT	\$50.00	\$50,000.00
		20B575	32	1,000	FT	\$48.00	\$48,000.00
		20B550	30	1,000	FT	\$45.00	\$45,000.00
		20B525	29	1,000	FT	\$44.00	\$44,000.00
		20B500	28	1,000	FT	\$42.00	\$42,000.00
		20B475	26	1,000	FT	\$39.00	\$39,000.00
		20B450	25	5,060	FT	\$38.00	\$192,280.00
		20B425	23	12,010	FT	\$35.00	\$420,350.00
		PAGE SUBTOTAL					\$11,134,550.00

QUANTITIES		PRICES	
BY t Streifel	APPROVED	BY K. Copeland	CHECKED Non Hydeman 9/26/01
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

FEATURE: CUTTER 2040 DIVERSION ALTERNATIVE

25-Sep-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		20B400	22	5,000	FT	\$33.00	\$165,000.00
		20B375	21	1,000	FT	\$32.00	\$32,000.00
		20B350	19	1,000	FT	\$29.00	\$29,000.00
		20B325	18	1,000	FT	\$27.00	\$27,000.00
		20B300	17	1,000	FT	\$26.00	\$26,000.00
		20B275	17	1,000	FT	\$26.00	\$26,000.00
		16B600	22	120	FT	\$33.00	\$3,960.00
		16B475	17	4,000	FT	\$26.00	\$104,000.00
		16B425	15	1,890	FT	\$23.00	\$43,470.00
		16B400	14	650	FT	\$21.00	\$13,650.00
		16B325	13	10,000	FT	\$20.00	\$200,000.00
		16B300	13	7,230	FT	\$20.00	\$144,600.00
		16B275	13	1,760	FT	\$20.00	\$35,200.00
		16B250	13	3,000	FT	\$20.00	\$60,000.00
		16B225	13	1,810	FT	\$20.00	\$36,200.00
		16B200	13	1,000	FT	\$20.00	\$20,000.00
		16B175	13	2,000	FT	\$20.00	\$40,000.00
		16B100	13	3,000	FT	\$20.00	\$60,000.00
		16B75	13	1,450	FT	\$20.00	\$29,000.00
		16B50	13	10,060	FT	\$20.00	\$201,200.00
		16B25	13	5,000	FT	\$20.00	\$100,000.00
		14B525	15	2,550	FT	\$23.00	\$58,650.00
		14B500	14	920	FT	\$21.00	\$19,320.00
		14B475	13	970	FT	\$20.00	\$19,400.00
		14B450	12	570	FT	\$18.00	\$10,260.00
		14B425	12	8,910	FT	\$18.00	\$160,380.00
		14B400	12	4,180	FT	\$18.00	\$75,240.00
		14B375	12	6,000	FT	\$18.00	\$108,000.00
		14B350	12	11,180	FT	\$18.00	\$201,240.00
		14B325	12	10,040	FT	\$18.00	\$180,720.00
		14B275	12	4,370	FT	\$18.00	\$78,660.00
		14B250	12	4,820	FT	\$18.00	\$86,760.00
		14B225	12	5,570	FT	\$18.00	\$100,260.00
		14B200	12	4,860	FT	\$18.00	\$87,480.00
		14B175	12	6,920	FT	\$18.00	\$124,560.00
		14B150	12	2,000	FT	\$18.00	\$36,000.00
		14B125	12	4,790	FT	\$18.00	\$86,220.00
		14B100	12	3,260	FT	\$18.00	\$58,680.00
		14B75	12	1,850	FT	\$18.00	\$33,300.00
		<b>PAGE SUBTOTAL</b>					<b>\$2,921,410.00</b>

QUANTITIES		PRICES	
BY rt Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hyndman 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL

FEATURE: CUTTER 2040 DIVERSION ALTERNATIVE

25-Sep-2001

PROJECT: NAVAJO - GALLUP WATER SUPPLY PROJECT

DIVISION:

