Communications

Program Description

The Communications Department ensures District-wide integration and coordination of all communication and technology applications. The department is responsible for support of the multitude of District-wide communications systems, including District-wide and site specific landline phone systems; all emergency response portable, mobile, and base station radios; cell phones and PDAs; pagers; and all mobile data computers (MDCs) in response apparatus and their requisite software and wireless communications systems. The Department budget also includes leased cellular tower contract revenue.

Budget Summary

Revenues	2011-12 Actual	2012-13 Actual	2013-14 Budget	2014-15 Budget
Charges for Services		$ 2,714		$ 5,000
Rental Revenue	$ 122,337	66,955	$ 72,000	72,000
Miscellaneous		21,438		
Total Revenues	$ 122,337	$ 91,107	$ 72,000	$ 77,000

Expenditures	2011-12 Actual	2012-13 Actual	2013-14 Budget	2013-14 Budget
Personnel Services	$ 341,968	$ 386,591	$ 450,687	$ 470,761
Materials and Services	1,796,428	1,854,568	1,909,639	2,069,245
Total Expenditures	$ 2,138,396	$ 2,241,160	$ 2,360,326	$ 2,540,006

Personnel Summary

Position	2011-12 Actual	2012-13 Actual	2013-14 Budget	2014-15 Budget
Communications Supervisor	1.00	1.00	1.00	1.00
Communications Technician	2.00	2.00	2.00	2.00
Program Assistant	1.00	1.00	1.00	1.00
Total Full-Time Equivalents (FTE)	4.00	4.00	4.00	4.00

2014-15 Significant Changes

Charges for Services reflects limited external fire district services. Rental revenue reflects anticipated cell tower revenue sharing from cell tower leases.

Changes in Personnel Services are due to projected wage and benefit packages of personnel staffing the department.

Within Materials and Services, account 5330 supports a District-wide cell phone, communications lighting, radios, and fireground communications equipment. Dispatch fees reflect the charges from WCCCA ($1,664,264) and Clackamas C800 dispatch and service fees ($12,795). Telephone, account 5430, reflects the costs for District-wide telephone line and cellular costs.

Communications, continued

Status of 2013-14 Service Measures

- Ensure intra- and inter-agency communication operability during disasters and/or exercises.

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Goal(s)/Call(s) for Action:	III/1, 3, and 4
Service Type(s):	Mandatory
Measured By:	Maintain an appropriate matrix of communications requirements for use when the District is operating in Disaster Operations mode. Ensure that a comprehensive deployment plan for backup communications exists during an exercise or a real event. Provide emergency communications equipment training to all District personnel.
Status or Outcome:	New employees receive disaster communications training as part of the Fire Operations Center (FOC orientation). Continue to identify radio training throughout the year as appropriate, such as earthquake drills, annual CPR training, and other exercises. Infrastructure will be in place, reducing staffing resources assigned to the human repeater program during disaster operations to as few as three in designated fire stations. Continue to develop and maintain Communications Unit Leader (COML) program, expanding to include members of other divisions. Assisted in planning, coordinating, and controlling the State-sponsored COMLEX in fall of 2013.

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- Maintain consistent up-time of mobile data computers. Ensure critical response aids resources are updated and function as expected.

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Goal(s)/Call(s) for Action:	I/1; IV; VI/3 and 5; VII/1
Service Type(s):	Essential
Measured By:	Real-time monitoring and reporting on the Onboard Mobile Gateways (OMGs) performance metrics.
Status or Outcome:	The OnBoard Mobility Manager (OMM) continues to provide real time monitoring and Mobile Data Computer (MDC) connectivity to CAD. In support of the Logistics-driven proof of concept project for Automatic Vehicle Location (AVL) technology, three vehicles will be configured utilizing the OnBoard Mobile Gateway (OMG) and internal reporting services to evaluate the onboard diagnostics capabilities of the OMM. AVL enables Fleet to proactively monitor the entire system (error messages, RPM, idle time, speed, etc.).

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- Provide technical support for and maintain the communications infrastructure, equipment, and maintenance needs of the District. Maintain a solid relationship with WCCCA. Manage policies and procedures to ensure proper operation and use of the District's communications resources.

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Goal(s)/Call(s) for Action:	VI/4 and 5; VII/1
Service Type(s):	Mandatory
Measured By:	Munis work orders are monitored to ensure issues are dealt with in a timely fashion. Partner with WCCCA on applicable projects and maintain active committee participation.
Status or Outcome:	Worked closely with WCCCA to develop the interface used by Clackamas Fire District #1 (CFD#1) for the Comtech IP tap-out devices. Issued Active911 to the Volunteers to improve response notifications and situational awareness. Partnering with WCCCA to develop email distribution groups to improve efficiencies of communications between agencies. Installed consumer cellular network extenders at several facilities to improve in-building cellular access. Monitoring recent FCC regulation changes requiring BDA site licenses for potential future implementations, as well as the impact on the District's current use of consumer cellular network extenders. Conducting a professional site evaluation at the Training Center grounds to discover how to improve poor cellular coverage.

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Status of 2013-14 Service Measures, continued

- Participate as an active partner in project management, planning, and implementation to support District-wide communications needs.

Goal(s)/Call(s) for Action:	VI/4 and 5; VII/1 and 2
Service Type(s):	Management
Measured By:	Open lines of communication are experienced from inception to completion, resulting in a smooth and successful conclusion of the project.
Status or Outcome:	Maintenance of the fireground communications equipment transitioned to Communications. Communications provided a more widely accepted solution and continues to look for improvements. Worked closely with the HazMat team to upgrade the communications package in HM34 to include a new four radio digital Firecom System and in-suit communications package.

- Monitor opportunities at the regional, state, and national levels that support efforts in the area of voice and data interoperability.

Goal(s)/Call(s) for Action:	III/4; VII/1
Service Type(s):	Essential
Measured By:	Ensure regular attendance at regional meetings. