

ATTACHMENT TWO
MARICOPA ASSOCIATION OF GOVERNMENTS
INFORMATION SUMMARY... for your review

DATE:

September 2, 2003

SUBJECT:

2005 Population Options

SUMMARY:

In October 2002, the MAG Management Committee established a Subcommittee on 2005 Population Options to explore more cost-effective alternatives to a Special Census for deriving a 2005 population figure for distributing state-shared revenues to cities and towns. To create the opportunity to use other options, state law needed to be changed to allow for methods other than a Special Census. This year State law was amended to allow for the use of a Census Survey, or a July 1, 2005 Arizona Department of Economic Security Population estimate instead of a Special Census for distributing almost \$1 billion in state-shared revenue annually. After extensive deliberations during ten meetings held over a 10-month period, the MAG Management Subcommittee on 2005 Population Options has recommended that MAG conduct a Census Survey, with a confidence interval of 95 percent plus/minus 2 percent, at a cost of \$9.4 million. Jurisdictions that wish to conduct a survey with the higher confidence interval – 95 percent plus/minus 1 percent, would be able to do so if they agreed to incur any additional local costs associated with the larger sample size (see attached table).

The Federal Highway Administration (FHWA) has agreed to allow MAG to use FHWA Surface Transportation Program (STP) funds to cover half the cost of the survey because of the data benefits offered by the survey, if all MAG member agencies agree to participate. The remaining \$4.7 million in survey costs would be allocated among MAG member agencies in accordance with the attached table. The costs for jurisdictions that wish to conduct a survey using the higher 1 percent confidence interval are also shown in the table. The proposed Census Survey would be conducted in September 2005, and MAG would need to enter into an agreement with the Census Bureau by March 2004 to pursue this option. MAG member agencies would be billed for their share of the costs of the survey at the beginning of Fiscal Year 2006 (July 2005).

The efforts of the Subcommittee could not have been accomplished without the support and guidance of Census Bureau personnel in the Denver Regional Office and at Headquarters in Maryland.

PUBLIC INPUT:

A citizen encouraged efforts to ensure he is counted in the Special Census.

PROS & CONS:

PROS: With about \$1 billion in state-shared revenue distributed annually, the rapid growth in the metropolitan area and the financial condition of member agencies, it is crucial to have a cost-effective method for deriving a 2005 population figure for distributing state-shared revenue.

CONS: Pursuing a Census Survey is less expensive than a Special Census but is subject to sampling error.

TECHNICAL & POLICY IMPLICATIONS:

TECHNICAL: The logistics of carrying out a Census Survey for the region will be demanding, but will carry certain benefits of economies of scale and regional promotional activities to achieve participation and staffing.

POLICY: The 2005 population counts will be used to distribute more than \$1 billion annually in state-shared revenues between 2005 and 2010. The ability to use Federal Highway Administration funds to defray a portion of the cost of a Special Census or survey will require that the entire region pursue the Census Survey option.

ACTION NEEDED:

Information and discussion.

PRIOR COMMITTEE ACTIONS:

MAG Management Subcommittee on 2005 Population Options: On July 11, 2003, the MAG Management Subcommittee on 2005 Population Options recommended that MAG conduct a Census Survey for 2005 figures for distributing state shared revenue; and that the costs of the survey be allocated in accordance with the cost allocation table. MAG members that wish to conduct a survey with a higher confidence interval – 95 percent plus/minus 1 percent – would be able to do so if they agreed to incur the additional local costs associated with the larger sample size as shown in the attached table. The subcommittee unanimously agreed that there is a benefit to collecting regional information and updating Census data, but disagreement on the cost-allocation formula. The motion was recommended with one voting no (*italics*).

MEMBERS ATTENDING

George Pettit, Gilbert, Chairman
Charlie McClendon, Avondale
Prisila Ferreira, Peoria

Norris Nordvold, Phoenix
Jim Huling, Mesa
*Patrick Flynn, Tempe

*Those members not present.

