




MEMORANDUM

Date: October 8, 2009

To: Bond Advisory Committee

From: C.H. Huckelberry
County Administrator 

Re: **Fiscal Analysis Related to the Issuance of General Obligation Bonds**

I. Introduction

As discussed at the last Bond Advisory Committee meeting, I indicated I would provide detailed information regarding the issuance of general obligation bonds and the various factors leading to conclusions regarding the amount of bonds for potential authorization in any given election. The primary variables regarding debt capacity and the ability to pay, as well as actual information from previous authorizations and bond issuances, are discussed below.

II. Frequency of the General Obligation Bond Authorizations

Pima County general bond authorizations, the year in which authorization was received by a vote of the public, and the magnitude of the authorized general obligation debt are shown in Attachment 1. Since 1974, the County has frequently used voter authorized general obligation bonds to finance capital infrastructure. The purposes for which these bonds were authorized vary by bond issue. Over time, of the 10 general obligation authorizations received, the average time between voter authorizations is three years, with an average authorization of \$132.9 million. Over the past few years, the amount of bonds authorized has increased in magnitude.

III. Public Benefit from Past Bond Authorizations

As illustrated in Attachment 1, bonds in the past have been authorized and sold for a variety of public improvements, many of which are now constructed and delivering the intended benefit.

The highlights of the 1974 bond authorization relate to the first election for open space that led to the creation of Catalina State Park and bonds that built Kino

Community Hospital, now University Physicians Healthcare Hospital at the Kino Campus.

The authorization in 1979 reconstructed and rebuilt the County Adult Detention Center (jail) as the County was under a federal court order to relieve prisoner overcrowding and to modernize our correctional detention facilities. The present Pima County Adult Correction Center, which now houses, on average, nearly 2,000 inmates per day, was initially constructed with this bond authorization in 1979 and was expanded with bond authorizations in 1986 and 1997. The bond authorizations used to improve the detention facility then totaled \$80.2 million between three different bond authorizations. The present estimate to replace this facility today would be in excess of \$250 million.

In the authorization of 1980, major transportation corridors were constructed, including the Kolb Corridor through Davis-Monthan Air Force Base; the Golf Links/Alvernon Corridor through Davis-Monthan Air Force Base; and the Kino Corridor – Tucson International Airport to Broadway Boulevard. In 2007, these major transportation investments carried an average of 169,000 vehicles per day.

Following a devastating flood in October 1983, the voters, in February 1984, authorized \$63.8 million in flood repair bonds, including \$20 million for flood-prone land acquisition to prevent unwise urban encroachment into high flood hazard areas. Bridges that had been destroyed by the flood at Cortaro, Ina, and Continental Roads, across the Santa Cruz River, as well as Swan Road across the Rillito River, were all replaced with these bonds. Innumerable flood repair and bank stabilization projects to protect private property and public utilities were also completed utilizing these funds.

In the 1997 authorization, a new juvenile detention center was constructed at a cost of nearly \$45 million. The facility was constructed anticipating continuing trends in rapidly rising juvenile detention requirements. The replaced facility was overcrowded and antiquated; today, the facility will be used to alleviate significant, anticipated overcrowding at the main adult correctional facility by relocating remanded juveniles (those juveniles who are remanded to adult court due to the seriousness of their crime) to the juvenile detention facility. This allows the constructed facilities of 1997 to be used at their full potential and to alleviate anticipated overcrowding at the Adult Detention Center. In addition, the 1997 issue authorized significant additional investments in open space preservation for protecting the Sonoran Desert.

The highlight of the 2004 bond program has been the authorization of significant additional open space investments. Almost fully expended and obligated, the open space program that, together with the authorization of 1997, has conserved and protected over 41,000 acres of biologically sensitive and key ecosystems of the Sonoran Desert. In addition, 127,000 thousand acres of State Trust Land have been temporarily conserved through acquisition of grazing leases. These open space acquisitions, while of obvious benefit with regard to conservation, also have significant economic value to the community. The County has been engaged in the development of the Sonoran Desert Conservation Plan, including compliance with the numerous federal laws related to the Endangered Species Act, the Antiquities Act, and the Clean Water Act. These compliance requirements generally call for the preservation and protection of ecosystems necessary to offset the impacts associated with continued economic development and expansion of the community. Of the acquired lands to date, sufficient lands have been conserved through these open space programs to meet the compliance requirements on a species by species basis over the life of a permit to be authorized by the Endangered Species Act for a period of 30 years. Hence, we have, through our open space bond programs, guaranteed an economic future free from federal compliance actions for at least 30 years.

