



Then & Now: 50 Years of Serving the Region



# MAG PROGRAMS IN BRIEF

## FY 2017-2018 Summary

Unified Planning Work Program & Annual Budget

DRAFT

May 2017



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## Budget Highlights

The Maricopa Association of Governments (MAG) annual budget process begins eight months before the final budget is adopted, however, budget management activities at MAG continue throughout the year. To begin preparation of the budget, each division is asked to submit new project requests. These requests are initiated based on MAG committee project needs and other requests and guidance from our members. The requests are brought to the Regional Council, Regional Council Executive Committee, Management Committee, and Intergovernmental Representatives for review and discussion during January and February.

## New and Ongoing Projects for FY 2018

Legend: ■ New project ▲ Ongoing project

### Communications Division

#### 2018 *Don't Trash Arizona* Litter Prevention and Education Program ■ \$300,000

Concern over ugly and unhealthy freeway litter led elected officials to call for a litter education and prevention as an important component of the Regional Transportation Plan. Don't Trash Arizona is a joint effort between the Maricopa Association of Governments and the Arizona Department of Transportation to address the environmental, economic, safety, and health impacts of litter along regional and state highways. The program is funded through Proposition 400, which was approved by voters in 2004. Highway maintenance funding in the Regional Transportation Plan funded by Prop 400 encompasses litter pickup, sweeping, and landscape maintenance, as well as litter education and prevention. Don't Trash Arizona seeks to change attitudes, awareness, and most importantly, behavior, when it comes to highway littering. In 2006, litter prevention and education efforts were begun by MAG and ADOT to address roadway litter. The slogan Don't Trash Arizona is used cooperatively by both agencies to increase public awareness of the roadway litter condition. On November 14, 2016, the MAG Regional Council Executive Committee recommended approval to extend the consultant contract with Fingerprint Marketing, Inc., for the second one-year option for the Litter



Prevention and Education Program, and to amend the contract to include the \$300,000 budgeted in the FY 2018 Unified Planning Work Program and Annual Budget for litter prevention and education efforts.

#### 2018 Video Outreach Associate ▲ \$80,000

The Video Outreach Associate assists in implementing the MAG Video Outreach Program by providing writing, direction, pre-production, production, and post production services, along with project management. Approximately five videos would be produced within a 12-month time frame.

#### 2018 Disability Outreach Associate ▲ \$18,500

Federal transportation law requires that environmental justice be part of any transportation plan to prevent discrimination and to ensure the full and fair participation of protected classes such as minority populations and low-income populations in the transportation decision-making process. MAG implemented the Associate Outreach program in 2001 to provide targeted outreach to Title VI communities, including the disability community. The Disability Outreach Associate serves as a liaison between MAG and the disability community, developing methods to engage the community in the transportation planning process, achieving high levels of participation from the community and securing participation and promoting activity in the planning and programming process.



## Environmental Division

### 2018 MAG Air Quality Associate ▲ \$130,000

As the designated Regional Air Quality Planning Agency for the Maricopa area and portions of Pinal County, the Maricopa Association of Governments conducts air quality modeling and prepares air quality plans to attain and maintain the National Ambient Air Quality Standards. Technical assistance from a MAG Associate will be needed in the following technical air quality areas: air quality modeling; air quality monitoring and meteorology; exceptional events; traffic surveys and emissions inventories; dirt road inventories and tracking progress made to pave dirt roads; statistical analysis of data; analysis of control measures; air quality plan preparation; CMAQ evaluation methodologies; and transportation conformity. On September 12, 2016, the U.S. Ninth Circuit Court of Appeals issued a ruling in the lawsuit filed by the Arizona Center for Law in the Public Interest to challenge the Environmental Protection Agency (EPA) approval of the MAG 2012 Five Percent Plan for PM-10. The Court upheld EPA's determination that the control measures in the Five Percent Plan did not need to be updated. The Court upheld EPA's exclusion of all of the exceptional events. The Court remanded the contingency measures to EPA for further consideration, since they were implemented early. One of the three judges on the panel dissented on the contingency measure portion of the opinion and agreed with EPA that contingency measures could be implemented early. On October 26, 2016, the Arizona Center for Law in the Public Interest filed a petition for rehearing by the panel contending that EPA should have required the plan to include updated Best Available Control Measures and Most Stringent Measures.