UNIT:

H:\D8170\EST\SPREADSH\COPELAND\NAVAJO~1\CSTESTX.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		<b>Furnish and install pipe as follows:</b>	8140				
		14B25	12	4,000	FT	\$18.00	\$72,000.00
		10B525	9	1,020	FT	\$14.00	\$14,280.00
		10B475	9	1,080	FT	\$14.00	\$15,120.00
		10B450	9	1,000	FT	\$14.00	\$14,000.00
		10B400	9	9,790	FT	\$14.00	\$137,060.00
		10B375	9	1,000	FT	\$14.00	\$14,000.00
		10B350	9	7,260	FT	\$14.00	\$101,640.00
		10B325	9	15,000	FT	\$14.00	\$210,000.00
		10B300	9	13,000	FT	\$14.00	\$182,000.00
		10B275	9	1,000	FT	\$14.00	\$14,000.00
		10B250	9	8,730	FT	\$14.00	\$122,220.00
		10B225	9	6,000	FT	\$14.00	\$84,000.00
		10B200	9	5,000	FT	\$14.00	\$70,000.00
		10B150	9	5,000	FT	\$14.00	\$70,000.00
		10B125	9	6,580	FT	\$14.00	\$92,120.00
		10B100	9	4,000	FT	\$14.00	\$56,000.00
		<b>Furnish and install pumping plants as follows:</b>	8140				
		8.34 cfs, 291 ft. head, 1+1 units/plant		1	EA	\$360,000.00	\$360,000.00
		8.34 cfs, 420 ft. head, 1+1 units/plant		1	EA	\$450,000.00	\$450,000.00
		8.34 cfs, 471 ft. head, 1+1 units/plant		1	EA	\$500,000.00	\$500,000.00
		7.84 cfs, 277 ft. head, 1+1 units/plant		1	EA	\$330,000.00	\$330,000.00
		6.79 cfs, 450 ft. head, 1+1 units/plant		1	EA	\$410,000.00	\$410,000.00
		4.64 cfs, 400 ft. head, 1+1 units/plant		1	EA	\$290,000.00	\$290,000.00
		<b>Furnish and install air chambers</b> (20 ft. Dia. Sphere, 6 total, 1 at each pmp. plt.)	8140	6	EA	\$100,000.00	\$600,000.00
		<b>Furnish and install water regulating tanks,</b> <b>as follows:</b>	8140				
		84,602 gallons, 40 ft. Dia. X 9 ft. Height, 2 tanks		2	EA	\$130,000.00	\$260,000.00
		<b>Furnish and install water forebay tanks,</b> <b>as follows:</b>	8140				
		60,000 gallons, 8 ft. Dia. X 40 ft. Height, 6 tanks		6	EA	\$55,000.00	\$330,000.00
		<b>PAGE SUBTOTAL</b>					\$4,798,440.00

QUANTITIES		PRICES	
BY rt Streifel	APPROVED	BY K. Copeland	CHECKED <i>Norm Hyndman 9/26/01</i>
DATE PREPARED 25-Sep-2001	DATE	DATE 09/25/2001	PRICE LEVEL



<b>FEATURE:</b> NAVAJO GALLUP WATER SUPPLY APPRAISAL-GRADE ESTIMATE <i>SJR Infiltration Alternative</i>		<b>PROJECT:</b> Navajo-Gallup Water Supply	
		<b>DIVISION / REGION:</b> UC - New Mexico	
		<b>CONTRACT/SPEC:</b>	
<b>WOID:</b> DUR30		<b>FILE:</b> J:\WORKSHTS\CY2001\GALLUP2.WK4	

