ATTACHMENT 8 (Supplemental Documentation to the: Mogollon Rim Water Resource Management Study Report of Findings)

Estimation Work Sheets

MOGOLLON RIM WATER RESOURCE MANAGEMENT STUDY

SOCIAL ASSESSMENT AND ENVIRONMENTAL JUSTICE

A. Social Assessment

Social analysis is the process of considering impacts on humans, and social assessment is the product of the analysis (the results needed to describe the impacts on the human community from the action.

The goals of social analysis are to:

- Contribute to making projects more sound and sustainable by ensuring that projects fit the individuals and communities served and affected.
- Ensure project effectiveness by increasing support and tailoring institutional arrangements to the local culture.
- Make projects more inclusive by involving not only selected stakeholders but the larger, more diverse community

An extensive Social Analysis was not performed during this study. Rather an attempt has been made to identify significant area of social concern that could require additional research, analysis, and evaluation in subsequent studies. Social Assessment considerations for the Study Area include the following issues:

- Environmental Justice -- Distribution of minority population and low income populations of the Study Area within Gila County.
- Probable economic impacts restrictive limits on growth for all economic units associated residential, commercial and industrial development and expansion.
- Reduced quality of life, changes in lifestyle, increased poverty in general, population migrations, reduction or modifications of recreation activities.
- Reevaluation of social values growth vs. no-growth, community appearance, and cultural resources preservation and protection
- Public dissatisfaction with government water resource development and community growth policies and strategies -- moratorium on the issuance of water meters for community development (all considerations) and the introduction and application of restrictions on all community's planning and zoning policies and codes.
- Perceptions of inequity related to socioeconomic status, ethnicity, age, gender, and seniority, particularly with respect to water service rates.
- Recognition of institutional restraints on water use. Surface Water Rights
- Increased Restrictions and Conflicts -- Water user, Political, and Management (Community Fire Protection and Water Conservation), and (Other social conflicts?)
- Institutional Formation Legal requirements and institutional organization

B. Environmental Justice

is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from

industrial, municipal and commercial operations or the execution of federal, state, local, and tribal programs and policies. Meaningful involvement means that; (1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contribution can influence the regulatory agency's decision; (3) the concerns al all participants involved will be considered in the decision making process; and (4) the decision makers seek out and facilitate the involvement of those potentially affected.

In sum, environmental justice is the goal to be achieved for all communities and persons across this Nation. Environmental justice is achieved when everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

Environmental justice must be considered and where required appropriate mitigation measures will be established that will not create disproportionately high and adverse human health or environmental effects of federal programs, policies, and activities on minority populations and low-income populations in the Study Area.

The populations that could be affected in the Study Area are minority and low income populations in the Study Area are, in general, Black or African Americans, American Indian and Alaska Native, Asian, Native Hawaiian and other Pacific Islander, and Hispanic or Latino. The minorities population distribution, by population centers and estimation are shown in Table A.

Table A Minority Population Distribution by Town and Census Designated Place (CDP)-- 2000. Table A

	1		
Gila County	Town of	Pine CDP	Strawberry CDP
	Payson		CDP
Population*	Population*	Population*	Population *
197	36	3	1
6,630	257	10	6
220	72	2	7
28	7	0	0
3,385	183	21	10
8,546	708	34	32
19,006	1,263	70	56
	Population* 197 6,630 220 28 3,385 8,546	Payson Population* Population* 197 36 6,630 257 6,630 257 220 72 28 7 3,385 183 8,546 708 19,006 1,263	Payson Population* Population* 197 36 3 197 36 3 6,630 257 10 220 72 2 28 7 0 3,385 183 21 8,546 708 34 19,006 1,263 70

*2000 U. S. Bureau Census Data

The population distribution of minorities in the residual population of the Study Area's unincorporated community population, 4,762, is unknown, but mostly likely would be similar to the population distribution of minorities in the Pine and Strawberry Census Designated Places (CDP).

Low-Income populations are persons of low-income status. This status is based on U.S. Bureau of the Census definitions of individuals living below the poverty line, as defined by a statistical threshold that considers family size and income. Poverty levels census data -- 2000, in the Study Area, have been developed several ways, however, only two poverty status levels are presented in TableB., i.e. Families and Individuals.

Table B.

The Poverty Status of Families and Individuals in the Study Area. - 2000.

Population Distribution Center	Gila County	Town of Payson	Pine CDP	Strawberry CDP
Below Poverty	Numbers	Numbers	Numbers	Numbers
Level				
Families	1,785	274	31	24
Individuals	8,752	1,360	176	111

The population distribution of family and individual poverty status in the residual population of the Study Area's unincorporated community population, 4,762, is unknown, but most likely will be similar to the number shown for the Pine and Strawberry CDPs.

There are enough population in both minorities and low-income groups to flag these population groups as being groups that will require further considerations regarding environmental justice with respect to any proposed action associated with any or all of the proposed alternative prior to its implementation, including the Future Without alternative.

Probable economic impacts – The local economy is dominated by the tourism, inmigrating retirees, and seasonal residents are the primary drivers of the Payson and surrounding area economy. Government provides the most employment of any sector in Payson area. Another significant area of the local economy is the construction industries. There is a growing emphasis on manufacturing and service firms. Also encouraged is light industry and high tech operations compatible with the community's "High Quality of Life."

With the overall water supply being limited in both Payson and the surrounding area, the potential for the placement of restrictive limits on growth or expansion, e.g. moratorium on the sale of water meters or limitations on the issuance of building permits, could occur and hinder all future residential, commercial and industrial economic growth. The placement of restrictive growth limits would have a serious economic impact upon the construction industry as well as having a trickle down effect on the rest of the supporting economic sectors in the area.

As certain economic sectors are impacted the expected results would be a reduced quality of life, changes in lifestyle, increased poverty in general, population migrations, reduction or modifications of recreation activities to identify a few of the potential impacts.

Reevaluation of social values – Payson and the surrounding communities and unincorporated areas could settle the ongoing argument concerning growth vs. nogrowth. If the water supply is limited and the safe yield limits have been identified and perhaps encroached upon, it most likely that a political scenario would be developed that implements no-growth policies for Payson and the surrounding areas. Water currently used to maintain each community's appearance could be seriously reduced and perhaps eliminated from use. Other areas where water could be used but restricted or eliminated could include cultural resources preservation and protection and recreation facilities.

Public dissatisfaction with local government -- for past several years, water resource development and community growth policies and strategies have been hot topics with the citizens of Payson and the surrounding areas. Issues that have been regularly discussed over the years are growth and no-growth. In fact, election of mayors and council persons frequently revolve around this specific issue. Secondary to the growth and no-growth

issues is water resource development. Issues associated with special use permits, for groundwater exploration and development in the National Forest, have been quite difficult to acquire by the Town of Payson. It is expected that acquisition of special use permits by others will be equally difficult. Discussions that evolve around moratoriums, whether zoning or water supply availability, i.e. water meters; create heated and divisive discussions within the community.

Perceptions of inequity related to the cost of water services and water supply development and their impact upon the socioeconomic status, ethnicity, age, gender, and seniority of Payson's citizens and the surrounding unincorporated communities will require additional study. The concerns over the issues of inequity may become may require special deliberations with respect to their impacts upon each group's or grouping's quality of life.

Recognition of institutional restraints on water use -- As noted through out this Report, surface water rights in the Study Area can generally be regarded as owned by the Salt River Project. Land ownership is also an institutional restraint in a geographic area that is primarily owned by Federal and State governments. Very little private land is available for developing well sites and other water system facilities needed system development, particularly groundwater wells and associated pipelines.

Increased Restrictions and Conflicts – As each community's water supply reaches its "Safe Yield" limitations, the challenge will be to establish a process for sustainable water supply management that will protect both the supply and serve the water user. Groundwater has been the primary water resource for this are for several years. However, this supply is susceptible to drought conditions. As the aquifer storage is diminished and the assumptions associated with "Safe Yield" are violated; the impacts and conflicts between and among groundwater users will increase. Impacts that could be noticed are the reduction in available fire protection, increased use of restrictive water conservation measures – including policing of water use. Efforts to mitigate these impacts could include use of effluent for as a source to provide fire protection, persistent application of water conservation measures rather than seasonal application of those same measures.

Drought may be another area that creates water use restrictions and conflicts. As aquifer deplete and recharge and aquifer recovery fails to provide for an adequate water supply for a community conflicts between water resource managers and water users will increase. There will be a need to focus upon the issues of water demand management and supplement water supplies to alleviate these shortages.

Institutional Formation – Legal requirements and institutional organization – The only known formation of a legal institutional arrangement is between the Town of Payson and the Tonto Apache Tribe. This action is an extension of previous service agreements between the Town and the Tribe.

All considered alternatives are on or near Federal lands. The probability of the any project being impacted by one or more Federal laws is quite high, i.e. it should be expected that some type of Federal impact will occur to either a community or the environment. What has been presented here is a preliminary social assessment. Certainly, more intense research, analysis, and evaluation would be required prior to the implementation of any proposed projects. Even the activities associated with Future Without Alternative would have to have the same level of investigation prior to the implementation of this Alternative, particularly where the projects implemented traverse Federal lands.