On October 27, 2016, EPA filed a petition for rehearing en banc contending that the divided court panel incorrectly held that contingency measures cannot be implemented early under the Clean Air Act. The petition indicates that the Ninth Circuit Court's ruling on contingency measures directly conflicts with the decision of the Fifth Circuit Court and affects the national application of the Clean Air Act requirements in which there is an overriding need for national uniformity. On October 27, 2016, the State of Arizona filed a petition for rehearing en banc in support of EPA. In FY 2018, the lawsuit will be closely monitored. Supplemental technical analyses and information may need to be provided. In addition, the preparation of the MAG Redesignation Request and Maintenance Plan for PM-10 for the Maricopa County Area will be continued.

On October 3, 2016, EPA published the final revisions to the 2007 Exceptional Events Rule. A mitigation plan for the region will be due on September 30, 2018. MAG will continue to provide technical assistance to the Arizona Department of Environmental Quality for the documentation of PM-10 and ozone exceptional events in accordance with the rule revisions.

For the 2008 ozone standard of 0.075 parts per million, the MAG 2017 Eight-Hour Ozone Moderate Area Plan for the Maricopa Nonattainment Area was prepared to meet the requirements of Section 182(b) of the Clean Air Act and submitted to EPA by January 1, 2017. Collectively, the plan includes 93 existing control measures approved by EPA in prior air quality plans and existing federal control measures. The plan demonstrates attainment in 2017 (ozone season prior to the July 20, 2018 attainment date). Supplemental technical analyses and information may need to be provided to EPA. For the 2015 ozone standard of 0.070 parts per million, EPA anticipates finalizing the designations, classifications, and attainment dates by October 1, 2017 based upon 2014-2016 monitoring data. Nonattainment areas will have until 2020 to late 2037 to meet the new standard with attainment dates varying based upon the ozone levels in the area (Marginal-Extreme). On November 17, 2016, EPA published a proposed rule on the Implementation of the National Ambient Air Quality Standards for Ozone Nonattainment Area Classifications and State Implementation Plan Requirements. The ozone designations and implementation rule will be closely monitored and evaluated to determine implications for the MAG region. If mandated, technical assistance may also include an analysis of greenhouse gas requirements and emissions to comply as required.

## Human Services Division

### 2018 Continuum of Care HEARTH Act Implementation ■ \$263,000

This Continuum of Care consultant project will assist the Continuum of Care in meeting HUD HEARTH Act requirements, in efforts to connect homeless persons with mainstream resources, and efforts to end homelessness across the region. The scope of the project will be developed by MAG staff in consultation with and guidance from the Continuum of Care Board.

## Transportation Division

### **2018 Transportation Public Opinion Research ■ \$150,000**

This project will support the ongoing transportation strategic planning associated with the development of next generation of Regional Transportation Plan development: Imagine. While technical studies to inform future multi-modal transportation investments are underway, preparations for future funding initiatives must begin in earnest as transportation needs will remain after Proposition 400 expires at the end of 2025. This work would focus on better understanding public attitudes regarding regional values, transportation needs, and investment priorities. Results of this work would help to inform the development of the next Regional Transportation Plan, Imagine, and would contribute to framing potential strategies and determining timing related to publically-supported funding options (e.g., renewal of local sales tax).

### **2018 Methodology for Evaluating New Traffic Detectors On-Call ■ \$30,000**

The operation of arterial traffic signal systems relies on two key inputs: (1) established signal timing settings that are periodically adjusted to match traffic demand patterns; and (2) prevailing traffic demand as detected via traffic detectors that are built into the road infrastructure. The traffic signals would not operate well if the detectors do not perform well, even if the signal timing is perfect. The detectors/sensors, therefore, play a critical role in traffic signal operations. Due to advances in electronics, a wide range of traffic detector products are available to local agencies, all meeting the required specifications. The study results will recommend a methodology that would help local agencies evaluate the performance of new traffic detectors. Vendor claims of accuracy are difficult to substantiate without independent evaluation studies. Local agency staff, faced with the task of evaluating new detectors, have requested MAG technical assistance through an On-Call study that would recommend some solutions to apply a statistically valid screening methodology. The study will also identify and recommend a range of options from independent testing services to the development of a detector test bed and related tools that could be used by agency staff.