In addition, within the 2004 program is a nearly \$100 million investment in public safety communication interoperability. The program is nearing implementation today. Given the current constrained budgets of various police agencies throughout Pima County, if these bonds had not been authorized by the voters in response to the interoperable communication problems of public safety highlighted by the terrorist attacks on New York City, no health or public safety agency would be able to make the required investment to upgrade their communications systems. These bonds have made this possible.

Finally, the latest authorization (in 2006) has allowed for a significant investment in the capability of the community to deliver needed psychiatric services. In fact, the delivery model for psychiatric services integrating community providers, the clinical physician environment, and law enforcement in the detention facility is a model of integrated care for mental health services and should lead to a safer and more stable community.

In summary, since 1974, a total of \$1.33 billion in general obligation bonds and \$363 million in sewer revenue bonds, as well as \$350 million in Highway User Revenue Bonds, have been authorized by the voters of Pima County. These past bonds are clearly providing significant and continuing community benefit.

IV. Authorization by Voters does not Incur a Debt Obligation

By Arizona law and the State Constitution, the voters are required to authorize the issuance of general obligation bonds. Once authorized, the County can then issue bonds in varying amounts over a period of years. The bonds issued create a debt obligation that must be repaid above all else. General obligation bonds issued by Pima County have the full faith and credit of the County pledged to repay them, which means the obligation to repay bonded indebtedness of the County authorized by the voters is paramount to all other financial obligations of the County, including those for operating and maintenance.

The primary constraint on bonded indebtedness is not the amount of bonds authorized, but the rate and timing of their issuance. Clearly, the County electorate could authorize several billion dollars of debt; however, voter authorization does not immediately translate into a debt obligation. The obligation occurs when the authorized bonds are sold to investors with a pledge of repayment. It is the act of selling authorized bonds that creates the dilemma of how much debt the County can carry and reasonably repay under a series of assumptions regarding the debt structure.

V. Bond Repayment Interest Rates

Interest rates charged on authorized general obligation bonds have varied greatly over time. The highest interest rates charged for bond issuances occurred in 1982, where bonds were sold that carried a repayment interest obligation of 11.5 percent. More recently, the financing of public improvements through general obligation bonds, which are tax exempt in both the Federal and State income tax structures, has been quite attractive. Table 1 indicates the issuance of general obligation bonds authorized in 1997 and 2004, the amounts issued, and the net interest cost. The average weighted interest rate over these issuances is 4.11 percent, which is quite attractive when compared to the highest interest rate of County general obligation bonds paid in 1982 at an interest rate of 11.5 percent.

Table 1. Summary of Net Interest Cost

Series	Date of Issuance	Amount of Issuance (000's)	Net Interest Cost
1998	05/01/1998	\$42,420	4.5990000
1999	10/01/1999	50,000	4.9394000
2000	08/01/2000	50,000	4.7344000
2002	01/01/2002	20,000	4.0624142
2003	01/15/2003	50,000	3.6966789
2004	06/01/2004	65,000	4.2617917
2005	05/01/2005	65,000	3.9421915
2007	01/01/2007	95,000	4.0282944
2008	02/15/2008	100,000	3.6623000
2009	04/22/2009	75,000	3.8966000
Total Bonds Issued		\$612,420	
Weighted Average Interest Rate			4.1136535

Given the current economic conditions and continuing low interest rates for all types of borrowing, it would appear that general obligation bond financing by local governments will continue to be attractive for at least the next two to four years. We do anticipate an increase from current, near historic interest rate lows; however, when this will occur is a matter of subjective evaluation.

For the purpose of this analysis, it is assumed the 2009 bond sale will be at an interest rate of 4.7 percent, with future sales at 4.2 percent.