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		ragin Reservoir Water S and Tonto Apache Tri			Mogo	ollon Rim Wa	ter Resource Ma	nagement Study	
	-	ission Pipeline and Wa	-	WOID:		ESTIMAT	E LEVEL:	Appraisal	
		ost Summary		REGION:	LC	PRICE LE		1st quarter 2008	
		l Water Supply = 3,725) acre-feet per year	FILE:				•	
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PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
		Tailrace Modifications			1	Lump Sum	\$55,000	\$55,0	
		Raw Water Main Pipel	ine						
		Pipeline 18"			76,560	lf	\$135	\$10,335,6	
		Pavement Repla	cement		57,420	lf	\$40	\$2,296,8	
		Rock Excavation			29,774	су	\$45	\$1,339,8	
		Water/Wash Cro	ssing		16	Crossing	\$45,000	\$720,0	
		Traffic Control				Lump Sum	\$170,000	\$170,0	
		Booster Pump St	ations		0	Stations	\$825,000		
		Subtotal						\$14,917,2	
		Mobilization @ 5	%					\$745,	
		Subtotal with Mobilizat	ion					\$15,663,	
	_	Unlisted Items @	15%					\$2,349,	
	_	Contract Cost						\$18,012,6	
	_	Contingencies @	25%					\$4,503,	
		Field Cost (1st qtr 200	6)					\$22,515,	
		Water Treatment Plant							
	-	General Require						\$288,0	
	-	Sitework						\$640,0	
			ilding (1,600 sq ft)					\$176,0	
		Microfiltration Eq						\$1,780,	
		Disinfection	•					\$275,	
		Finished Water F	Reservoir					\$750,	
		Pump Station						\$215,	
		Electrical						\$703,	
		HVAC/Plumbing						\$176,	
		Subtotal						\$5,753,	
		Mobilization @ 5	%					\$287,	
		Subtotal with Mobilizat	ion					\$6,041,	
		Unlisted Items @	15%					\$906,	
		Contract Cost						\$6,974,	
		Contingencies @	25%					\$1,736,	
		Field Cost (1st qtr 200	6)					\$8,684,	
		Total Field Cost (4-1	r 2006)					¢04.400	
		Total Field Cost (1st q Adjusted Field Cost (\$31,199, \$33,861 ,	
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		Note: The estimate d	oes not include Non-contra	act costs.					
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	-	e and Water Treatmen I Water Supply = 500 a		REGION:	LC	PRICE LE		1st quarter 2008		
	Annua	Water Supply = 500 a	sie-leet per year	FILE:	LU					
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PLANT ACCOUNT	РАҮ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		Raw Water Main Pipe	line							
	-	Pipeline 8"			80,256	lf	\$60	\$4,815,40		
		Pavement Repla	acement		60,200	lf	\$40	\$2,408,00		
		Rock Excavation			30,000	су	\$45	\$1,350,00		
		Water/Wash Cro			16	Crossing	\$45,000	\$720,00		
	-	Traffic Control	Jooning		10	Lump Sum	\$200,000	\$200,00		
	-	Booster Pump S	itations		3	Stations	\$825,000	\$2,475,00		
	-	Subtotal			5	0.00000	Ψ020,000	\$2,475,00		
	-	Mobilization @ {	5%					\$598,40		
		Subtotal with Mobiliza						\$12,566,80		
		Unlisted Items @								
	-	-	2 13 /0					\$1,885,00		
	-	Contract Cost	2.50/					\$14,451,80		
		Contingencies @	y 25%					\$3,612,90		
		Field Cost						\$18,064,70		
	_							A		
	_		atment Cost (see Pine Raw					\$1,895,80		
	-		Pipeline and Water Treatment							
	_	Plant Cost Summary)								
		Total Field Cost (1st	qtr 2006)					\$19,960,50		
		Adjusted Field Cost	(1st qtr 2008)					\$21,663,60		
		Annual Cost								
								A (-) (-)		
	-		al Cost (20 yrs @ 4,875%)					\$1,719,90		
			n & Maintenance Cost @ 8%					\$1,733,10		
	_	of Field Cost								
	_	Total Annual Cost						\$3,453,00		
	_	Annual Cost per						\$6,90		
		Annual Cost per	1,000 gallons					\$21.1		
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PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Washington Park						
		Subtotal (include Mobilizatio	es pipeline and WTP) n @ 5%					\$248,50 \$12,40
		Subtotal with Mo	obilization					\$260,90
		Unlisted It	ems @ 15%					\$39,10
		Contract Cost						\$300,00
		Contingen	cies @ 25%					\$75,00
		Field Cost (1st o	tr 2006)					\$375,00
		Adjusted Field C	Cost (1st qtr 2008)					\$377,40
		Rim Trail DWID						
		Subtotal (include	es pipeline and WTP)					\$249,40
		Mobilizatio	n @ 5%					\$12,50
		Subtotal with Mo	bilization					\$261,80
		Unlisted It	ems @ 15%					\$39,30
		Contract Cost						\$301,10
		Contingen	cies @ 25%					\$75,30
		Field Cost (1st o	tr 2006)					\$376,40
		Adjusted Field C	Cost (1st qtr 2008)					\$378,70
		Verde Glen						
		Subtotal (include	es pipeline and WTP)					\$584,20
		Mobilizatio	n @ 5%					\$29,20
		Subtotal with Mo	bilization					\$613,40
		Unlisted It	ems @ 15%					\$92,00
		Contract Cost						\$705,40
			cies @ 25%					\$176,40
		Field Cost (1st c	ıtr 2006)					\$881,80
		Adjusted Field C	Cost (1st qtr 2008)					\$887,30
		Noto: The activity	less not include Non-sector					
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PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
		Cowan Ranch				_			
			es pipeline and WTP)			_		\$82,20	
		Mobilizatio				_		\$4,10	
		Subtotal with Me						\$86,30	
			ems @ 15%					\$13,00	
		Contract Cost						\$99,30	
			cies @ 25%					\$24,80	
		Field Cost (1st o	ıtr 2006)					\$124,10	
		Adjusted Field C	Cost (1st qtr 2008)					\$124,90	
		Shadow Rim Ranch C	Girl Scout Camp						
			es pipeline and WTP)					\$236,50	
		Mobilizatio						\$11,80	
		Subtotal with Me						\$248,30	
			ems @ 15%					\$37,20	
		Contract Cost						\$285,60	
			cies @ 25%					\$71,40	
	_	Field Cost (1st o						\$357,00	
	_								
		Adjusted Field C	Cost (1st qtr 2008)					\$359,20	
		Whispering Pines							
		Subtotal (include	es pipeline and WTP)					\$388,80	
		Mobilizatio	on @ 5%					\$19,40	
		Subtotal with Me	obilization					\$408,20	
		Unlisted It	ems @ 15%					\$61,20	
		Contract Cost						\$469,50	
		Contingen	cies @ 25%					\$117,40	
		Field Cost (1st o	tr 2006)					\$586,80	
	-	Adjusted Field (Cost (1st qtr 2008)					\$590,50	
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PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		Beaver Valley								
		Subtotal (include	es pipeline and WTP)					\$322,20		
		Mobilizatio	on @ 5%					\$16,10		
		Subtotal with Me	obilization					\$338,30		
		Unlisted It	ems @ 15%					\$50,70		
		Contract Cost						\$389,10		
		Contingen	cies @ 25%					\$97,30		
		Field Cost (1st o	ıtr 2006)					\$486,30		
		Adjusted Field C	Cost (1st qtr 2008)					\$489,40		
		Freedom Acres								
		Subtotal (include	es pipeline and WTP)					\$110,90		
		Mobilizatio	on @ 5%					\$5,50		
		Subtotal with Me	obilization					\$116,40		
		Unlisted It	ems @ 15%					\$17,50		
		Contract Cost						\$133,90		
		Contingen	cies @ 25%					\$33,50		
		Field Cost (1st o						\$167,30		
		Adjusted Field C	Cost (1st qtr 2008)					\$168,40		
		Wonder Valley								
		Subtotal (include	es pipeline and WTP)					\$64,90		
		Mobilizatio	on @ 5%					\$3,20		
		Subtotal with Me	obilization					\$68,10		
		Unlisted It	ems @ 15%					\$10,20		
		Contract Cost						\$78,30		
		Contingen	cies @ 25%					\$19,60		
		Field Cost (1st o	utr 2006)					\$97,90		
		Adjusted Field C	Cost (1st qtr 2008)					\$98,50		
		Note: The estimate o	loes not include Non-contr	act costs.						
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PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		Sunflower Mesa								
		Subtotal (include	es pipeline and WTP)					\$75,00		
		Mobilizatio	n @ 5%					\$3,70		
		Subtotal with Mo	bilization					\$78,70		
		Unlisted Ite	ems @ 15%					\$11,80		
		Contract Cost						\$90,50		
		Contingen	cies @ 25%					\$22,60		
		Field Cost (1st c	tr 2006)					\$113,20		
		Adjusted Field C	ost (1st qtr 2008)					\$113,90		
		Mesa del Caballo								
			es pipeline and WTP)					\$462,20		
		Mobilizatio						\$23,10		
		Subtotal with Mo						\$485,30		
			ems @ 15%					\$72,80		
		Contract Cost						\$558,10		
			cies @ 25%					\$139,50		
		Field Cost (1st c						\$697,60		
								\$700.00		
		Adjusted Field C	ost (1st qtr 2008)					\$702,00		
		East Verde Estates								
			es pipeline and WTP)					\$504,1		
		Mobilizatio						\$25,2		
		Subtotal with Mo						\$529,3		
			ems @ 15%				+	\$79,4		
		Contract Cost					+	\$608,7		
		Field Cost (1st c	cies @ 25% tr 2006)					\$152,2 \$760,9		
		Adjusted Field C	ost (1st qtr 2008)					\$765,7		
		Note: The estimate of	oes not include Non-contr	act costs.						
	QUANTITIES				PRICES					
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	beyond	to Round Valley and	Oxbow Estates	WOID:			TE LEVEL:	Appraisal
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PLANT ACCOUNT	РАҮ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Flowing Springs						
			es pipeline and WTP)					\$502,80
		Mobilizatio						\$25,10
		Subtotal with M	obilization					\$528,00
		Unlisted It	ems @ 15%					\$79,20
		Contract Cost						\$607,20
		-	cies @ 25%					\$151,80
		Field Cost (1st o	ıtr 2006)					\$759,00
		Adjusted Field (Cost (1st qtr 2008)					\$763,80
		Town of Payson						
		Subtotal (includ	es pipeline and WTP)					\$20,670,70
		Mobilizatio						\$1,033,50
		Subtotal with M	obilization					\$21,704,20
		Unlisted It	ems @ 15%					\$3,255,60
		Contract Cost						\$24,959,80
			cies @ 25%					\$6,240,00
		Field Cost (1st o						\$31,199,80
		Adjusted Field (Cost (1st qtr 2008)					\$33,861,90
		Town of Star Valley						
		Subtotal (includ	es pipeline and WTP)					\$621,60
		Mobilizatio	on @ 5%					\$31,10
		Subtotal with M	bilization					\$652,60
		Unlisted It	ems @ 15%					\$97,90
		Contract Cost						\$750,50
			cies @ 25%					\$187,60
		Field Cost (1st o						\$938,20
		Adjusted Field C	Cost (1st qtr 2008)					\$944,10
		Note: The estimate of	loes not include Non-contr	act costs.				
	QUANTITIES			PRICES				
Y				ВҮ		СНЕ	ECKED	
ATE PREPA	Marvin Murray PREPARED PEER REVIEW			DATE PREPA	RED	PEE	R REVIEW	