### **2018 Enhancements to RTSIMS Software On-Call ■ \$40,000**

The RTSIMS software was developed by MAG for the purpose of performing crash data analysis to gain a good understanding of crash causation and crash risk and to identify appropriate countermeasures. The software was

developed with built-in ability to allow authorized staff at MAG member agencies to gain access to the software via the internet for performing crash data analysis. Although the current version RTSIMS 2.0 is already heavily used by MAG staff, a number of desired software enhancements have been identified to further improve its usefulness. This project will involve implementing these enhancements.

### **2018 Local Agency Safety Studies On-Call ■ \$200,000**

This project will support the performance of a minimum of two safety studies at specific intersections or arterial road segments where safety concerns have been identified. Candidate study sites will be nominated by local agencies, for review and recommendation by the Transportation Safety Committee. Recommended studies will be carried out by utilizing MAG ITS and Safety on-call consultants. The detailed scope of these studies will be developed by MAG in coordination with the requesting local agency.

### **2018 Safe Routes to School Studies On-Call ■ \$230,000**

This project will support the performance of Safe Routes to School studies at ten (10) specific schools where local agencies have successfully secured Transportation Alternatives (TA) Safe Routes to School funding through a competitive application process. Candidate study schools are indicated in the MAG Transportation Improvement Program listing for each project approved by the MAG Regional Council on January 25, 2017. Funding will be transferred to the MAG UPWP through an agreement with ADOT as administrator of the TA funding source. The local match for this funding source may be provided with local agency staff time (non-elected) spent on the development of the study, or cash match through an IGA between MAG and the local agency. The Safe Routes to School studies will be carried out by utilizing MAG ITS and Safety on-call consultants. The detailed scope of these studies will be developed by MAG in coordination with the requesting local agency.

### **2018 I-10 Papago Freeway Tunnel Traffic Operations Implementation Plan ■ \$200,000**

This project is the next step following the FY2016 Interstate 10/ Papago Freeway Tunnel Traffic Operations Study. It will take the findings from the previous study's technical report and continue the preliminary planning work, including simulation modeling, toward project implementation, leading into public outreach for the identified design alternatives.

**2018 MAG Models Integration Phase I On-Call ■ \$250,000**

The main purpose of the Models Integration On-Call program is integration of next generation modeling tools previously developed at MAG into a coherent new transportation forecasting system. MAG completed development of the agent-based behavioral freight model with funds from the SHRP2 C20 Implementation Assistance Program. MAG also has completed development of the regional micro-simulation model and MAG Activity-Based Model. In order to complete development of the next generation transportation forecasting tools, the models have to be integrated. The new integrated system will be able to support new transportation planning challenges, including transformative mobility scenarios (like autonomous vehicles penetration), new transit and managed lanes projects, improvements for non-motorized travel and operational changes. The on-call task orders will include integration of the freight and passenger agent-based travel forecasting models, integration of the travel demand forecasting models with dynamic traffic simulation models and development of advanced modeling scenarios required for the regional planning purposes. Qualified consultants and vendors are sought to assist staff in the following three service areas: (A) Activity-based and agent-based travel demand forecasting and modeling, (B) Dynamic Traffic Simulations, (C) Modeling and forecasting of advanced planning scenarios. The project will include three phases with Phase I being focused on development of methodological approaches, algorithmic foundation of the models integration, selection of the required software tools, some software implementations and elements required for the development of new regional transportation plan and servicing relevant requests from MAG member agencies.

