

State of Alaska FY2017 Governor's Operating Budget

Department of Administration Satellite Infrastructure Component Budget Summary

Component: Satellite Infrastructure

Contribution to Department's Mission

To sustain the key satellite infrastructure used for the delivery of audio and video news, public affairs, legislative and other state government content, public service information, entertainment, education, and state and federal emergency alert services to communities statewide.

Core Services

- 360 North - Unique Alaskan programs, original statewide productions and events, public affairs specials, documentaries and historical programs. Home to Gavel Alaska providing extensive coverage of the Alaska Legislature and government, originating at KTOO in Juneau, distributed by satellite to viewers across rural Alaska.
- UATV - Distance education from the University of Alaska, distributed by satellite and reaching 100 communities and UA's rural campuses.
- Alaska Rural Communications Service (ARCS) - the rural low power television service, owned and operated by the State of Alaska, delivers multifaceted program services including educational programming, news and information, sports and cultural events of statewide interest, from urban public and commercial stations into remote communities.
- State and Federal Emergency Alert Service (EAS) - real time delivery of emergency alerts and tests of the Emergency Alert System statewide to bush, rural and urban communities as provided for in the State of Alaska's plan for emergency preparedness.
- Public Radio Services - delivery of programming by six different public radio stations and the Alaska Public Radio Network (APRN) to the 26 individual local stations and their translators reaching 95% of Alaska's population.
- Technical monitoring and system maintenance of the satellite infrastructure is managed by Alaska Public Broadcasting Inc. (APBI) provides comprehensive management support and trouble-shooting services at the statewide and community levels. APBI also provides information and advice to DOA/ETS on public telecommunications policy issues, public broadcasting needs and issues and responds to requests for service from DOA or ETS on various other telecommunications issues.

Major Component Accomplishments in 2015

- Managed and coordinated the statewide ARCS television program service throughout FY2015 without any major system-wide shutdowns, failures or outages. In the course of the past year APBI handled over 500 contacts from ARCS sites around Alaska, restoring service in over 50 cases.
- Restored infrastructure and service in 20 rural communities leveraging SOA capital funds to partner with rural communities whose equipment for receiving satellite service and transmitting ARCS had been compromised by extreme environment wear and tear.
- Managed ARCS Digital Conversion Project for SOA, leading efforts through design, prototype, vendor selection, product selection, final design and into deployment phase.
- ARCS programming highlights include full coverage of the annual AFN convention, Iditarod Trail Sled Dog Race, ASAA High School basketball tournaments, statewide elections coverage, Governor's addresses, and numerous special news programs. ARCS is delivered into the homes of thousands of Alaskans in communities where other alternatives are either too expensive or simply do not exist.
- Successfully managed the satellite infrastructure responsible for delivering ARCS, Alaska Public Television, University of Alaska Television and multiple public radio audio channels including APRN.
- As a State Satellite Relay Network, participated in and distributed all of the State of Alaska Emergency Alert System (EAS) monthly exercises and actual emergency alerts including tsunami, wildfire and severe storm warnings.

Key Component Challenges

Federal Mandate: LPTV Digital Conversion - The deadline by which all analog Low Power Television (LPTV)

operations must convert to digital is expected to be reinstated by the Federal Communications Commission (FCC) following the completion of spectrum auction activities in mid-2016. The State allocated funds in its FY2014 Capital Budget and launched the ARCS Digital Conversion project to address the impending deadline and embrace the opportunity to significantly expand public service programming for bush residents. Major benefits of converting ARCS to digital include increased and improved digital services and the replacement of the obsolete analog electronics infrastructure with new digital systems.

Satellite Uplink Equipment Replacement - All of the original uplink infrastructure equipment was replaced by APBI in 2007 using one time Denali Commission funds. This core piece of infrastructure will pass the 10 year mark this fiscal year; it is in need of replacement and is no longer supported by the manufacturer. Some components of the system have failed and been repaired with spare parts acquired from the used equipment marketplace. Service is now dependent upon in-place backup systems. Services may be significantly jeopardized if further failures occur, or if backup components fail.

ARCS Maintenance – Though owned and operated by the State of Alaska, it is rural communities that fund ongoing maintenance while individuals at remote sites provide labor on a volunteer basis. Community organizations provide space and power for antennas and electronics. Costs of maintenance of satellite dish antennas, cables, transmission towers and antennas, and the electronics that support ARCS distribution remain the responsibility of local communities. The fleet of satellite dish antennas has been in service for over 20 years. Limited State funds are currently being applied to select sites where extreme conditions have resulted in unserviceable dish antennas.

Alaska Emergency Alert System (EAS) - Continuation of the collaborative relationship between ARCS and the SOA Division of Homeland Security and Emergency Management (DHS&EM) alerting systems for the distribution of emergency alert and warning systems is critical. As a Satellite Relay Network ARCS plays a central role in the State of Alaska EAS Plan, and is a designated monitoring assignment choice available to Alaska broadcasters. The ARCS low power television signals in bush communities provide year round 24/7 access to emergency information for rural viewers in their homes.

Significant Changes in Results to be Delivered in FY2017

ARCS Digital Conversion Project – This project replaces all analog transmitters at remote ARCS broadcast sites with new generation digital equipment. New equipment carries multi-year warranties reducing the need for associated repair costs during that time period and resulting in reduced costs for communities currently covering repair and replacement expenses for the existing aging system. As sites are converted to digital the full set of video services on the satellite carrier are broadcast through the new transmitters to viewers in their homes representing a 300% increase in service, going from one channel to four, with no increase in operating costs.