VI. Secondary Property Tax Rate Limitations

In order to reduce the tax impact on the voters who authorize general obligation bonds, the Bond Advisory Committee, as well as the Board of Supervisors, has, in the past, pledged certain secondary property tax rate caps. These caps, in effect, act as a governor over the amount of bonds that can be issued, even though general obligation bonds authorized by the voters stand in first priority for repayment, with an unlimited rate to repay the debt obligation pursuant to the State Constitution. The self-imposed secondary property tax rate caps are simply a mechanism to moderate and make generally more predictable the taxes necessary to repay general obligation debt from voter authorized bonds. These rate caps have varied over time. They were first introduced as a policy pledge by the Bond Advisory Committee and Board of Supervisors in 1997. The rate cap in 1997 was \$1.00 per \$100 of assessed value. This rate cap had dropped to \$0.815 per \$100 of assessed value for those bonds authorized by the voters in 2004. It decreased to \$0.715 per \$100 of assessed value for the limited amount of bonds authorized

by voters in 2006. (In this authorization, the amount of general obligation bonds authorized was only \$54 million as compared to \$582.25 million in 2004.)

These self-imposed tax rate caps are of significant importance in determining the magnitude and rate of debt issuance of future bond issues as opposed to the constitutional debt limit. For example, the constitutional debt limit is equal to 15 percent of the net assessed value of the County. For fiscal year 2008/09, this would be \$1.48 billion. However, as of this date, the bonded indebtedness outstanding is \$380.7 million (or 26 percent of the debt limit). The smaller amount of bonded indebtedness is controlled primarily by the self-imposed secondary property tax bond repayment cap as opposed to the constitutional debt limitation.

For the purpose of this analysis, it will be assumed the secondary tax rate for debt service purposes cannot exceed \$0.815 per \$100 of second assessed value.

VII. Life or Term of Bonds

The County has historically preferred a short bonded indebtedness period, which means that the average time between bonds being issued and retired has been approximately 12 years, with amortization schedules based on a 15-year bond life. Obviously, 20- and 30-year bond debt repayment periods are used in the industry; however, these longer bond lives incur more interest and retire debt slower than our past preferred method, which is to keep bonded indebtedness life relatively short, averaging approximately 12 years. More than likely, the bonds authorized in 1986 have been retired as of today, and much of the early issuance of the 1997 general obligation bonds has been retired. Short-term bond lives are preferable in a high-growth community where infrastructure needs tend to increase over time. When infrastructure needs are generally viewed to be a one-time occurrence and population demands are not expected to increase significantly to warrant new infrastructure requirements, then longer term bond issuance would be acceptable. However, in high population growth environments with recurring significant infrastructure needs, it is preferable to issue bonds and retire same in a relatively short period of time. Lengthening bond terms to 20 or 30 years as a short-term solution to not exceed self-imposed tax rate caps would be poor fiscal policy.

VIII. Straight Repayment Schedule

Another method of shifting bond cost repayment is to alter the payment schedule. Rather than using a simple, straight-line 15-year amortization period with corresponding principal and interest payments, some schedules could be constructed such that in the first five years, interest only is paid, and principal

payments are backloaded in the last 10 years. This scenario assumes that in the future, economic conditions that caused the requirement to alter the repayment schedule have corrected themselves. Since balancing a backloaded repayment schedule alters fiscal reality and may make economic conditions appear better than they actually are, I would not favor an altered or unbalanced debt repayment schedule.

For the purpose of this analysis, only a straight-line traditional debt repayment schedule is assumed.

IX. Assessed Value and Its Importance in Determining Bonded indebtedness Limitations and Reasonable Repayment Schedules

The assessed value of Pima County has changed year to year, and it is the primary determinant of how many bonds can be issued. Table 2 indicates the assessed value of Pima County over the last 30 years, which increased by an average of \$284.5 million annually, with an average increase in assessed value of 7.4 percent.