BUREAU OF	RECLAMATION
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FEATL	EATURE:				CT:				SHEET_6_ OF6
		agin Reservoir Water ach's Group Houstoi			Мод	ollon Rin	n Wat	ter Resource M	lanagement Study
		to Round Valley and (WOID:		ESTIN	ΙΑΤΙ	E LEVEL:	Appraisal
	Field Co	ost Summary		REGION		PRICE			1st qtr 2008
	Source:	Tetra Tech Base Co	ost	FILE:					
					U:\PaysonApprai	salReport\Att	ach. 8\	[Communities along	HMRoad Table IVc32.xls]Sheet1
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT		UNIT PRICE	AMOUNT
		Round Valley Subtotal (include	es pipeline and WTP)				_		\$1,523,200
		Mobilizatio	on @ 5%						\$76,200
		Subtotal with Mo	obilization						\$1,599,400
		Unlisted Ite	ems @ 15%						\$239,900
		Contract Cost							\$1,839,300
			cies @ 25%						\$459,800
		Field Cost (1st q							\$2,299,100
					-				. , ,
		Adjusted Field C	Cost (1st qtr 2008)						\$2,313,600
		Oxbow Estates							
		Subtotal (include	es pipeline and WTP)						\$571,400
		Mobilizatio	on @ 5%						\$28,600
		Subtotal with Mo	obilization						\$600,000
		Unlisted Ite	ems @ 15%						\$90,000
		Contract Cost							\$690,000
		Contingen	cies @ 25%						\$172,500
		Field Cost (1st q	ıtr 2006)						\$862,500
		Adjusted Field C	Cost (1st qtr 2008)						\$868,000
		Note: The estimate d	loes not include Non-contract o	osts.					
							_		
		QUANT	TITIES		<u> </u>		PF	RICES	
вү			CHECKED	вү			СНЕС		
	Marvin Mu	rray							
DATE PREPA	ARED April 30 20	08	PEER REVIEW	DATE PREPAR	ED		PEER	REVIEW	

FEATU				PROJECT: SHEET_1_OF_1_						
		on of wells near C. C	Cragin Reservoir	Mogollon Rim Water Resource Management Study						
	motunatio		l erugin neeer ven		Mogolic	on Rim W	ater Resource Ma	nagement Study		
				WOID:		ESTIM	ATE LEVEL:	Appraisal		
	Annual G	roundwater Produc	tion = 3500 acre-feet	REGION	:	PRICE	LEVEL:	1st quarter 2008		
				FILE:						
Ę	Σ									
PLANT ACCOUNT	РАҮ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		Well Field Cost			6	well	\$500,000	\$3,000,000		
		Arrentine de Of	A 0750/					¢000.00		
) yrs @ 4,875% on & Maintenance Cost @ 8%					\$238,200 \$240,000		
		of Field Cost						\$240,00 \$478,20		
		Total Annual C	oct					\$470,20		
		Total Annual C	051							
		Annual Cost pe	ar Acre Foot					\$13		
			er 1,000 gallons					\$0.4		
								ψ0		
		Noto: The actimet	doog not include New series							
		NOLE. THE ESTIMATE	does not include Non-contra	LI CUSIS.						
							+ +			
		QUANT	ITIES	PRICES						
Y CHECKED			ВҮ			CHECKED				
-	r CHECKED Marvin Murray					ſ				
ATE PREP		· ·	PEER REVIEW	DATE PREPA	RED	F	PEER REVIEW			
	ATE PREPARED PEER REVIEW April 30 2008					ľ				

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ESTIMATE WORKSHEET

SHEET_1_OF _1_

BUREAU OF		IION	ESTIVIAT	-	-			SHEET_1_OF_1_	
FEATU	JRE:			PROJE	CT:				
		l Arizona Project Water : Pine Creek	Supply Alternative		Moge	ollon Rim Wa	ater Resource Ma	lanagement Study	
		al Water Volume = 161 a	acre-feet per vear)	WOID:		ESTIMAT	E LEVEL:	Appraisal	
	•	aters Only		REGION:	LC	PRICE LE		1st quarter 2008	
	CAP II	alers Only		FILE:	LO			TSI quarter 2000	
				FILE.	U:\PaysonApprais	alReport\Attach. 8	V[PineWaterCoTableIV:	36&TableIV37.xls]Sheet1	
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
AGA	<i>1</i> 4								
		Pine Creek Water Su	pply						
		Pipeline System							
		Diversion Struct	ure			Lump Sum	\$250,000	\$250,000	
		Pipeline 10"			2,640		\$75	\$198,000	
		Pavement Repla	acement		250	lf	\$40	\$10,00	
		Rock Excavation	۱		250	су	\$45	\$67,50	
		Water/Wash Cro	ossing		1	Crossing	\$45,000	\$45,000	
		Traffic Control			0.2	Lump Sum	\$170,000	\$42,500	
		Booster Pump S	tation(s)		0	Stations	\$104,000	(
		Subtotal						\$613,000	
		Mobilization @ 5	5%					\$30,600	
		Subtotal with Mobiliza	tion					\$643,700	
		Unlisted @ 15%						\$96,600	
		Contract Cost						\$740,200	
		Contingencies @	25%					\$185,000	
		Field Cost (1st qtr 200						\$925,200	
								\$020,200	
		Water Treatment Pla	nt					\$649,300	
		-							
		Finished Water Stora	-					\$1,143,400	
	_	Field Cost (1st C	2006)					\$1,792,700	
		Total Field Cost (1st q	tr 2006)					\$2,717,900	
								φ2,111,000	
	_	Adjusted Total Field	Cost (1st qtr 2008) TFC					\$2,885,000	
		Annual Cost							
			rs @ 4.875%; CRF = 0.07939)					\$229,000	
	+		ntenance @ 8% TFC					\$230,800	
		Total Annual Cost						\$459,800	
		Annual Cost per	Acro Foot					\$2,850	
	-	Annual Cost per						\$2,650	
		Annual Cost per						ψ0.70	
				_					
		Note: The estimate d	loes not include Non-contract of	costs.					
	QUANTITIES				1	P	RICES		
вү	снескер			BY CHECKED					
	Marvin Murray								
DATE PREP	TE PREPARED PEER REVIEW		DATE PREPAR	ED	PEE	REVIEW			
	April 30 2008								

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ESTIMATE WORKSHEET

SHEET_1_OF _ 2_

FEATU	ATURE:				CT:			
		Arizona Project Wate Arde River Option	r Supply Alternative		Mog	ollon Rim Wa	ater Resource M	anagement Study
		l Water Supply = 161 a	cre-feet per year)	WOID:		ESTIMAT	E LEVEL:	Appraisal
	•		/	REGION:	LC	PRICE LI		1st qtr 2008
				FILE:				/36&TableIV37.xls]Sheet1
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		East Verde River Wa	ter Supply					
		Watan Daliwama Cuata						
		Water Delivery Syste			4	Lump Sum	¢500.000	¢500.000
		Diversion Struct	ure			Lump Sum	\$500,000	\$500,000
		Pipeline 6"			52,272		\$45	\$2,352,200
		Pavement Repla			52,272		\$40	\$2,090,900
		Rock Excavation			20,000	су	\$45	\$900,000
		Water/Wash Cro	ossing		5	-	\$45,000	\$225,000
		Traffic Control		_	1	Lump Sum	\$170,000	\$170,000
		Booster Pump S	station(s)		3	Stations	\$882,000	\$2,646,000
		Subtotal						\$8,384,100
		Mobilization @ 5	5%					\$419,200
		Subtotal with Mobiliza	tion					\$8,803,300
		Unlisted @ 15%	1					\$1,320,500
		Contract Cost						\$10,123,800
		Contingencies @	25%					\$2,531,000
		Field Cost (1st qtr 200	06)					\$12,654,800
		Water Treatment Pla	nt					\$649,300
		Finished Water Stora	age					\$1,143,400 \$1,792,700
		Total Field Cost (1st o	ıtr 2006)					\$14,447,500
		Adjusted Total Field	Cost (1st qtr 2008) TFC					\$15,680,200
		Annual Cost						
		-	rs @ 4.875%; CRF = 0.07939)					\$1,150,000
			intenance @ 8% TFC					\$1,254,400
		Total Annual Cost						\$2,404,400
		Annual Cost per	Acro Foot					\$14,934
		Annual Cost per						\$45.83
		Annual Cost per						\$40.00
	Note: The estimate does not include Non-contract		loes not include Non-contract of	osts.				
	QUANTITIES					P	RICES	
вү				BY CHECKED				
5.	CHECKED Marvin Murray			51				
DATE PREPA			DATE PREPAR	ED	PEE	REVIEW		
	April 30, 2008							

ESTIMATE WORKSHEET

SHEET_2_ OF _ 2_

FEATU	JRE:			PROJE	CT:			SHEET_2_0F_2_
		l Arizona Project Water erde River Option	Supply Alternative		Moge	ollon Rim W	ater Resource N	lanagement Study
	(Annua	l Water Supply = 661 a	cre-feet per year)	WOID:		ESTIMA	TE LEVEL:	Appraisal
				REGION:	LC	PRICE L	EVEL:	1st qtr 2008
				FILE:	U:\PaysonApprais	alReport\Attach.	8\[PineWaterCoTable]	V36&TableIV37.xls]Sheet1
PLANT ACCOUNT	РАҮ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
4		East Verde River Wa	ter Supply					
		Water Delivery Syste	em					
		Diversion Struct			1	Lump Sum	\$500,000	\$500,00
		Pipeline 8"	· ·		52,272		\$45	\$3,136,30
		Pavement Repla	acement		52,272		\$40	\$2,090,90
		Rock Excavation			20,000		\$45	\$900,00
		Water/Wash Cro				Crossing	\$45,000	\$225,00
		Traffic Control	Joshig		1	Lump Sum	\$170,000	\$170,00
			tation(s)			Stations	\$882,000	\$2,646,00
	-	Booster Pump S	dalion(s)		3	Stations	\$882,000	
		Subtotal	-0/					\$9,668,20
		Mobilization @ 5						\$483,40
		Subtotal with Mobiliza						\$10,151,60
		Unlisted @ 15%						\$1,522,70
	_	Contract Cost						\$11,374,40
		Contingencies @	25%					\$2,918,600
		Field Cost (1 qtr 2006))					\$14,592,900
		Water Treatment Pla	nt					\$649,300
		Finished Water Stora	age					\$1,143,400 \$1,792,700
		Total Field Cost (1st q	tr 2006)					\$21,960,900
		Adjusted Total Field	Cost (1st qtr 2008)					\$23,834,70
		Annual Cost						
		Amortized (20 yr	rs @ 4.875%; CRF = 0.07939)					\$1,897,24
		Operation & Mai	ntenance @ 8% TFC					\$1,906,80
		Total Annual Cost						\$3,804,00
		Annual Cost per	Acre-Foot					\$5,75
		Annual Cost per	1,000 gallons					\$17.6
		Note: The estimate d	loes not include Non-contract	costs.				
	QUANTITIES				1	F	PRICES	I
ВΥ				вү			ECKED	
DATE PREPA	Marvin Murray TE PREPARED PEER REVIEW			DATE PREPAR	ED	PFF		
	TE PREPARED PEER REVIEW April 30, 2008							

		8	ESTIMAT			- 1		SHEET_1_OF _1
FEATU	URE:	ADOT HWY 260 Su	rface Water Diversion	PROJE	CT:			
		ated at or near Lion s is at or near Kohl's F	Springs @ HWY 260 Ranch @ HWY 260		Mogolic	on Rim Wate	er Resource M	anagement Study
-			ude Kohl's Ranch, Pine	WOID:		ESTIMA	E LEVEL:	Appraisal
					LC			
			to Village. One or more		LC		EVEL.	1st quarter 2008
			expected water supply	FILE:				
	source, i.	e 100 acre-feet per a	nnum					
PLANT ACCOUNT	РАҮ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		HWY 260 Transmiss	sion Pipeline					
		Pipeline 6" (o	dip 350 psi class)		54,542	lf	\$45.00	\$ 2,454,400
		Pipeline 8" (d	dip 350 psi class)		0	lf	\$60.00	\$ 0
		Pavement Surf	ace Replacement		10,560	lf	\$40.00	\$ 422,400
		Rock Excavation	วท		14,667	су	\$45.00	\$ 660,000
		Water/Wash C	rossing		10	Crossing	\$45,000	\$ 450,000
		Traffic Control	-		1	Lump Sum	\$170,000	\$ 170,000
		Booster Pump	Stations		1	Stations	\$167,000	\$ 167,000
		Subtotal						\$ 4,323,800
		Mobilizati	on @ 5%					\$ 216,200
		Subtotal with M	lobilization					\$ 4,540,000
		Unlisted I	tems @ 15%					\$ 681,000
		Contract Cost						\$ 5,221,000
		Continger	ncies @ 25%					\$ 1,305,200
		Field Cost (1st						\$ 6,526,200
			Cost of Existing Facilites					\$ 2,500,000
			reatment facilities, storage, and					
		· · · · · · · · · · · · · · · · · · ·	ection systems are included					
		and operable.	•					
			ADOT Facilities					\$ 9,583,000
		Field Cost adju	sted to 1st qtr. 2008 FC					
		Annual Cost						
		Amortized @ 2	0 yrs, I = 4.875%; CRF = 0.0793	39				\$ 760,800
		Operation & Ma	aintenance @ 8% FC					\$ 766,600
		Total Annual Cost						\$ 1,527,400
		Annual Cost pe	er Acre-Foot					\$ 15,274
		Annual Cost pe	er 1,000 gallons					\$ 46.87
		Note: The estimate	does not include Non-contra	ct costs.				
	QUANTITIES						ICES	
BY			CHECKED	вү		CHE	CKED	
	Marvin Murr	ray						
DATE PREP	ATE PREPARED PEER REVIEW April 29, 2008			DATE PREPAR	ED	PEEI	REVIEW	
		April 20, 2000						

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		-	ESTIMA		-			SHEET_1_OF_18_
	-	ional Groundw	ater Alternative		.01.			
	0		Group Field Cost and		Mogo	ollon Rim W	ater Resource M	lanagement Study
	Associat	ted Annual Cos	t	WOID:		ESTIMA ⁻	TE LEVEL:	Appraisal
				REGION	:	PRICE L	EVEL:	1st quarter 2008
				FILE:				
Ę	Σ							
PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT
	Sub-Reg	ion One - Non-(Cluster Communities					
	Camp Ge	eronimo						
		2040 Annual L	ow Water Demand = 19 af/yr					
		Low volu	me production well(s)		1	20 gpm	\$38,400	\$38,4
		High volu Field Cost (FC	me production well(s))		0	150 gpm	\$350,000	\$38,4
		Annual Cost						
	+		tion: n = 20 yrs; I = 4.875%					\$3,0
	-		& M Cost @ 8% of FC					\$3,1
		Total Anr						\$6,1
			ost per Acre-Foot	-				\$3
			ost per 1,000 gallons					\$0
	Geronimo	Estates						
		2040 Annual L	ow Water Demand = 84 af/yr					
			me production well(s)		3	20 gpm	\$38,400	\$115,2
			me production well(s)			150 gpm	\$350,000	· · · · · · · · · · · · · · · · · · ·
		Field Cost (FC						\$115,2
		Annual Cost						
		Amortizat	tion: n = 20 yrs; l = 4.875%					\$9,1
		Annual O	& M Cost @ 8% of FC					\$9,2
		Total Anr	ual Cost					\$18,4
		Annual C	ost per Acre-Foot					\$2
		Annual C	ost per 1,000 gallons					\$0
	Bonita Cr							
			ow Water Demand = 27 af/yr					
			me production well(s)			20 gpm	\$38,400	\$38,4
	_	High volu Field Cost (FC	me production well(s))		0	150 gpm	\$350,000	\$38,4
		Annual Cost						
		Amortizat	tion: n = 20 yrs; I = 4.875%					\$3,0
		Annual O	& M Cost @ 8% of FC					\$3,1
		Total Anr	ual Cost					\$6,1
		Annual C	ost per Acre-Foot					\$2
	Neto- T		ost per 1,000 gallons					\$0
	Note: The estimate does not include Non-contract o		DSTS.					
	QUANTITIES						PRICES	
(CHECKED Marvin Murray		вү		CHE	CKED		
ATE PRE	REPARED PEER REVIEW			DATE PREPA	RED	PEE	R REVIEW	

FEAT	EATURE:			PROJECT:					
	-		ater Alternative Group Field Cost and		Mog	ollon Rim W	/ater Resource M	anagement Study	
	Associat	ed Annual Cos	t	WOID:		ESTIMA	TE LEVEL:	Appraisal	
				REGION	l:	PRICE L		1st quarter 2008	
				FILE:					
PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT	
	Sub-Regi	on One - Non-	Cluster Communities						
	Diamond	Point Recreat	ion						
		2040 Annual L	ow Water Demand = 15 af/yr						
		Low volu	me production well(s)			20 gpm	\$38,400	\$38,400	
		High volu	ime production well(s)		0	150 gpm	\$350,000	\$0	
		Field Cost (FC	;)					\$38,400	
		Annual Cost							
		Amortiza	tion: n = 20 yrs; l = 4.875%					\$3,000	
		Annual C	& M Cost @ 8% of FC					\$3,100	
		Total An	nual Cost					\$6,100	
		Annual C	Cost per Acre-Foot					\$408	
	Annual Cost per 1,000 gallons							\$1.25	
	Kohl's Ra	nch							
			ow Water Demand = 62 af/yr						
			me production well(s)		2	20 gpm	\$38,400	\$76,800	
			Ime production well(s)			150 gpm	\$350,000	\$0	
		Field Cost (FC	:)					\$76,800	
	-	Annual Cost							
			tion: n = 20 yrs; I = 4.875%					\$6,100	
			& M Cost @ 8% of FC					\$6,100	
		Total An	nual Cost					\$12,200	
		Annual C	Cost per Acre-Foot					\$197	
		Annual C	Cost per 1,000 gallons					\$0.61	
	Tonto Cre	ek Estates							
			ow Water Demand = 21 af/yr						
			me production well(s)			20 gpm	\$38,400	\$38,400	
		-	Ime production well(s)		0	150 gpm	\$350,000	\$0	
	_	Field Cost (FC	3)					\$38,400	
		Annual Cost							
			tion: n = 20 yrs; I = 4.875%					\$3,000	
			0 & M Cost @ 8% of FC					\$3,100	
	Total Annual Cost			_				\$6,100	
	Annual Cost per Acre-Foot Annual Cost per 1,000 gallons Note: The estimate does not include Non-contract co						├ ─── ├	\$291	
				osts.				\$0.89	
	QUANTITIES						PRICES		
BY	CHECKED			ВҮ		CHE	CKED		
	Marvin Murray								
DATE PRE	TE PREPARED PEER REVIEW April 30 2008			DATE PREPA	ARED.	PEE	R REVIEW		

FEAT	EATURE:			PROJE	CT:				
	•		ater Alternative Group Field Cost and	Mogollon Rim Water Resource Management Study WOID: ESTIMATE LEVEL: Appraisal					
	Associat	ed Annual Cos	t	WOID:		ESTIMA ⁻	TE LEVEL:	Appraisal	
				REGION	l:	PRICE L	EVEL:	1st quarter 2008	
				FILE:					
PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT	
	Sub-Regi	on One - Clust	er 1						
	_	er Company							
			ow Water Demand = 1128 af/yr						
		Low volu	me production well(s)		5	20 gpm	\$38,400	\$192,000	
		High volu	me production well(s)		4	150 gpm	\$350,000	\$1,400,000	
		Field Cost (FC)						\$1,592,000	
		Annual Cost							
			tion: n = 20 yrs; I = 4.875%					\$126,400	
			& M Cost @ 8% of FC					\$127,400	
		Total Anr						\$253,700	
	Annual Cost per Acre-Foot							\$225	
		Annual C	ost per 1,000 gallons					\$0.69	
	Pine Creek Canyon DWID								
			ow Water Demand = 58 af/yr				.	ATO 000	
			me production well(s)			20 gpm	\$38,400	\$76,800	
		-	me production well(s)		0	150 gpm	\$350,000	\$0	
		Field Cost (FC)					\$76,800	
		Annual Cost							
			tion: n = 20 yrs; I = 4.875%					\$6,100	
			& M Cost @ 8% of FC					\$6,100	
		Total Anr						\$12,200	
			ost per Acre-Foot					\$211	
			ost per 1,000 gallons					\$0.65	
	Pine Wate	er Association	DWID ow Water Demand = 18 af/yr						
	+		me production well(s)		1	20 gpm	\$38,400	\$38,400	
	+		me production well(s)		0	150 gpm	\$350,000	\$38,400 \$0	
		Field Cost (FC				loo gpiii	4000,000	\$38,400	
		Annual Cost							
			tion: n = 20 yrs; I = 4.875%				<u> </u>	\$3,000	
			& M Cost @ 8% of FC					\$3,100	
		Total Anr						\$6,100	
	Annual Cost per Acre-Foot							\$340	
	Annual Cost per 1,000 gallons							\$1.04	
	Note: The estimate does not include Non-contract co			sts.					
	QUANTITIES						PRICES		
ВΥ			CHECKED	ВҮ		CHE	CKED		
DATE PREF	Marvin Murra	ay	PEER REVIEW	DATE PREPA	RED	PEE	R REVIEW		
	April 30 2008								

	REAU OF RECLAMATION ESTIVA							SHEET4 OF18	
FEAT	URE:			PROJE	CT:				
	•		vater Alternative Group Field Cost and		Moge	ollon Rim W	ater Resource M	lanagement Study	
		ed Annual Cos	-	WOID:		ESTIMA	TE LEVEL:	Appraisal	
				REGION	-	PRICE L		1st quarter 2008	
				FILE:	•				
				FILE.					
PLANT ACCOUNT	PAY ITEM			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT	
AOA	_								
		ion One - Clus	ter 1						
	Solitude	Trails DWID							
			Low Water Demand = 25 af/yr						
			ime production well(s)			20 gpm	\$38,400	38,40	
	_	-	ume production well(s)		0	150 gpm	\$350,000		
		Field Cost (FC	C)					38,400	
		Annual Cost							
			ation: n = 20 yrs; I = 4.875%					\$3,00	
	Annual O & M Cost @ 8% of FC							\$3,10	
	Total Annual Cost							\$6,10	
	Annual Cost per Acre-Foot							\$24	
	Annual Cost per 1,000 gallons							\$0.7	
	Strawberr	y Hollow DWID							
			Low Water Demand= 23 af/yr						
			Ime production well(s)		1	20 gpm	\$38,400	\$38,40	
		-	ume production well(s)		0	150 gpm	\$350,000		
		Field Cost (FC	C)					\$38,400	
		Annual Cost							
			ation: n = 20 yrs; I = 4.875%					\$3,000	
			D & M Cost @ 8% of FC					\$3,10	
			nual Cost					\$6,10	
			Cost per Acre-Foot					\$260	
			Cost per 1,000 gallons					\$0.82	
	Strawberr	y Water Compa							
	_		Low Water Demand = 672 af/yr Ime production well(s)		0	20 gpm	\$38,400	\$(
			ume production well(s)		3		\$350,000	نې \$1,050,00	
		Field Cost (FC			3	150 gpm	\$350,000	\$1,050,000	
								φ1,000,00	
		Annual Cost							
		Amortiza	ation: n = 20 yrs; I = 4.875%					\$83,40	
		Annual C	D & M Cost @ 8% of FC					\$84,00	
		Total An	nual Cost					\$167,400	
	Annual Cost per Acre-Foot							\$24	
		Annual (Cost per 1,000 gallons					\$0.7	
	Note: The estimate does include Non-contract costs.								
	QUANTITIES						PRICES		
BY				BY					
	Marvin Murr	ay							
	re PREPARED PEER REVIEW		DATE PREPA	RED	PFF	R REVIEW			
	April 30 2008								

FEAT	FEATURE:		PROJE	CT:				
	-		ater Alternative Group Field Cost and		Mog	ollon Rim V	Vater Resource M	lanagement Study
	Associate	ed Annual Cos	t	WOID:		ESTIMA	TE LEVEL:	Appraisal
				REGION	l:	PRICE I	EVEL:	1st quarter 2008
				FILE:				
PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT
	-	on One - Clust						
	Strawber	ry Water Comp					+ +	
			ow Water Demand = 23 af/yr				.	* 22,422
			me production well(s)		-	20 gpm	\$38,400	\$38,400
		Field Cost (FC	,		0	150 gpm	\$350,000	\$0
		Field Cost (FC)				+ +	\$38,400
		Annual Cost						
	Amortization: n = 20 yrs; I = 4.875%							\$3,000
			& M Cost @ 8% of FC					\$3,100
		Total Anr						\$6,100
	Annual Cost per Acre-Foot							\$266
	Annual Cost per 1,000 gallons						\$0.82	
	Cluster 1 Sub-Regional System							
	2040 Annual Low Water Demand=1,947 af/yr							
			me production well(s)			20 gpm	\$38,400	\$38,400
		-	me production well(s)		8	150 gpm	\$350,000	\$2,800,000
		Field Cost (FC)					\$2,838,400
		Annual Cost						
		Amortizat	tion: n = 20 yrs; I = 4.875%					\$225,300
		Annual O	& M Cost @ 8% of FC					\$227,100
	_	Total Anr						\$452,400
			ost per Acre-Foot					\$232
		Annual C	ost per 1,000 gallons					\$0.71
<u> </u>								
<u> </u>				-				
	Note: The estimate does include Non-contract costs.							
		QUAI	NTITIES		<u> </u>	<u> </u>	PRICES	
вү	CHECKED		ВҮ		сн	ECKED		
	Marvin Murray							
DATE PREP			PEER REVIEW	DATE PREPA	RED	PE	ER REVIEW	
	April 30 2008)						

FEA1	EATURE:			PROJE	CT:								
	-		vater Alternative Group Field Cost and		Mog	ollon Rim W	ater Resource M	lanagement Study					
	Associat	ed Annual Cos	st	WOID:		ESTIMA	TE LEVEL:	Appraisal					
				REGION	-	PRICE L		1st quarter 2008					
				FILE:				•					
PLANT ACCOUNT				CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT					
		on One - Clus	ter 2										
	Washing												
			Low Water Demand = 5 af/yr				••••	•					
			ume production well(s)			20 gpm	\$38,400	\$38,400					
		High volume production well(s) Field Cost (FC)			0	150 gpm	\$350,000	\$0\$38,400					
		Annual Cost	('					\$0.00					
			ation: n = 20 yrs; I = 4.875%					\$3,000					
			nual Cost					\$3,100					
			Cost per Acre-Foot					\$0,100					
			Cost per 1,000 gallons					\$3.76					
	Rim Trail												
	Rim Irali		Low Water Demand = 48 af/yr										
					2	20 gpm	\$38,400	\$76,800					
		Low volume production well(s) High volume production well(s)				150 gpm	\$350,000	\$70,000 \$(
		Field Cost (F0						\$76,800					
		Annual Cost											
		Amortiza	ation: n = 20 yrs; l = 4.875%					\$6,100					
		Annual (O & M Cost @ 8% of FC					\$6,100					
		Total An	nual Cost					\$12,200					
			Cost per Acre-Foot					\$255					
		Annual (Cost per 1,000 gallons					\$0.78					
	Shadow I	Rim Ranch											
			Low Water Demand = 7 af/yr										
			ume production well(s)			20 gpm	\$38,400	38,400					
		-	ume production well(s)		0	150 gpm	\$350,000	(
		Field Cost (F0	C)					38,400					
		Annual Cost											
		Amortiza	ation: n = 20 yrs; I = 4.875%					3,000					
			D & M Cost @ 8% of FC					3,100					
	Total Annual Cost					ļļ	6,100						
	Annual Cost per Acre-Foot						↓ ↓	874					
	Annual Cost per 1,000 gallons Note: The estimate does not include Non-contract co			sts.				\$2.68					
	QUANTITIES						PRICES						
BY	CHECKED			вү		СНЕ	CKED						
DATE DE													
DATE PRE	TE PREPARED PEER REVIEW April 30 2008		DATE PREPA	KED	PEE	R REVIEW							