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
			<b>D-8440</b>				
	1	Furnishing and constructing 69-kV wood-pole transmission line, three conductor with one OHG and one optical ground wire		115	wmile	\$100,600.00	\$11,569,000.00
		Conductor: 336 kcmil ACSR	3/c	15,840	ft	\$2.40	
		OHG: 1/2" HSS	1/grd	5,280	ft	\$1.00	
		OPGW: 24 fiber	1/op-grd	5,280	ft	\$4.00	
		Terrain: Mostly flat, some gradual hills, soils mixture of common to slightly rocky	includes ins	7.54	strut/mi	\$4,800.00	
		Two pole wood structures about 55-65 feet tall, about 700 foot spans	Unit cost			\$100,608.00	
	2a	Electrical equipment at each plant, including engine-generator w/full plant capacity		21	ea	\$35,000.00	\$735,000.00
	2b	Electrical equipment at each treatment plant		2	ea	\$35,000.00	\$70,000.00
	3	Electrical equipment at each turnout		6	ea	\$5,000.00	\$30,000.00
	4	SCADA equipment including controller					
		Each plant		21	ea	\$5,000.00	\$105,000.00
		Each turnout		21	ea	\$5,000.00	\$105,000.00
		Infiltration system		1	ea	\$5,000.00	\$5,000.00
	5	New SCADA system in NTUA Fort Defiance		1	ls	\$300,000.00	\$300,000.00
	6	Communication equipment:					
		Each plant		21	ea	\$20,000.00	\$420,000.00
		Each turnout		21	ea	\$20,000.00	\$420,000.00
		Infiltration system		1	ea	\$10,000.00	\$10,000.00
	7	Security system equipment at each plant		21	ea	\$5,000.00	\$105,000.00
	8	Substation near Huerfano		1	LS	\$1,000,000.00	\$1,000,000.00
		Tap structure, switch, circuit breaker, transformer					
	9	Power tap-poles, transformer					
		Each plant		21	ea	\$60,000.00	\$1,260,000.00
		Each turnout		21	ea	\$60,000.00	\$1,260,000.00
		Infiltration system		1	ea	\$60,000.00	\$60,000.00

QUANTITIES		PRICES	
BY Lisa Gamuciello D-8440	APPROVED	BY D-8170 L. Pedde	CHECKED
DATE PREPARED 07-Sep-2001	DATE	DATE 09-Oct-2001	PRICE LEVEL



<b>FEATURE:</b> 12-Oct-2001 <b>SJR Infiltration Alternative</b> <b>2020 Demand (23.89 MGD)</b> Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand	<b>PROJECT:</b> Navajo Gallup WSP <hr/> <b>DIVISION:</b> <hr/> <b>FILE:</b> H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\SJR-ESTF.WK4
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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building with 20 foot high exterior wall includes 2.700 SF of Mezzanine	D8230	27,200	SF	\$75.00	\$2,040,000.00
2		ZeeWeed Water Treatment System		23,890,000.00	GPD	\$0.46	\$10,989,400.00
3		Concrete Reinforced tanks for ZeeWeed Systems		1047	CY	\$400.00	\$418,800.00
4		Concrete Flocculation tank		198	CY	\$400.00	\$79,200.00
5		Concrete for Splitter Tank		50	CY	\$400.00	\$20,000.00
6		Concrete for rapid mix tank		50	CY	\$400.00	\$20,000.00
7		Ultraviolet Disinfection Units		5	EA	\$100,000.00	\$500,000.00
8		Excavation of Clearwell		7700	CY	\$10.00	\$77,000.00
9		Backfill around clearwell after construction		2900	CY	\$15.00	\$43,500.00
10		Construction of Clearwell		1053	CY	\$400.00	\$421,200.00
11		Excavation for wastewater treatment ponds		8570	CY	\$8.00	\$68,560.00
12		Clear Well Mixers		6	Ea	\$15,000.00	\$90,000.00
13		Sediment Drying Beds Sand for Wastewater Polishing Ponds Sediment		125	CY	\$15.00	\$1,875.00
14		Regional Operations and Maintenance Bldg Prefab, slab on grade with 14 feet eves		2,500.00	SF	\$110.00	\$275,000.00
15		45 mil Polypropylene Liner for Wastewater Ponds Installation		34,500.00 34,500.00	SF SF	\$0.50 \$0.20	\$17,250 \$6,900
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc. )					\$4,520,000.00 ✓
		Subtotal					\$19,588,685.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$1,960,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$21,748,685.00</b> ✓