**2018 MAG Regional Transportation Data On-Call ■ \$450,000**

The main purpose of a Regional Transportation Data On-Call program is ensuring uninterrupted delivery of critical data sets for MAG planning, forecasting and system analysis purposes. The on-call task orders will include traffic counts data collections in accordance with Highway Performance Monitoring System requirements and federal guidance, data purchases (such as annual speed data purchase required for System Analysis and Performance Measurement Programs), development and purchase of data analysis and visualization software. Some of the developments will be used for both analytical and transportation modeling purposes. Qualified consultants are sought to assist staff in the following two services areas: (A) Transportation Data Collection and Acquisition, (B) Transportation Analysis and Modeling.

**2018 MAG Models Recalibration On-Call ■ \$300,000**

The main purpose of the Models Recalibration On-Call program is MAG transportation models update, recalibration and re-estimation as a part of main models maintenance and improvement business process. MAG periodically conducts travel surveys, data collections and purchases with a comprehensive updates of the regional transportation models that normally follow main travel data collection efforts. This process is critical for the regional planning purposes, air quality conformity analysis and fulfillment of requests from MAG member agencies. MAG is currently completing 2016-2017 Regional Household Travel Survey. The survey data will be available in the first half of the FY2018. MAG has completed 2016-2017 Regional Establishment Survey data collection and the data is available for model development purposes. In order to ensure relevancy and accuracy of the regional transportation forecast, an update of MAG transportation forecasting models to the latest survey data is required. Due to the recent economic recession, collecting post-recession data and updating regional transportation forecasting models in a timely fashion, is even more important and urgent. Qualified consultants and vendors are sought to assist staff in the following two service areas: (A) Recalibration and update of the regional travel demand forecasting models, (B) Transportation Data Management. Area (A) will mostly include specification, estimation, calibration and validation of various transportation models and modeling components. Area (B) will include data acquisition, data collection, data analysis, data integration, data storage and other data management tasks required for successful completion of the transportation models recalibration and update.

**2018 Bicycle and Pedestrian Master Plans and First Time Updates On-Call ▲ \$480,000**

In response to an inquiry about available funding for MAG member agencies in the region to develop bicycle and pedestrian master plans, the MAG Bicycle and Pedestrian Committee formed a working group to examine the issue. The group included representatives from the City of Phoenix, City of Mesa, City of Tempe, City of Scottsdale, City of Glendale, Town of Apache Junction and the Maricopa County Department of Public Health. The group recommended that funding be requested to assist in the development of the plans and also recommended suggested elements and evaluation criteria. The group stipulated that applications requesting Transportation Alternatives (TA) funding for Bicycle/Pedestrian Master Plans will be limited to first time bicycle and pedestrian master plans or first time updates of existing plans. After the first



plan or update, members must wait 10 years before applying again. The application process will be held annually. The recommended allocation for this effort is \$600,000 for FY 2018 and will be revised as needed in following years. A 20 percent local match would be required.

#### **2018 Traffic Signal Optimization Program— \$40,000 MAG Associate ▲**

The MAG Traffic Signal Optimization Program (TSOP) has so far successfully completed nearly 120 projects and has provided services to many MAG jurisdictions. Projects launched through this program provide technical assistance to member agencies for improving traffic signal coordination, optimization and review of operations through simulation modeling. Assistance is provided by local consultants that are hired by MAG through an on-call services contract. The MAG Associate to be hired through this project would assist MAG staff in coordinating all TSOP projects with local agencies and would also provide technical assistance during implementation. The Associate would be a person well experienced in local agency traffic signal operations.

#### **2018 Road Safety Assessments and Project Assessments On-Call ▲ \$300,000**

A select number of Road Safety Assessments (RSAs) and Project Assessments (PAs) will be executed for a list of intersections and arterial corridors that experience a high crash occurrence. These locations will be identified both through a comprehensive network screening process that includes a review of five years of crashes on the road network, and also based on recommendations by the local agencies that own the facilities.