FEA ⁻	EATURE:		PROJE	CT:				
	-		ater Alternative Group Field Cost and		Mog	ollon Rim W	ater Resource M	lanagement Study
	Associate	ed Annual Cos	t	WOID:		ESTIMA ⁻	TE LEVEL:	Appraisal
				REGION	:	PRICE L	EVEL:	1st quarter 2008
				FILE:				•
⊢₽	Σ							
PLANT ACCOUNT	PAY ITEM			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT
	Sub-Regi	on One - Clust	er 2					
	Whisperin	-						
			ow Water Demand = 74 af/yr					
			me production well(s)			20 gpm	\$38,400	\$115,200
		-	Ime production well(s)		0	150 gpm	\$350,000	\$0
		Field Cost (FC	;)					\$115,200
		Annual Cost						.
			tion: n = 20 yrs; l = 4.875%					\$9,100
			0 & M Cost @ 8% of FC					\$9,200
		Total Annual Cost						\$18,400
	Annual Cost per Acre-Foot Annual Cost per 1,000 gallons							\$248
		Annual C	cost per 1,000 gallons					\$0.76
	Cowon B	anah						
	Cowan Ranch 2040 Annual Low Water Demand = 7 af/yr							
			me production well(s)		1	20 gpm	\$38,400	\$38,400
			ime production well(s)	_	0	150 gpm	\$350,000	\$00,400 \$0
		Field Cost (FC			0	100 gpin	4000,000	\$38,400
			·)					
		Annual Cost						
		Amortiza	tion: n = 20 yrs; l = 4.875%					\$3,000
			& M Cost @ 8% of FC					\$3,100
		Total Ani	nual Cost					\$6,100
		Annual C	Cost per Acre-Foot					\$874
		Annual C	cost per 1,000 gallons					\$2.68
	Verde Gle	en						
		2040 Annual L	ow Water Demand = 37 af/yr					
			me production well(s)		2	20 gpm	\$38,400	\$76,800
		-	ume production well(s)		0	150 gpm	\$350,000	\$0
		Field Cost (FC	3)					\$76,800
		Annual Cost						
			tion: n = 20 yrs; I = 4.875%					\$6,100
			0 & M Cost @ 8% of FC					\$6,100
		Total Ani	nual Cost					\$12,200
		Annual Cost per Acre-Foot						\$331
	Annual Cost per 1,000 gallons Note: The estimate does not include Non-contract co						\$1.02	
			sts.					
	QUANTITIES							
							PRICES	
BY	CHECKED		вү		СНЕ	CKED		
	Marvin Murray							
DATE PR	TE PREPARED PEER REVIEW		DATE PREPA	RED	PEE	R REVIEW		
	April 30 2008	L						

FEAT	EATURE:			PROJE	PROJECT:					
	-		ater Alternative Group Field Cost and		Mog	ollon Rim W	/ater Resource M	lanagement Study		
	Associate	ed Annual Cos	t	WOID:		ESTIMA [®]	TE LEVEL:	Appraisal		
				REGION	:	PRICE L	EVEL:	1st quarter 2008		
				FILE:						
PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT		
	Sub-Regi	on One - Clust	er 2							
	Cluster 2	Sub-Regiona	-							
		2040 Annual L	ow Water Demand = 178 af/yr							
			me production well(s)		6	20 gpm	\$38,400	\$230,400		
		-	me production well(s)		0	150 gpm	\$350,000	\$0		
		Field Cost (FC)					\$230,400		
		Annual Cost								
		Amortizat	tion: n = 20 yrs; I = 4.875%					\$18,300		
		Annual O	& M Cost @ 8% of FC					\$18,400		
	Total Annual Cost							\$36,700		
	Annual Cost per Acre-Foot							\$206		
	Annual Cost per 1,000 gallons						\$0.63			
	Sub-Region One - Cluster 3									
	Zane Gre	y Meadows								
			ow Water Demand = 6 af/yr							
			me production well(s)			20 gpm	\$38,400	\$38,400		
	_	-	me production well(s)		0	150 gpm	\$350,000	\$0		
		Field Cost (FC)					\$38,400		
	_	Annual Cost								
			tion: n = 20 yrs; l = 4.875%					\$3,000		
			• & M Cost @ 8% of FC					\$3,000		
		Total Ann						\$5,100		
			ost per Acre-Foot					\$0,100		
			ost per 1,000 gallons					\$3.13		
	Collins R	anch								
			ow Water Demand = 11 af/yr							
		Low volu	me production well(s)		1	20 gpm	\$38,400	\$38,400		
		High volu	me production well(s)		0	150 gpm	\$350,000	\$0		
		Field Cost (FC)					\$38,400		
		Annual Cost								
			tion: n = 20 yrs; l = 4.875%					\$3,000		
			& M Cost @ 8% of FC					\$3,100		
	Total Annual Cost							\$6,100		
	Annual Cost per Acre-Foot							\$556		
	Annual Cost per 1,000 gallons							\$1.71		
	Note: The estimate does not include Non-contract co			sts.						
	QUANTITIES						PRICES			
вү			CHECKED	вү		CHE	CKED			
	Marvin Murra	ау								
DATE PREP	ATE PREPARED PEER REVIEW		PEER REVIEW	DATE PREPA	RED	PEE	R REVIEW			
	April 30 2008	5								