<b>QUANTITIES</b>		<b>PRICES</b>	
BY Glenn Howard	CHECKED BY	BY K. Copeland	CHECKED <i>dp 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED	DATE 12-Oct-2001	PRICE LEVEL

**FEATURE:**  
 11-Oct-2001  
**SJR Infiltration Alternative**  
**Additional treatment units to**  
**upgrade the plant by 14.36 MGD with a**  
**total capacity of 38.25 MGD**

**PROJECT:**  
**DIVISION:**  
**FILE:**  
 H:\D8170\EST\SPREADSHT\COPELAND\NAVAJO-1\SJR-ESTF.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		ZeeWeed Water Treatment System		14,360,000		\$0.46	\$6,605,600.00
2		Ultraviolet Disinfection Units		2		\$100,000	\$200,000.00
		Unlisted 5%					\$340,000.00
<b>TOTAL</b>							<b>\$7,145,600.00</b>

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED BY	BY K. Copeland	CHECKED <i>[Signature]</i> 10/11/01
DATE PREPARED October 9, 2001	APPROVED	DATE 11-Oct-2001	PRICE LEVEL

**FEATURE:**  
 12-Oct-2001  
**San Juan Alternative Cutter Diversion**  
 Quantities for tanks, building and process ponds for 2040 demand. All other quantities for 2020 demand  
 Includes Jicarilla Apache Nation Demand

**PROJECT:**  
 Navajo Gallup WSP  
**DIVISION:**  
**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\CUT-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		Prefabricated Building	D8230	4,600	SF	\$90.00	\$414,000
2		ZeeWeed Water Treatment System		3,740,000	GPD	\$0.70	\$2,618,000
3		Concrete Reinforced tanks for ZeeWeed Systems		110	CY	\$500	\$55,000
4		Concrete Flocculation tank		61	CY	\$500	\$30,500
5		Reinforced Concrete for Splitter Tank		20	CY	\$500	\$10,000
6		Reinforced Concrete for Rapid mix tank		20	CY	\$500	\$10,000
7		Ultraviolet Disinfection Units Model 1250		3	Ea	\$120,000	\$360,000
8		Excavation of Clearwell		1,820	CY	\$10	\$18,200
9		Backfill around clearwell after construction		1,270	CY	\$15	\$19,050
10		Reinforced concrete for clearwell		213	CY	\$500	\$106,500
11		Excavation of Wastewater Polishing Ponds		2,100	CY	\$9	\$18,900
12		Mixers for ClearWell		6	Ea	\$15,000	\$90,000
13		Sediment Drying Beds					
		Sand for Wastewater Polishing Ponds		25	CY	\$20	\$500
14		Regional Operations and Maintenance Bldg		2,500.00	SF	\$110.00	\$275,000.00
		Prefab, slab on grade with 14 feet eves					
15		45 mil Polypropylene Liner for Wastewater Ponds		11,500.00	SF	\$0.50	\$5,750
		Installation		11,500.00	SF	\$0.20	\$2,300
		Unlisted 30% (mixer for rapid mix tank, chlorinators, ammoniators, misc piping, blending studies, etc. )					\$1,210,000.00 ✓
		Subtotal					\$5,243,700.00 ✓
		Unlisted 10% (for DBP Treatment Systems at service points)					\$520,000.00
		Construct and operate Pilot sytem for 12 consecutive months					\$200,000.00
		<b>TOTAL</b>					<b>\$5,963,700.00</b> ✓

QUANTITIES		PRICES	
BY Glenn Howard	CHECKED	BY K. Copeland	CHECKED <i>LP 10-12-01</i>
DATE PREPARED October 9, 2001	APPROVED BY	DATE 12-Oct-2001	PRICE LEVEL