#### **2018 Cost Risk Analysis for the MAG Regional Freeway and Highway Program On-Call ▲ \$300,000**

When budgets are established for Regional Freeway and Highway Program projects, contingencies are applied to account for uncertainties during the development and delivery process. Often, these contingencies are level percentages based upon historical trends for freeway projects by the Arizona Department of Transportation (ADOT) that may not address project uniqueness. Starting with the SR-202L/South Mountain Freeway corridor in 2013, an alternate method evaluated project specific risks to identify a suitable project budget and customized contingency for the programming process. Since this project, MAG has conducted additional cost risk analysis workshops with ADOT staff that identified over \$135 million in contingencies from current Regional Freeway and Highway Program projects that could be utilized elsewhere in the

program. These retired risks provide more money in the program cash flow to conduct other projects. The purpose of this project will be obtaining a Cost Risk Analysis On-Call for Regional Freeway and Highway Program projects.

#### **2018 Traffic Signal Optimization Program \$300,000 On-Call ▲**

The MAG Traffic Signal Optimization Program (TSOP) has successfully completed over 120 projects and has provided services to many MAG jurisdictions. Projects launched through this program provide technical assistance to member agencies for improving traffic signal coordination, optimization and review of operations through simulation modeling. Future TSOP projects will also provide technical support for developing Integrated Corridor Management (ICM) strategies for freeway-arterial corridors. Assistance is provided by local consultants hired by MAG through an on-call services contract, with modeling support for ICM projects provided by MAG staff. A selected number of these projects will be evaluated through “before” and “after” travel time studies. The program also provides an annual three day hands-on workshop on the signal timing software SYNCHRO.

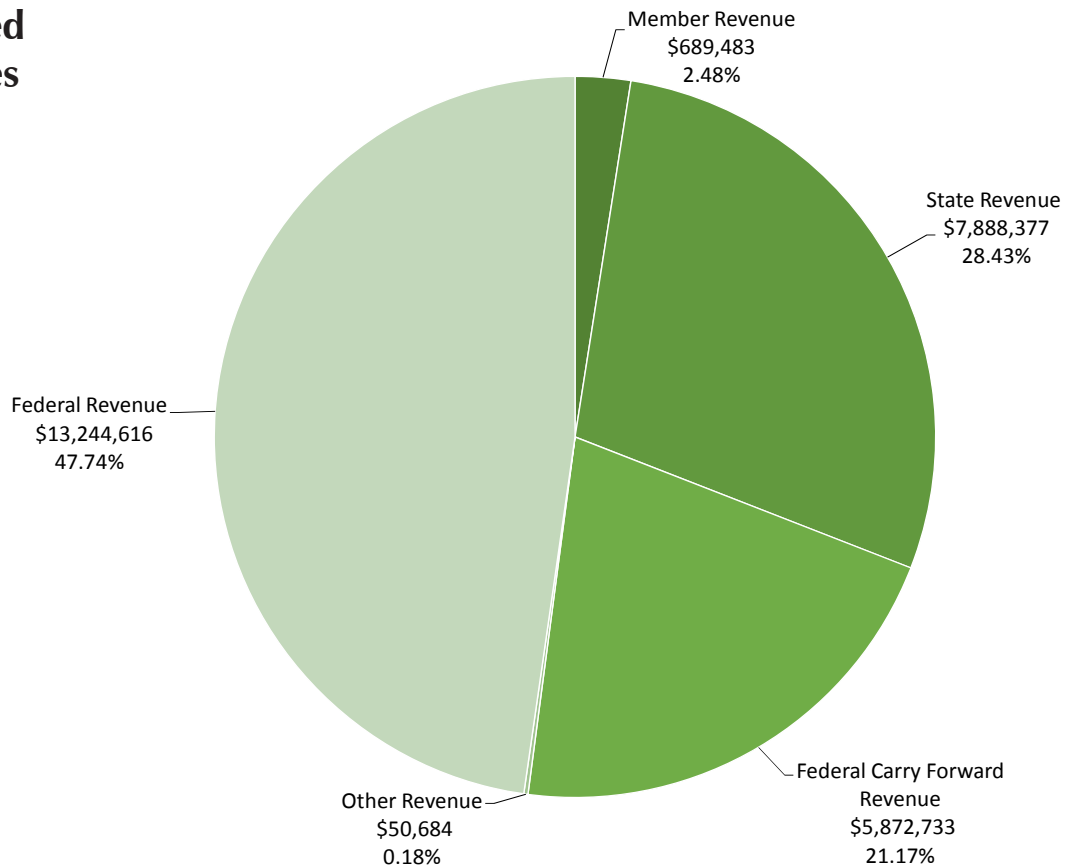
#### **2018 Pedestrian and Bicycle Facilities Design Assistance Program On-Call ▲ \$500,000**