Satellite Downlink Equipment Replacement- Refurbishment work at satellite downlink facilities resulting in restoration of services at chronically afflicted sites will come to an end. Several downlink sites have been repaired and/or replaced, however there is more work to do and no funds are designated for ongoing maintenance of this infrastructure. Deflecting costs of maintaining this set of state owned equipment onto individual communities as they become affected by service outages will delay and/or prevent repairs from continuing. Those communities able to are expected to raise funds locally for these repairs, while others may seek funding through legislative representatives in the form of capital grants.

Next Generation Satellite – For the past three decades satellite facilities across Alaska have been receiving service from a single satellite in the sky. Indications from the owner/operator of the current spacecraft are that it will reach the end of its service life by calendar 2018. Planning for satellite service beyond that date, including considerations of a new orbital position that would require physically adjusting and re-aiming hundreds of remote satellite dishes, as well as band changes requiring replacement of satellite dish hardware, should commence in order to allow time for smart decision making and action to take place prior to termination of service on the current spacecraft.

Statutory and Regulatory Authority

AS 44.21.305-330 Telecommunications

Contact Information

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Component Detail All Funds
Department of Administration

Component: Satellite Infrastructure (2349)
RDU: Public Communications Services (30)

Non-Formula Component

	FY2015 Actuals	FY2016 Conference Committee	FY2016 Authorized	FY2016 Management Plan	FY2017 Governor	FY2016 Management Plan vs FY2017 Governor	
71000 Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
72000 Travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
73000 Services	888.2	787.3	787.3	787.3	787.3	0.0	0.0%
74000 Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
75000 Capital Outlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
77000 Grants, Benefits	160.0	92.2	92.2	92.2	92.2	0.0	0.0%
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Totals	1,048.2	879.5	879.5	879.5	879.5	0.0	0.0%
Fund Sources:							
1004Gen Fund (UGF)	848.2	779.5	779.5	779.5	779.5	0.0	0.0%
1007I/A Rcpts (Other)	200.0	100.0	100.0	100.0	100.0	0.0	0.0%
Unrestricted General (UGF)	848.2	779.5	779.5	779.5	779.5	0.0	0.0%
Designated General (DGF)	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Other Funds	200.0	100.0	100.0	100.0	100.0	0.0	0.0%
Federal Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Positions:							
Permanent Full Time	0	0	0	0	0	0	0.0%
Permanent Part Time	0	0	0	0	0	0	0.0%
Non Permanent	0	0	0	0	0	0	0.0%

Change Record Detail - Multiple Scenarios with Descriptions
Department of Administration

Component: Satellite Infrastructure (2349)
RDU: Public Communications Services (30)

Scenario/Change Record Title	Trans Type	Totals	Personal Services	Travel	Services	Commodities	Capital Outlay	Grants, Benefits	Miscellaneous	Positions		NP
										PFT	PPT	
***** Changes From FY2016 Conference Committee To FY2016 Authorized *****												
FY2016 Conference Committee												
ConfCom		879.5	0.0	0.0	787.3	0.0	0.0	92.2	0.0	0	0	0
1004 Gen Fund		779.5										
1007 I/A Rcpts		100.0										
Subtotal		879.5	0.0	0.0	787.3	0.0	0.0	92.2	0.0	0	0	0
***** Changes From FY2016 Management Plan To FY2017 Governor *****												
Totals		879.5	0.0	0.0	787.3	0.0	0.0	92.2	0.0	0	0	0

Line Item Detail
Department of Administration
Services

Component: Satellite Infrastructure (2349)
RDU: Public Communications Services (30)

Line Number	Line Name		FY2015 Actuals	FY2016 Management Plan	FY2017 Governor
73000	Services		888.2	787.3	787.3
Expenditure Account	Servicing Agency	Explanation	FY2015 Actuals	FY2016 Management Plan	FY2017 Governor
73000 Services Detail Totals			888.2	787.3	787.3
73150	Information Technlgy	Information technology service costs	0.0	72.0	72.0
73152	IT Consulting		80.4	0.0	0.0
73156	Telecommunication	Telecommunication services.	100.0	715.3	715.3
73157	Television		707.8	0.0	0.0

Line Item Detail
Department of Administration
Grants, Benefits

Component: Satellite Infrastructure (2349)
RDU: Public Communications Services (30)

Line Number	Line Name		FY2015 Actuals	FY2016 Management Plan	FY2017 Governor
77000	Grants, Benefits		160.0	92.2	92.2
Expenditure Account	Servicing Agency	Explanation	FY2015 Actuals	FY2016 Management Plan	FY2017 Governor
77000 Grants, Benefits Detail Totals			160.0	92.2	92.2
77437	General Government	General government grants.	160.0	92.2	92.2

Restricted Revenue Detail
Department of Administration

Component: Satellite Infrastructure (2349)
RDU: Public Communications Services (30)

Master Account	Revenue Description				FY2015 Actuals	FY2016 Management Plan	FY2017 Governor
51015	Interagency Receipts				200.0	100.0	100.0
Detail Information							
Revenue Amount	Revenue Description	Component	Collocation Code	AKSAS Fund	FY2015 Actuals	FY2016 Management Plan	FY2017 Governor
59450	University Of Alaska RSA with the University of Alaska Fairbanks for the Alaska transponder fee.		2300200	11100	100.0	100.0	100.0
59450	University Of Alaska		2309202	11100	100.0	0.0	0.0