FEAT	FEATURE:				PROJECT:							
	Sub-Regional Groundwater Alternative Individual, Cluster and Group Field Cost and				Mogollon Rim Water Resource Management Study WOID: ESTIMATE LEVEL: Appraisal							
	Associated Annual Cost					ESTIMA	TE LEVEL:	Appraisal				
				REGION	:	PRICE L		1st quarter 2008				
				FILE:								
					-	_						
PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT				
	Sub-Regi Mead Rai	ion One - Clust nch	er 3									
		2040 Annual L	ow Water Demand = 41 af/yr									
		Low volur	me production well(s)		2	20 gpm	\$38,400	\$76,800				
	High volume production well(s)				0	150 gpm	\$350,000	\$0				
		Field Cost (FC					\$76,800					
		Annual Cost										
			tion: n = 20 yrs; I = 4.875%					\$6,100				
			& M Cost @ 8% of FC					\$6,100				
		Total Ann	ual Cost					\$12,200				
		Annual C	ost per Acre-Foot					\$299				
		Annual C	ost per 1,000 gallons					\$0.92				
	Cluster 3	Sub-Regiona	al System									
		-	ow Water Demand = 58 af/yr									
			me production well(s)		2	20 gpm	\$38,400	\$76,800				
			me production well(s)		0		\$350,000	\$0				
		Field Cost (FC						\$76,800				
		Annual Cost										
			tion: n = 20 yrs; l = 4.875%					\$6,100				
		Annual O	& M Cost @ 8% of FC					\$6,100				
		Total Ann						\$12,200				
			ost per Acre-Foot					\$211				
		Annual C	ost per 1,000 gallons					\$0.65				
	Sub-Regi	on One - Clust	er 4									
	Ellison C	reek Recreatio										
			ow Water Demand = 19 af/yr									
			me production well(s)		1	20 gpm	\$38,400	\$38,400				
		-	me production well(s)		0	150 gpm	\$350,000	\$0				
	Field Cost (FC)							\$38,400				
		Annual Cost										
		Amortizat	tion: n = 20 yrs; I = 4.875%					\$3,000				
		Annual O	& M Cost @ 8% of FC					\$3,100				
		Total Ann	ual Cost					\$6,100				
	Annual Cost per Acre-Foot Annual Cost per 1,000 gallons					ļ	\$322					
							\$0.99					
	Note: The estimate does not include Non-contract cos QUANTITIES CHECKED			sts.			PRICES					
вү				вү								
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DATE PREP			PEER REVIEW	DATE PREPA	RED	PEE						
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FEATURE:			PROJECT:							
Sub-Regional Groundwater Alternative Individual, Cluster and Group Field Cost and					Mog	ollon Rim	Water Resource M	lanagement Study		
Associated Annual Cost			WOID:		ESTIM	ATE LEVEL:	Appraisal			
				REGION	:		LEVEL:	1st quarter 2008		
				FILE:						
PLANT ACCOUNT	PAY ITEM			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT		
	Sub-Regi	on One - Cluste	er 4							
	Ellison C	reek Estates								
			ow Water Demand = 26 af/yr							
			ne production well(s)			20 gpm	\$38,400	\$38,400		
		-	me production well(s)		0	150 gpm	\$350,000	\$0		
	Field Cost (FC)						\$38,400			
		Annual Cost								
			ion: n = 20 yrs; l = 4.875%				_	\$3,000		
			& M Cost @ 8% of FC				_	\$3,100		
		Total Ann					_	\$6,100		
			ost per Acre-Foot				_	\$235		
		Annual Co	ost per 1,000 gallons				-	\$0.72		
	Cluster 4	Sub-Regiona	al System				-			
	Cluster 4		ow Water Demand = 45 af/yr							
			ne production well(s)		2	20 gpm	\$38,400	\$76,800		
			me production well(s)			150 gpm	\$350,000	\$70,000		
		Field Cost (FC)			0	100 gpin	4000,000	\$76,800		
							-	¢10,000		
		Annual Cost								
			ion: n = 20 yrs; l = 4.875%					\$6,100		
			& M Cost @ 8% of FC					\$6,100		
		Total Ann	ual Cost					\$12,200		
		Annual Co	ost per Acre-Foot					\$272		
		Annual Co	ost per 1,000 gallons					\$0.83		
	Note: The		not include Non-contract co	sts.						
		QUAN	ITITIES				PRICES			
ВҮ	Marvin Murra	ay	CHECKED	ВҮ		С	HECKED			
DATE PREP			PEER REVIEW	DATE PREPA	RED	PI	EER REVIEW			
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	FEATURE:			PROJECT:							
	Regional Groundv idual, Cluster and	vater Alternative Group Field Cost and		Moge	ollon Rim V	Vater Resource M	anagement Study				
	Associated Annual Cost				ESTIMA	TE LEVEL:	Appraisal				
			REGION	:	PRICE L		1st quarter 2008				
			FILE:	-							
PLANT ACCOUNT PAY ITFM			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT				
	Region One - Clus	ter 5									
Thon	npson Draw I&II										
		Low Water Demand = 27 af/yr					• • • • • •				
		ume production well(s)			20 gpm	\$38,400 \$350,000	\$38,400				
	Field Cost (F			0	150 gpm	\$350,000	\$0 \$38,400				
)					φ30,400				
	Annual Cost										
		ation: n = 20 yrs; I = 4.875%					\$3,000				
	Annual (D & M Cost @ 8% of FC					\$3,100				
	Total An	nual Cost					\$6,100				
		Cost per Acre-Foot					\$227				
	Annual (Cost per 1,000 gallons					\$0.70				
Taut	N/IIIana										
Tonto	2040 Appual	Low Water Demand = 114 af/yr				+					
		ume production well(s)	-	4	20 gpm	\$38,400	\$153,600				
		ume production well(s)	-		150 gpm	\$350,000	\$0				
	Field Cost (F0						\$153,600				
	Annual Cost										
	Amortiza	ation: n = 20 yrs; l = 4.875%					\$12,200				
		D & M Cost @ 8% of FC					\$12,300				
		nual Cost					\$24,500				
		Cost per Acre-Foot					\$215				
	Annuar	Cost per 1,000 gallons					\$0.66				
Note		es not include Non-contract co NTITIES	sts.								
вү	QUA		BY			PRICES					
	Murray		51		CH						
DATE PREPARED		PEER REVIEW	DATE PREPA	RED	PEI	ER REVIEW					
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FEAT	FEATURE:			PROJECT:							
Sub-Regional Groundwater Alternative Individual, Cluster and Group Field Cost and					Mog	ollon Rim W	/ater Resource M	anagement Study			
	Associated Annual Cost					ESTIMA	TE LEVEL:	Appraisal			
				REGION	l:	PRICE L		1st quarter 2008			
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PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT			
		on One - Clust	er 5								
	Wood Ca	nyon Ranch									
			ow Water Demand = 84 af/yr								
			me production well(s)			20 gpm	\$38,400	\$115,200			
	High volume production well(s)			0	150 gpm	\$350,000	\$0				
		Field Cost (FC)					\$115,200			
		Annual Cost									
		Amortizat	ion: n = 20 yrs; I = 4.875%					\$9,100			
		Annual O	& M Cost @ 8% of FC					\$9,200			
		Total Ann	ual Cost					\$18,400			
		Annual C	ost per Acre-Foot					\$219			
		Annual C	ost per 1,000 gallons					\$0.67			
	Cluster 5	Sub-Regiona									
			ow Water Demand = 225 af/yr								
			me production well(s)			20 gpm	\$38,400	\$268,800			
		-	me production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC)					\$268,800			
		Annual Cost									
			ion: n = 20 yrs; l = 4.875%					\$21,300			
		Annual O	& M Cost @ 8% of FC					\$21,500			
		Total Ann						\$42,800			
			ost per Acre-Foot					\$190			
		Annual C	ost per 1,000 gallons					\$0.58			
	Sub-Regi Bear Flat	on One - Clust	er 6								
		2040 Annual L	ow Water Demand = 46 af/yr								
		Low volur	me production well(s)		2	20 gpm	\$38,400	\$76,800			
		High volu	me production well(s)		0	150 gpm	\$350,000	\$0			
	Field Cost (FC)						\$76,800				
		Annual Cost									
			ion: n = 20 yrs; l = 4.875%					\$6,100			
			& M Cost @ 8% of FC					\$6,100			
	Total Annual Cost Annual Cost per Acre-Foot Annual Cost per 1,000 gallons Note: The estimate does not include Non-contract cos QUANTITIES						\$12,200				
							\$266				
			Ļ				\$0.82				
			sts.			DRICES					
DY.			DV			PRICES					
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FEAT	EATURE:			PROJE	CT:				
	-		ater Alternative Group Field Cost and		Модо	ollon Rim V	Vater Resource N	lanagement Study	
		ed Annual Cos	-	WOID:		ESTIMA	TE LEVEL:	Appraisal	
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PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT	
	Sub-Regi	on One - Clust	er 6						
	Christoph	ner Creek							
			ow Water Demand = 183 af/yr						
			me production well(s)		-	20 gpm	\$38,400	\$230,400	
		-	me production well(s)		0	150 gpm	\$350,000	\$0	
	Field Cost (FC)							\$230,400	
	Annual Cost								
		Amortizat	ion: n = 20 yrs; I = 4.875%					\$18,300	
		Annual O	& M Cost @ 8% of FC					\$18,400	
		Total Ann	ual Cost					\$36,700	
			ost per Acre-Foot					\$201	
		Annual C	ost per 1,000 gallons					\$0.62	
	Hunter Cr	ook							
	Hunter Cr		ow Water Demand = 54 af/yr				+ +		
	-		me production well(s)		2	20 gpm	\$38,400	\$76,800	
			me production well(s)		-		\$350,000	\$0	
		Field Cost (FC					+	\$76,800	
		Annual Cost							
			ion: n = 20 yrs; l = 4.875%					\$6,100	
			& M Cost @ 8% of FC					\$6,100	
		Total Ann						\$12,200	
	-		ost per Acre-Foot ost per 1,000 gallons					\$227 \$0.70	
		Annuar C	usi per 1,000 galions					φ0.70	
	R Bar C B	oy Scout Cam	р						
		-	ow Water Demand = 3 af/yr						
		Low volur	me production well(s)		1	20 gpm	\$38,400	\$38,400	
		High volu	me production well(s)		0	150 gpm	\$350,000	\$0	
		Field Cost (FC						\$38,400	
		Annual Cost							
		Amortizat	ion: n = 20 yrs; l = 4.875%					\$3,000	
		Annual O	& M Cost @ 8% of FC					\$3,100	
	Total Annual Cost							\$6,100	
	Annual Cost per Acre-Foot						↓	\$2,040	
	Annual Cost per 1,000 gallons							\$6.26	
	Note: The		not include Non-contract cos	sts.					
		QUAN	TITIES				PRICES		
вү			CHECKED	ВҮ		сн	ECKED		
	Marvin Murra	у							
DATE PREP	ARED April 30 2008		PEER REVIEW	DATE PREPA	RED	PEI	ER REVIEW		
	April 30 2008	,							

FEATURE:	PROJECT:								
Sub-Regional Groun	dwater Alternative nd Group Field Cost and		Mogollon Rim Water Resource Management Study						
	Associated Annual Cost				TE LEVEL:	Appraisal			
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		FILE:	•						
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PLANT ACCOUNT PAY ITEM		CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT			
Sub-Region One - Cl	uster 6								
Cluster 6 - Sub-Regi	onal System								
2040 Annu	al Low Water Demand = 286 af/yr								
Low v	olume production well(s)		9	20 gpm	\$38,400	\$345,600			
High	volume production well(s)		0	150 gpm	\$350,000	\$0			
Field Cost	(FC)					\$345,600			
Annual Cos									
Amor	ization: n = 20 yrs; I = 4.875%					\$27,400			
Annua	al O & M Cost @ 8% of FC					\$27,600			
	Annual Cost					\$55,100			
	al Cost per Acre-Foot					\$193			
Annua	al Cost per 1,000 gallons					\$0.59			
Sub-Region Two									
Arrowhead Canyon									
	al Low Water Demand = 3 af/yr					• • • • • •			
	olume production well(s)			20 gpm	\$38,400	\$38,400			
	volume production well(s)		0	150 gpm	\$350,000	\$0			
Field Cost						\$38,400			
Annual Cos									
	ization: n = 20 yrs; I = 4.875%				-	000 ¢2			
	al O & M Cost @ 8% of FC					\$3,000 \$3,100			
	Annual Cost					\$5,100			
	al Cost per Acre-Foot					\$2,040			
	al Cost per 1,000 gallons					\$6.26			
	ndividual Communities					ψ0.20			
Mesa Del Caballo									
	al Low Water Demand = 147 af/yr								
	olume production well(s)		5	20 gpm	\$38,400	\$192,000			
	volume production well(s)				\$350,000	\$0			
Field Cost	,					\$192,000			
						· · /···			
Annual Cos	st								
Amor	ization: n = 20 yrs; I = 4.875%					\$15,200			
	al O & M Cost @ 8% of FC					\$15,400			
Total	Annual Cost					\$30,600			
Annu	Annual Cost per Acre-Foot Annual Cost per 1,000 gallons					\$208			
						\$0.64			
	Note: The estimate does not include Non-contract co								
વા	QUANTITIES				PRICES				
ВҮ	CHECKED	вү		сн	ECKED				
Marvin Murray									
DATE PREPARED	PEER REVIEW	DATE PREPA	RED	PE	PEER REVIEW				
April 30 2008									

FEAT	FEATURE:			PROJECT:							
Sub-Regional Groundwater Alternative Individual, Cluster and Group Field Cost and					Mogollon Rim Water Resource Management Study						
		ed Annual Cos		WOID:		ESTIMA	TE LEVEL:	Appraisal			
					:	PRICE L		1st quarter 2008			
				REGION FILE:	••						
				FILE.							
PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT			
	Sub-Regi	on Three - Indi	vidual Communities								
	Flowing S	Springs									
			ow Water Demand = 26 af/yr								
			me production well(s)		1	20 gpm	\$38,400	\$38,400			
		High volu	me production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC)					\$38,400			
		A 10 /									
		Annual Cost						\$ 2,222			
			tion: $n = 20$ yrs; $l = 4.875\%$					\$3,000			
			& M Cost @ 8% of FC					\$3,100			
		Total Ann	ost per Acre-Foot					\$6,100			
			ost per 1,000 gallons					\$235 \$0.72			
		Annuar C	ost per 1,000 gallons					φ0.72			
	Fast Vero	le Estates									
	Lust vere		ow Water Demand = 79 af/yr								
			me production well(s)		3	20 gpm	\$38,400	\$115,200			
			me production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC					+000,000	\$115,200			
			/					· · · · · ·			
		Annual Cost									
		Amortizat	tion: n = 20 yrs; I = 4.875%					\$9,100			
			& M Cost @ 8% of FC					\$9,200			
		Total Anr	nual Cost					\$18,400			
		Annual C	ost per Acre-Foot					\$232			
		Annual C	ost per 1,000 gallons					\$0.71			
	Summit S	prings									
		2040 Annual L	ow Water Demand = 9 af/yr								
		Low volu	me production well(s)		1	20 gpm	\$38,400	\$38,400			
		High volu	me production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC)					\$38,400			
		Annual Cost									
		Amortizat	tion: n = 20 yrs; I = 4.875%					\$3,000			
			& M Cost @ 8% of FC					\$3,100			
	ļ	Total Anr					ļ	\$6,100			
	Annual Cost per Acre-Foot Annual Cost per 1,000 gallons						ļ	\$680			
								\$2.09			
	Note: The estimate does not include Non-contract cos		sts.								
	QUANTITIES						PRICES				
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	Marvin Murra	ay									
DATE PREP	ARED		PEER REVIEW	DATE PREPA	RED	PEE	R REVIEW				
	April 30 2008	3									