The Pedestrian and Bicycle Facilities Design Assistance program was initiated in 1996 to encourage the development of designs for bicycle and pedestrian facilities according to the MAG Pedestrian Policies and Design Guidelines and the MAG Regional Bikeway Master Plan. The intent of the program is to stimulate integration of bicycle and pedestrian facilities into the transportation infrastructure. MAG will utilize the FY2018 Pedestrian and Bicycle Facilities Design Assistance Program On-Call consultant list.

#### **2018 MAG Regional Transportation Planning On-Call ▲ \$400,000**

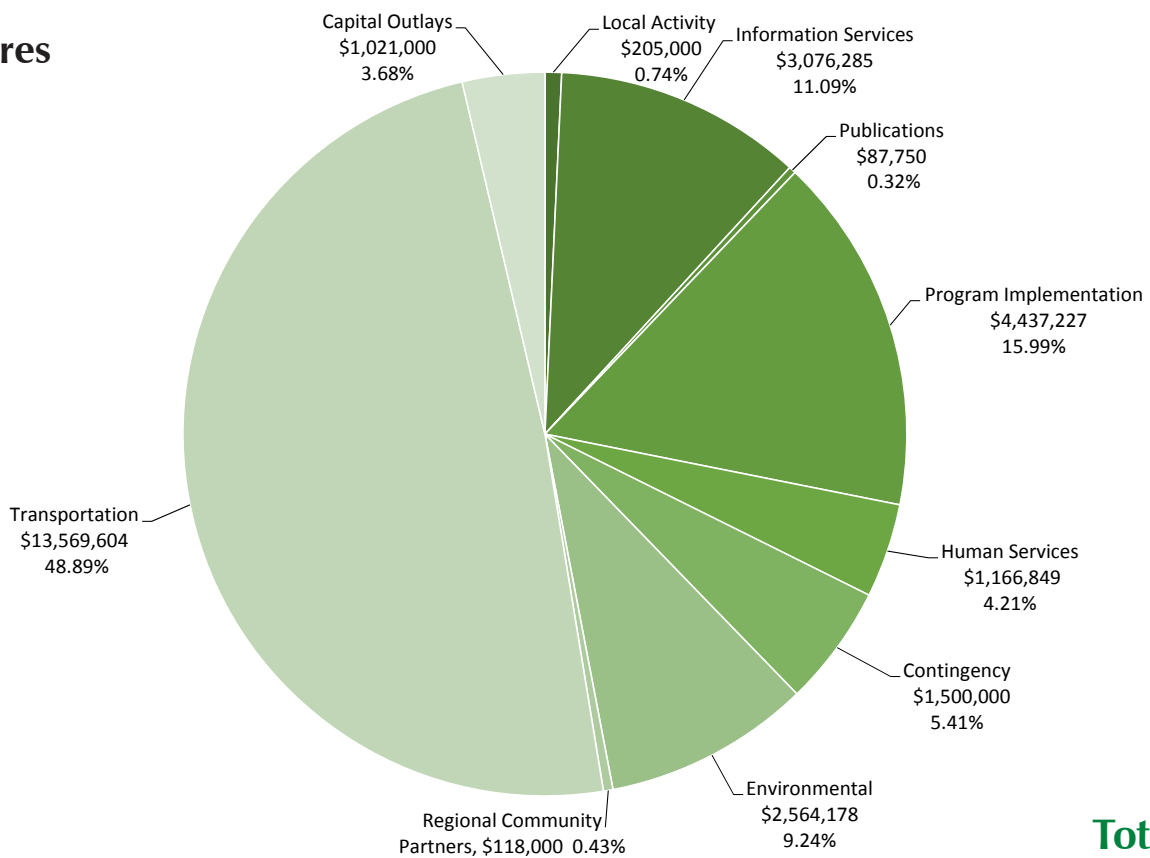
The purpose of a Regional Transportation Plan On-Call program is for expediting the delivery of consultant services at MAG. Qualified consultants are sought to assist staff in the following six services areas: (A) Civil Engineering, (B) Transportation Planning, (C) Transportation Operations, (D) Policy and Finance, (E) Public Involvement, and (F) Economic Development. These services will produce projects that will then inform the MAG Regional Transportation Plan and establish the next iteration of the MAG Regional Transportation Plan for adoption by the MAG Regional Council through a continuing, comprehensive, and collaborative process.

## Estimated Revenues FY 2018



**Total:**  
**\$27,745,893**

## Estimated Expenditures FY 2018



**Total:**  
**\$27,745,893**

## MAG FTE by Division

### Summary of Authorized Positions and Full-time Equivalents by Program Area Comparison for 3 Years

	FY 2016	FY 2017	FY 2018
100 ENVIRONMENTAL PROGRAMS	11	11	11
300 HUMAN SERVICES	5	6	6
600 TRANSPORTATION	35	35	35
800 INFORMATION SERVICES	16	16	16
1000 ADMINISTRATION	7.5	7.5	7.5
1000 COMMUNICATION SERVICES	5	6	6
1000 FINANCIAL SERVICES	8	9	9
1000 INFORMATION TECHNOLOGY	8	9	9
1000 OFFICE SERVICES	6.5	6.5	6.5
<b>TOTAL FTE</b>	<b>102</b>	<b>106</b>	<b>106</b>

## FY 2018 Budget Compared to FY 2017 Budget

Revenues By Source	2016	2017 Revised Budget	2018 Proposed Budget	\$ Change FY 17-FY 18	% Change FY 17-FY 18
Federal	\$19,070,234	\$22,547,492	\$25,808,242	\$3,260,750	14.46%
State	7,282,973	8,684,298	7,888,377	(795,921)	(9.17%)
Member	669,767	674,435	689,483	15,048	2.23%
Other	369,099	93,342	50,684	(42,658)	(45.70%)
Less: Restricted Reserves		(9,456,430)	(6,690,893)	2,765,537	(29.25%)
<b>Total Estimated Revenues Without Carryforward</b>	<b>27,392,073</b>	<b>22,543,137</b>	<b>27,745,893</b>	<b>5,202,756</b>	<b>23.08%</b>
<b>Total Estimated Revenue Carryforward</b>		<b>10,216,582</b>	<b>5,972,733</b>	<b>(4,243,849)</b>	<b>(41.54%)</b>
<b>Total Estimated Revenue</b>		<b>\$32,759,719</b>	<b>\$33,718,626</b>	<b>\$958,907</b>	<b>2.93%</b>
<b>Expenditures By Division/Function</b>					
Publications	\$56,560	\$85,179	\$87,750	\$2,571	3.02%
Environmental	2,492,302	2,483,402	2,564,178	80,776	3.25%
Human Services	579,770	847,634	1,166,849	319,215	37.66%
Regional Community Partners (RCP)	197,299	131,875	118,000	(13,875)	(10.52%)
Program Implementation	7,185,921	2,932,530	4,437,227	1,504,697	51.31%
Transportation	13,204,586	10,823,557	13,569,604	2,746,047	25.37%
Information Services	2,987,368	3,168,860	3,076,285	(92,575)	(2.92%)
Local Activity	227,654	213,800	205,000	(8,800)	(4.12%)
Capital Outlays: Regional Planning	352,065	368,800	1,021,000	652,200	176.84%
Contingency		1,487,500	1,500,000	12,500	0.84%
<b>Total Estimated Expenditures Without Carryforward</b>	<b>27,283,525</b>	<b>22,543,137</b>	<b>27,745,893</b>	<b>5,202,756</b>	<b>23.08%</b>
<b>Total Estimated Expenditures With Carryforward</b>		<b>10,216,582</b>	<b>5,972,733</b>	<b>(4,243,849)</b>	<b>(41.54%)</b>
<b>Total Estimated Expenditures</b>		<b>\$32,759,719</b>	<b>\$33,718,626</b>	<b>\$958,907</b>	<b>2.93%</b>