Table 2. Assessed Value of Pima County: Fiscal Years 1977/78 through 2009/10

Fiscal Year	Pima County Secondary Net Assessed Value	Percent Change From Prior Year	Cumulative Percent Change from Fiscal Year 77/78
77/78	\$1,324,520,503	--	--
78/79	1,291,568,812	-2.49	-2.49
79/80	1,303,534,317	0.93	-1.58
80/81	1,439,932,259	10.46	8.71
81/82	1,766,388,868	22.67	33.36
82/83	2,059,636,111	16.60	55.50
83/84	2,207,615,754	7.18	66.67
84/85	2,324,225,207	5.28	75.48
85/86	2,565,591,138	10.38	93.70
86/87	2,841,072,424	10.74	114.50
87/88	2,993,817,624	5.38	126.03
88/89	3,110,803,778	3.91	134.86
89/90	3,105,394,430	-0.17	134.45
90/91	3,044,972,363	-1.95	129.89
91/92	2,998,163,538	-1.54	126.36
92/93	2,993,029,392	-0.17	125.97

**Table 2. Assessed Value of Pima County: Fiscal Years
 1977/78 through 2009/10 (Continued)**

Fiscal Year	Pima County Secondary Net Assessed Value	Percent Change From Prior Year	Cumulative Percent Change from Fiscal Year 77/78
93/94	2,974,071,684	-0.63	124.54
94/95	3,150,104,570	5.92	137.83
95/96	3,218,883,605	2.18	143.02
96/97	3,247,512,122	0.89	145.18
97/98	3,700,269,222	13.94	179.37
98/99	3,852,574,000	4.12	190.87
99/00	4,000,624,012	3.84	202.04
00/01	4,236,070,095	5.89	219.82
01/02	4,491,395,307	6.03	239.10
02/03	4,835,561,219	7.66	265.08
03/04	5,221,272,390	7.98	294.20
04/05	5,620,156,274	7.64	324.32
05/06	6,050,950,040	7.67	356.84
06/07	6,869,955,457	13.54	418.67
07/08	8,220,395,835	19.66	520.63
08/09	9,594,861,519	16.72	624.40
09/10	9,860,980,900	2.77	644.49

If the four lowest and the four highest years of assessed value were removed from this data series, the average would drop to 5.3 percent. Typically, a growth in assessed value of three to five percent per year is indicative of a relatively stable and sustainable economy. Presently, the County is in the midst of a declining and/or shrinking secondary assessed value, the term of which is unknown. A previous financial forecast indicated that the secondary assessed value of Pima County could contract by as much as 14.2 percent: going from \$9,860,980,900 in current fiscal year 2009/10 to \$8,460,584,492 in fiscal year 2013/14.

Of all the variables associated with bonded indebtedness, repayment and total net secondary assessed values are perhaps the most important. Given the declines that are occurring or are forecasted to occur in the next few years, it is appropriate to forecast the rate of recovery and how quickly the rate of growth in the assessed value will return to the more stable and sustainable three to five percent annual

growth rate. Unfortunately, no one knows exactly what will be the return to normalcy with regard to growth in assessed value. It relates primarily to population growth and expansion and the creation of parcels of residential property upon which houses are constructed, when assessed value increases from vacant land to improved property. Population growth at this point is substantially reduced from past years to the point of being stable; hence, it is difficult to forecast the assessed value of Pima County in future years. Our official forecast of assessed value over the next 10 years, compiled by economists and staff specializing in this area, is shown in Table 3 below. We know, based on the statutory decreases in the assessment ratios, the downward pressure on residential property values, and the historically low numbers of building permits, that assessed values for next year will be lower than the current year. The assessments for fiscal year 2010/11 are based on what property values were on January 1, 2009. The decrease in net assessed value forecasted for fiscal year 2010/11 by the County's Budget Division is based on the preliminary notices of valuations that were sent to property owners last February.

Table 3. Official Forecast of Assessed Value

Fiscal Year	Net Secondary Assessed Value
2009/10	\$ 9,860,980,900
2010/11	9,472,135,836
2011/12	8,997,287,213
2012/13	8,701,095,935
2013/14	8,460,584,492
2014/15	8,629,796,182
2015/16	8,802,392,105
2016/17	9,066,463,869
2017/18	9,338,457,785
2018/19	9,711,996,096
2019/20	10,100,475,940

Secondary Assessed Value (SAV) for fiscal year 2009/10 is actual. For fiscal years 2010/11 through 2013/14, the estimates are based on the County's economic forecasts. Thereafter, SAV is assumed to grow at 2 percent annually for two years, at 3 percent for two years, and then at 4 percent.