FEATURE:			PROJECT:								
Sub-Regional Groundwater Alternative Individual, Cluster and Group Field Cost and					Mogollon Rim Water Resource Management Study						
	Associated Annual Cost					ESTIM/	TE LEVEL:	Appraisal			
				REGION	-	PRICE	LEVEL:	1st quarter 2008			
				FILE:							
PLANT ACCOUNT	PAY ITEM			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT			
	Sub-Regi	on Three - Indi	vidual Communities								
	Star Valle	ey (
		2040 Annual L	ow Water Demand = 509 af/yr								
		Low volu	me production well(s)		1	20 gpm	\$38,400	\$38,400			
	High volume production well(s)				2	150 gpm	\$350,000	\$700,000			
		Field Cost (FC)					\$738,400			
		Annual Cost									
		Amortizat	tion: n = 20 yrs; I = 4.875%					\$58,600			
		Annual O	& M Cost @ 8% of FC					\$59,100			
		Total Anr						\$117,700			
			ost per Acre-Foot					\$231			
			ost per 1,000 gallons					\$0.71			
	-	on Three - Gro	up 7				_				
	Beaver V										
			ow Water Demand = 113 af/yr								
			me production well(s)		4	20 gpm	\$38,400	\$153,600			
		-	me production well(s)		0	150 gpm	\$350,000				
		Field Cost (FC)					\$153,600			
		Annual Cost									
		Amortizat	tion: n = 20 yrs; l = 4.875%					\$12,200			
		Annual O	& M Cost @ 8% of FC					\$12,300			
		Total Anr	nual Cost					\$24,500			
		Annual C	ost per Acre-Foot					\$217			
		Annual C	ost per 1,000 gallons					\$0.66			
	Freedom										
			ow Water Demand = 7 af/yr								
			me production well(s)		1	20 gpm	\$38,400	\$38,400			
		High volu	me production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC)					\$38,400			
		Annual Cost									
			tion: n = 20 yrs; l = 4.875%					\$3,000			
			& M Cost @ 8% of FC					\$3,100			
		Total Anr						\$6,100			
	Annual Cost per Acre-Foot Annual Cost per 1,000 gallons Note: The estimate does not include Non-contract cos						\$874				
							\$2.68				
			sts.								
	QUANTITIES						PRICES				
вү			CHECKED	вү		с⊦	ECKED				
	Marvin Murray			DATE PREPA			ER REVIEW				
DATE PREP	ATE PREPARED PEER REVIEW			DATE PREPA	RED						

FEA	FEATURE:			PROJECT: 1							
	-		ater Alternative Group Field Cost and		Mogollon Rim Water Resource Management Study						
	Associat	ed Annual Cos	t	WOID:		ESTIMA	TE LEVEL:	Appraisal			
				REGION	l:	PRICE L		1st quarter 2008			
				FILE:							
PLANT ACCOUNT	РАҮ ІТЕМ			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT			
	Sub-Regi	on Three - Gro	oup 7								
	Wonder \	/alley									
		2040 Annual L	ow Water Demand = 8 af/yr								
			me production well(s)		1	20 gpm	\$38,400	\$38,400			
		High volu	ime production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC	;)					\$38,400			
		Annual Cost									
		Amortiza	tion: n = 20 yrs; l = 4.875%					\$3,000			
		Annual C	& M Cost @ 8% of FC					\$3,100			
		Total Anr						\$6,100			
			ost per Acre-Foot					\$765			
		Annual C	ost per 1,000 gallons					\$2.35			
	Group 7 -	Sub-Regional	System								
		2040 Annual L	ow Water Demand = 128 af/yr								
		Low volu	me production well(s)		4	20 gpm	\$38,400	\$153,600			
		High volu	ime production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC	;)					\$153,600			
		Annual Cost									
		Amortiza	tion: n = 20 yrs; l = 4.875%					\$12,200			
		Annual C	& M Cost @ 8% of FC					\$12,300			
		Total Anr						\$24,500			
			ost per Acre-Foot					\$191			
			ost per 1,000 gallons					\$0.59			
		on Three - Gro	oup 8								
	Round Va										
			ow Water Demand = 78 af/yr		2	00	¢20,400	¢445.000			
			me production well(s)		3 0	20 gpm 150 gpm	\$38,400 \$350,000	\$115,200 \$0			
		Field Cost (FC			0	150 gpm	\$350,000	\$0			
)					\$113,200			
		Annual Cost									
			tion: n = 20 yrs; I = 4.875%					\$9,100			
			0 & M Cost @ 8% of FC					\$9,200			
		Total Anr						\$18,400			
	Annual Cost per Acre-Foot Annual Cost per 1,000 gallons Note: The estimate does not include Non-contract cos QUANTITIES						ļ	\$235			
								\$0.72			
				sts.							
							PRICES				
BY	CHECKED			вү		СНЕ	CKED				
	Marvin Murra	ay									
DATE PRE	PARED		PEER REVIEW	DATE PREPA	RED	PEE	R REVIEW				
	April 30 2008	3									

FEATU	FEATURE:			PROJECT:							
	-		ater Alternative Group Field Cost and		Moge	ollon Rim	Water Resource N	lanagement Study			
	Associated Annual Cost					ESTIM/	ATE LEVEL:	Appraisal			
				WOID: REGION	•		LEVEL:	1st quarter 2008			
				FILE:	-						
PLANT ACCOUNT	PAY ITEM			CODE	QUANTITY	UNIT	UNIT PRICE	FIELD COSTAMOUNT			
	Sub-Regi	on Three - Gro	up 8								
	Oxbow E										
			ow Water Demand = 34 af/yr								
			me production well(s)			20 gpm	\$38,400	\$38,400			
		-	me production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC))					\$38,400			
		Annual Cost					++				
			ion: n = 20 yrs; l = 4.875%					\$3,000			
			& M Cost @ 8% of FC					\$3,100			
		Total Ann					+ +	\$6,100			
			ost per Acre-Foot				-	\$182			
			ost per 1,000 gallons					\$0.56			
	Group 8 -	Sub-Regional	System								
		2040 Annual L	ow Water Demand = 112 af/yr								
			me production well(s)			20 gpm	\$38,400	\$153,600			
			me production well(s)		0	150 gpm	\$350,000	\$0			
		Field Cost (FC))					\$153,600			
		Annual Cost									
		Amortizat	ion: n = 20 yrs; l = 4.875%					\$12,200			
		Annual O	& M Cost @ 8% of FC					\$12,300			
		Total Ann						\$24,500			
			ost per Acre-Foot					\$219			
		Annual Co	ost per 1,000 gallons					\$0.67			
	Note: The		not include Non-contract cos	sts.							
		QUAN	TITIES				PRICES				
ВΥ			CHECKED	вү		CI	HECKED				
	Marvin Murra	ау									
DATE PREP			PEER REVIEW	DATE PREPA	RED	PI	EER REVIEW				
	April 30 2008										

	F RECLAMAT	ION	ESTIMA	TE WOR		<u> </u>		SHEET_1_OF1			
FEAT	URE:			PROJE	CT:						
	Tonto Apache Tribe Roosevelt Lake Option				Mogollon Rim Water Resource Management Study						
	-	l Water Supply = 128 a		WOID:			TE LEVEL:	Appraisal			
	Reclam	ation Construction Co	st Trend Adjusted	REGION:	LC	PRICE L	EVEL:	1st qtr 2008			
	Origina	l Cost:Gookin Enginee	ers 1992	FILE:	FILE: U:\PaysonAppraisalReportAttach. 8\[TontoRooseveltTableIV37.xls]Sheet1						
E											
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	Original Price 3rd Qtr 1992	Index Adjusted Price 1st Qtr 200			
		Roosevelt Lake Opti	on								
		Water Delivery Syste	em								
		Pipeline			253,440	lf	\$29,146,100	\$48,477,700			
		Intake Facility			1	unit	\$10,000	\$16,60			
		Pump Houses (2	2 pumps per unit)		22	unit	\$2,530,000	\$4,208,100			
		Water Treatmen	t Plant (7mgd)		1	mgd	\$3,500,000	\$2,521,400			
		Storage (1 mg)				mgd	\$200,000	\$332,600			
		Electric Lines &	Substations		Varies		\$5,481,500	\$9,117,200			
		O&M Equipmen	t		Varies	System	\$34,000	\$56,55			
		Subtotal					\$40,901,600	\$68,030,200			
	_	Mobilizatio					\$2,045,100	\$3,401,200			
	_	Subtotal with Mo					\$42,946,700	\$71,430,800			
	_		ems @ 15%				\$6,442,000	\$10,714,800			
	_	Contract Cost					\$49,388,700	\$82,146,500			
	_	-	cies @ 25%				\$12,347,200	\$20,536,600			
		Field Cost					\$60,735,900	\$101,581,400			
		Annual Cost									
		Amortized	20yr @ 8.5%; 0.10568)				\$6,523,800	\$0			
		Amortized	20yr @ 4.875%; 0.07939)				\$0	\$8,064,600			
		Operation	& Maintenance @ 8% FC				\$4,938,870	\$8,126,500			
		Total Annual C	ost				\$11,462,600	\$16,191,10			
		Annual Co	st per Acre-Foot				\$71,196	\$126,493			
		Annual Co	st per 1,000 gallons				218.49	388.19			
		Note: The estimate d	loes not include Non-contrac	t costs.							
	_										
		QUANT	TITIES				PRICES	•			
BY			CHECKED	вү		сн	ECKED				
	Marvin Murray										
DATE PREF	E PREPARED PEER REVIEW				ED	PE	ER REVIEW				
		April 30, 2008									

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