Management Committee: On October 14, 2002, the Management Committee approved establishment of a Subcommittee on 2005 population options to explore alternatives to deriving a 2005 population figure for distributing stated shared revenue.

MEMBERS ATTENDING

Peoria: Terry Ellis, Chairman
Mesa: Mike Hutchinson, Vice Chair
Apache Junction: Pat Brenner for
George Hoffman
Avondale: Kristin Greene Skabo for
Todd Hileman
* Buckeye: Joe Blanton
Carefree: Jon Pearson
Cave Creek: Usama Abujbarah
Chandler: Patrice Kraus for Donna Dreska
El Mirage: Stuart Brackney
* Fountain Hills: Tim Pickering
Gila Bend: Shane Dille
* Gila River Indian Community: Urban Giff
Gilbert: Tami Ryall for George Pettit
Glendale: Ed Beasley
Goodyear: Stephen Cleveland

Guadalupe: Tom Morales
Litchfield Park: Horatio Skeete
Paradise Valley: Tom Martinsen
Phoenix: Norris Nordvold for Frank Fairbanks
Queen Creek: Cynthia Seelhammer
*Salt River Pima-Maricopa Indian Community:
Bryan Meyers
Scottsdale: Steve Olson for Jan Dolan
Surprise: Bill Pupo
Tempe: Amber Wakeman for Will Manley
Tolleson: Reyes Medrano for Ralph Velez
*Wickenburg: Jerry Stricklin
Youngtown: Mark Fooks
ADOT: Dale Buskirk for Victor Mendez
Maricopa County: Mike Sabatini for
David Smith
RPTA: Ken Driggs

*Those members not present.

Participated by videoconference or telephone conference call.

Regional Council: On April 24, 2002, the Regional Council approved reserving at least \$6 million of MAG federal funds over a four year period (\$1.5 million per year) to keep our options open regarding taking a 2005 Special Census or using an estimate and to forward an assessment schedule to the MAG member agencies reflecting \$24 million over a four year period. The motion was approved, with one voting no (*italics*).

MEMBERS ATTENDING

Peoria: Mayor John Keegan, Vice Chair
Avondale: Mayor Ron Drake
* Buckeye: Mayor Dusty Hull
* Carefree: Mayor Edward C. Morgan
* Cave Creek: Vice Mayor Ralph Mozilo
* Chandler: Mayor Jay Tibshraeny
El Mirage: Mayor Roy Delgado
* Fountain Hills: Mayor Sharon Morgan
* Gila Bend: Mayor Chuck Turner
* Gila River Indian Community: Governor Donald Antone
Gilbert: Mayor Steven Berman
Glendale: Mayor Elaine Scruggs
Goodyear: Mayor Bill Arnold
* Guadalupe: Mayor Margarita Cota
* Litchfield Park: Mayor J. Woodfin Thomas
Maricopa County: Supervisor Max W. Wilson for Supervisor Don Stapley

* Mesa: Mayor Keno Hawker
Paradise Valley: Mayor Edward Lowry
Phoenix: Councilmember Peggy Bilsten for Mayor Skip Rimsza
Queen Creek: Mayor Wendy Feldman-Kerr
* Salt River Pima-Maricopa Indian Community: President Ivan Makil
* Scottsdale: Mayor Mary Manross
Surprise: Mayor Joan Shafer
* Tempe: Mayor Neil Giuliano
* Tolleson: Mayor Adolfo Gamez
Wickenburg: Mayor Lon McDermott
Youngtown: Councilmember Lucille Retherford for Mayor Daphne Green
ADOT: Joe Lane
ADOT: Dallas Gant
Citizens Transportation Oversight Committee: F. Rockne Arnett

*Those members not present.

Participated by videoconference or telephone conference call.