For purposes of this analysis, the assessed value is assumed to decline until fiscal year 2013/14. After 2013/14, the secondary assessed value is assumed to increase by two percent for two years, three percent for two years, and then four percent per year. As can be seen by examining Table 3, over the 10-year analysis period, the assessed value of the County increases only marginally – from \$9.86 billion to \$10.1 billion – or 2.4 percent.

X. New Debt Issuance Rate and Authorized General Obligation Bond Sales Per Fiscal Year

The rate at which authorized general obligation bond debt is issued has a direct impact on the ability to issue new debt and balance the interest and principal payments with the fixed and/or capped secondary property tax rate.

Over the last several years, the County has sold more bonds, while incurring more debt on an annual basis than existing debt being repaid. Over the last 10 years, the average amount of principal repayment on bonded indebtedness has been \$32.4 million. Over the last five years, the average size of new bond issues has been \$86.7 million, more than double the amount of principal repaid. This increase is primarily a result of significant expenditures in the Open Space Bond Program and several large capital bond projects now being implemented, including the Psychiatric Inpatient Hospital facilities and the Psychiatric Urgent Care Facilities, as well as the interoperable public safety radio system.

Another key variable in the amount of a future bond issue and annual debt issuance is the amount of new bonds that can be sold in any given year. New bonds, to the extent they increase indebtedness, means the amount of principal sold is greater than the amount of principal retired in a given year and increases the burden of repayment. For analysis purposes, I requested that our financial analysis include three different schedules for bond sales over a 12-year period: 1) a schedule for \$40 million per year, 2) another for \$60 million per year, and 3) one for \$80 million per year (Attachments 2, 3, and 4). The question then becomes given the maximum tax rate cap (\$0.815), probable interest rate upon sale (4.2 percent), and corresponding assessed value of the County in any given year during the next 12 years, which of these new, annual principal debt issuances can be supported given the constraints stated?

XI. Financial Forecast Associated with Future Bonded Indebtedness and Voter Authorized Debt

Given the three future bond sale scenarios, and after all 2004 and 2006 authorizations have been sold, Attachments 2, 3, and 4 illustrate various debt repayment schedules. Attachment 2 assumes a sale of \$40 million per year of new voter authorized debt. Attachment 3 assumes \$60 million per year authorized debt, and Attachment 4 assumes an issuance of \$80 million per year of debt. The primary constraint on the analysis is the secondary property tax rate cap of \$0.815 per \$100 of secondary net assessed value. The drop in secondary assessed value as now forecasted, along with the assumptions in assessed value growth recovery, also significantly impacts the analysis. This analysis assumes 1) a secondary cap of \$0.815 per \$100 of secondary net assessed value; 2) a bond issuance interest rate of 4.2 percent; 3) a 15-year straight-line amortization schedule for issued bond debt; 4) sale of the remaining 2004 and 2006 authorized bonds occurring before issuance of new debt; and 5) a fairly pessimistic view of the secondary assessed value of the County for the next 10 years, with a significant decline forecasted until 2013/2014 and a slow recovery scheduled over the next six years after 2013/14.

Attachment 4 for the sale of \$80 million of new debt per year, beginning in 2014/15, is not sustainable, since the rate cap is exceeded two years into the debt repayment schedule beginning in 2015/16, and it peaks at \$0.995 in 2021/22. Similarly, the sale of new debt at \$60 million per year causes the property tax rate cap to be exceeded in 2016/17 and to peak at \$0.8819 dollars in 2018/19. Given all of the assumptions, the most sustainable future annual debt schedule assumes a \$40 million per year debt sale. The property tax rate cap reaches \$0.8098 in fiscal year 2019/20 with increasing capacity at the end of the 12-year bond sale sequence. Based on this forecast, authorization of approximately \$600 million in bonds, with early sales limited to no more than \$40 million per year over the first seven years of the program, is sustainable given the assumptions contained in this analysis. Please note that the \$600 million can be exceeded and approach \$800 million; however, the sale period would need to be extended to 14 years or longer, unless the net assessed values increase sooner than expected.

CHH/mjk

c: The Honorable Chairman and Members of the
Pima County Board of Supervisors