**FEATURE:**  
 11-Oct-2001  
**San Juan Alternative Cutter Diversion**  
 Additional treatment units to upgrade the treatment plant by 1.65 MGD to a total capacity of 5.39 MGD  
 Includes Jicarilla Apache Nation Demand

**PROJECT:**  
**DIVISION:**  
**FILE:**  
 H:\D8170\EST\SPREADSH\COPELAND\NAVAJO-1\CUT-ESTA.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1		ZeeWeed Water Treatment System		1,650,000.00	GPD	\$0.70	\$1,155,000.00
		Unlisted 5%					\$58,000.00
<b>TOTAL</b>							<b>\$1,213,000.00</b>

QUANTITIES		PRICES	
BY Glenn Howard		BY K. Copeland	CHECKED <i>KL</i> 10/11/01
DATE PREPARED October 9, 2001	APPROVED BY	DATE 11-Oct-2001	PRICE LEVEL

FEATURE:

19-Feb-2002

PROJECT:

NAVAJO-GALLUP WATER SUPPLY PROJECT

GALLUP REGIONAL SYSTEM

DIVISION:

UNIT:

C:\TEMP\REVISE~1.WK4

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Excavation, common		135,600	CY	\$2.00	\$271,200.00
		Excavation, rock (DePauli assumed 15%)		24,000	CY	\$8.00	\$192,000.00
		Backfill, common		146,000	CY	\$1.50	\$219,000.00
		<b>Furnish and Install pipe as follows:</b> (Pipe lengths from DePauli Report, Appendix H)					
		24B275		36,616	FT	\$33.00	\$1,208,328.00
		16B275		15,593	FT	\$20.00	\$311,860.00
		14B275		62,499	FT	\$18.00	\$1,124,982.00
		12B275		26,575	FT	\$15.00	\$398,625.00
		10B275		29,309	FT	\$14.00	\$410,326.00
		8B275		1,331	FT	\$11.00	\$14,641.00
		Crossings & Bores (from DePauli Report, Appendix H)		1	LS	\$684,400.00	\$684,400.00
		<b>Furnish and install water storage tanks</b> as follows: (Capacities from DePauli Report, Appendix H)					
		Gamerco (5.5 MG, 20 ft H X 220 ft Dia.)		1	LS	\$2,200,000.00	\$2,200,000.00
		Lyons (3.0 MG, 20 ft H X 160 ft Dia.)		1	LS	\$1,270,000.00	\$1,270,000.00
		Sacred Heart (1.5 MG, 20 ft H X 114 ft Dia.)		1	LS	\$700,000.00	\$700,000.00
		RR Park (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		Southfork (2.0 MG, 20 ft H X 130 ft Dia.)		1	LS	\$910,000.00	\$910,000.00
		<b>Furnish and Install pumping plants as follows:</b> (from DePauli Report, Appendix H)					
		Lyons Pump Station		1	LS	\$472,000.00	\$472,000.00
		East Station Upgrade		1	LS	\$47,200.00	\$47,200.00
		Cresto Pump Station Upgrade		1	LS	\$94,400.00	\$94,400.00
		Country Club Upgrade		1	LS	\$56,640.00	\$56,640.00
		Valve and Metering Stations (from DePauli Report, Appendix H)		1	LS	\$542,800.00	\$542,800.00
		Surge Control Station (T1-T2, 24") (from DePauli Report, Appen		1	LS	\$84,960.00	\$84,960.00
		SCADA System (from DePauli Report was not used - assumed to be in BOR estimate)		N/A	N/A	N/A	N/A
		TOTAL					
		ROUNDED TOTAL					\$12,000,000.00

QUANTITIES		PRICES	
BY Kevin Moran & Marc DePauli	APPROVED	BY	CHECKED
DATE PREPARED 19-Feb-2002	DATE	DATE	PRICE LEVEL