Management Committee: On April 10, 2002, the Management Committee recommended reserving at least \$6 million of MAG federal funds over a four year period (\$1.5 million per year) to keep our options open regarding taking a 2005 Special Census or to develop an estimate and to forward an assessment schedule to the MAG member agencies reflecting \$24 million over a four year period. The motion was recommended, with one abstention (**shaded**).

MEMBERS ATTENDING

Wickenburg: Fred Carpenter, Chairman
Avondale: Kristin Greene for Scott Schrader
* Buckeye: Joe Blanton
* Carefree: Jon Pearson
* Cave Creek: Usama Abujbarah
Chandler, Donna Dreska
El Mirage: Stuart Brackney
* Fountain Hills: Paul Nordin
Gila Bend: Shane Dille
* Gila River Indian Community: Urban Giff
Gilbert: George Pettit
Glendale: Tim Ernster for Ed Beasley
Goodyear: Stephen Cleveland
* Guadalupe: Tom Morales
* Litchfield Park: Horatio Skeete

Mesa: Mike Hutchinson
Paradise Valley: Tom Martinsen
Peoria: Terry Ellis
Phoenix: Frank Fairbanks
Queen Creek: Cynthia Seelhammer
Salt River Pima-Maricopa Indian Community: Jacob Moore for Bryan Meyers
Scottsdale: Peggy Carpenter for Jan Dolan
Surprise: Bill Pupo
Tempe: Will Manley
Tolleson: Ralph Velez
*Youngtown: Mark Fooks
ADOT: Mary Lynn Tischer for Victor Mendez
Maricopa County: Tom Buick for David Smith
RPTA: Ken Driggs

*Those members not present.

Participated by videoconference or telephone conference call.

CONTACT PERSON:

George Pettit, Gilbert, (480) 503-6864
Harry Wolfe, MAG, (602) 254-6300

MAG MANAGEMENT SUBCOMMITTEE ON 2005 POPULATION OPTIONS

Member

George Pettit, Chair, Manager

Prisila Ferreira, Vice Chair, Deputy City Manager

Charlie McClendon, Assistant City Manager

Jim Huling, Assistant to the City Manager

Norris Nordvold, Intergovernmental Programs Director

Patrick Flynn, Assistant City Manager

Agency

Gilbert

Peoria

Avondale

Mesa

Phoenix

Tempe

September 2, 2003

TO: Members of the MAG Management Committee

FROM: George A. Pettit, Chair
Management Subcommittee on 2005 Population Options

SUBJECT: RECOMMENDATION ON 2005 POPULATION OPTIONS FOR
DISTRIBUTING STATE SHARED REVENUES

Almost \$1 billion in state-shared revenues is distributed annually to local governments throughout Arizona using population as one part of the distribution formula. This includes state shared income tax, sales tax, gasoline tax, and vehicle license tax. Lottery funds are distributed based on annual population estimates prepared by DES and approved by the Economic Estimates Commission. State law provides for the population to be changed on all other distributions using only the Decennial Census, or a mid-decade Special Census. A 1994 amendment which allowed for use of a Census survey lapsed in June, 2001.

Because of the rapid growth of the MAG Region, member agencies opted in 1985, and again in 1995 to conduct a Special Census to provide updated population data for the state-shared revenue formulas. The cost of a Decennial Census is paid by the federal government, while the costs of a Special Census must be paid by the contracting local governments. In 1985 the cost of the Special Census to MAG member agencies was approximately \$3.5 million. The 1995 Special Census cost approximately \$9 million, with half paid by Federal Highway (FHWA) Surface Transportation Program (STP) funds. FHWA approved use of the funds to provide updated data to use for transportation modeling efforts in the rapidly growing urban area. Initial estimates secured by MAG staff from the Office of Special Census for a 2005 Special Census was \$30 million, based upon an estimated 3.6 million persons to be counted in the region. It was estimated that a maximum of \$6 million in FHWA funds could be available, making the net costs to member agencies \$24 million for a Special Census.

While growth in the urban area continues to be explosive, the characteristics of that growth are changing, and the effects of population formulas upon member agencies distributions is different. There is a likelihood that larger communities that are continuing to grow will actually receive less in state shared revenue as surrounding communities grow faster. Additionally, the financial condition of several communities as a result of decline in state-shared income tax receipts created financial concerns on paying for a Special Census.

Legislative Remedies

A priority for the Subcommittee was securing changes in State Law which would allow for the use of methods other than a Special Census to change the distribution formulas. The 2003 Legislative session approved an amendment to State Law which would allow for use of the following options:

- Census Survey

- Arizona Department of Economic Security population estimate
- Special Census
- Retaining 2000 Census population estimates

Analysis of Options

Over the past ten months, the Subcommittee met to discuss and evaluate the options to a Special Census. Each option afforded by the legislative change is presented below.

Census Survey

A Census Survey is a statistical sampling of the households in a community sufficient to secure enough data to statistically derive the total population.

The Census Bureau has indicated the cost of a Survey with a 95 percent confidence interval, plus or minus 2 percent would be \$9.4 million, assuming a 50 percent mail response rate. If the response rate is lower, then additional costs for enumerators to make follow up visits to secure the information will be added. If the response rate is higher, then the costs could decrease. The cost of a 95 percent confidence interval plus or minus 1 percent approaches \$20 million.

An extensive amount of time was spent examining the proper accuracy level to use for the Survey. The Subcommittee worked with the Census Bureau and examined two options, a 95 percent confidence interval, plus or minus 2 percent and a 95 percent confidence interval, plus or minus 1 percent. The Subcommittee recommendation is to use the 95 percent, plus or minus 2 percent Survey.

One of the major underlying concerns of the Subcommittee was accuracy and completeness of a Survey. As a by-product of that concern, Group Quarters (dormitories, prisons, nursing homes, and the homeless) are recommended to receive a special census, rather than Survey. This cost is included in the \$9.4 million estimated cost.

The Census Survey represents a cost effective approach to secure updated population information and characteristics for the region.

DES Estimate

The Subcommittee recognized that the DES Estimate approach would cost the least. However, the Estimate uses completed housing units as a source of estimating population, as well as Census 2000 base data, and does not provide any updated information on the characteristics of the community such as vacancy rates and household size which will be collected by the Survey and be of value in transportation and community planning for the next five years until another Decennial Census in 2010.

Special Census

The Subcommittee determined that the cost/benefit of conducting a Regional Special Census was not realistic or affordable. The \$30 million estimated cost is prohibitive when viewed in terms of the the overall ability to pay given the information received. A Special Census involves having a Census enumerator visit each household in Maricopa County. The logistical concerns over recruiting sufficient staff to conduct a door to door census was also of concern.

Retaining 2000 Population

There was little discussion on this option, since most communities in the region are continuing to grow. However, we recognize the value to communities who might experience population decline in the rest of the State.

The Subcommittee unanimously recommended the use of a Census Survey to secure a mid-decade census count for the Region.

Cost Distribution Formula

The costs of the previous Special Census was distributed on a per capita basis, since there was a relationship between the costs of collecting the information based upon the number of persons being counted.

However, as the Committee reviewed the technical sampling and relative costs of a survey to collect information to achieve the statistical accuracy, a discussion on the cost distribution formula resulted. In some cases, the number of housing units required to sample smaller communities approached or exceeded the cost of a Special Census, while statistical accuracy sampling was less costly in larger communities.

The final compromise formula recommended by the Subcommittee uses a blending of allocating costs on per capita basis for communities with less than 6,000 population and a projected growth rate of less than 3.5 percent with housing unit sample size for all other communities. In no case can the costs of the 95 percent confidence interval, plus or minus 2 percent survey exceed the cost of a Special Census.

The Subcommittee further recommended that a community can choose to pay the additional costs associated with an improved accuracy level to plus or minus 1 percent, at their own choice. This recommendation assumes that all member agencies will agree to participate and fund the costs. There are additional costs associated with promotion and local efforts to assure that the return rate of the surveys is achieved.

The Subcommittee had one dissenting opinion on the cost allocation formula. The preference was to stay with per capita costs.

Timing

The Office of Special Census has indicated that MAG needs to enter into an Agreement for a Census Survey by March, 2004. All member agencies would have to agree to participate in the Survey, which will also allow for half the cost of the Survey to be covered by FHWA funds.

The Survey would be conducted in September, 2005. The change in population distribution would be effective July, 2006 for the 2006-07 Fiscal Year.

The Subcommittee recommendation is for information and discussion in September, 2004, with action planned for October, 2004. If recommended, MAG would use the FHWA funds to cover the initial costs of the Survey, and then invoice member agencies for their share of the projected costs. The final costs would be allocated in accordance with the recommended formula and actual population derived.

Acknowledgments

I want to express my appreciation to the personnel in the Census Bureau's Denver Regional Office and at Census Bureau Headquarters in Maryland who participated in our subcommittee meetings via teleconference, and provided valuable information and counsel to the subcommittee.

Additionally, Harry Wolfe, Rita Walton and others on the MAG staff provided timely information, explanations of the data and support to the subcommittee.

Finally, I appreciate the presence and participation of Norris Nordvold, Jim Huling, Patrick Flynn, Charlie McClendon and Prisila Ferriera in the meetings, deliberations and recommendations of the Subcommittee.

I can be reached at (480) 503-6864 if you have any questions or require additional information, or you can contact Harry Wolfe at (602) 254-6300.

**Comparison of
Net Survey Cost at 95% Confidence Interval +/- 2%,
Net Survey Cost at 95% Confidence Interval +/- 1%
and
Net Special Census Cost**

Jurisdiction	Net survey cost (after FHWA contribution)*		Net 2005 Special Census cost based on share of 2005 population (after FHWA contribution)*
	95% +/- 2%	95% +/- 1%	
Avondale	\$138,800	\$430,500	\$469,800
Buckeye	\$128,100	\$128,300	\$128,300
Carefree	\$4,500	\$12,600	\$23,000
Cave Creek	\$5,800	\$16,200	\$29,500
Chandler	\$213,400	\$717,900	\$1,464,800
El Mirage	\$136,000	\$136,000	\$136,000
Fountain Hills	\$157,600	\$158,200	\$158,200
Gila Bend	\$2,700	\$7,500	\$13,600
Gilbert	\$146,700	\$535,600	\$1,165,800
Glendale	\$215,400	\$731,500	\$1,578,400
Goodyear	\$140,800	\$288,600	\$288,600
Guadalupe	\$7,000	\$19,700	\$35,900
Litchfield Park	\$5,000	\$14,100	\$25,600
Mesa	\$628,400	\$1,298,900	\$3,128,300
Paradise Valley	\$96,600	\$96,600	\$96,600
Peoria	\$205,200	\$684,500	\$970,900
Phoenix	\$1,260,900	\$4,437,200	\$9,397,600
Queen Creek	\$54,800	\$54,800	\$54,800
Scottsdale	\$272,500	\$988,400	\$1,519,500
Surprise	\$277,600	\$512,700	\$512,700
Tempe	\$206,300	\$712,300	\$1,053,300
Tolleson	\$6,600	\$18,600	\$33,900
Wickenburg	\$40,400	\$40,400	\$40,400
Youngtown	\$24,600	\$24,600	\$24,600
Balance of County	\$324,300	\$1,134,200	\$1,650,000
Total	\$4,700,000	\$13,199,900	\$24,000,000

Notes:

Balance of County = Unincorporated areas, Gila River Indian Community and Salt River Pima-Maricopa Indian Community

Unless all member agencies decide to go for a Census Survey or all member agencies decide to go for a Special Census, FHWA funds will not be available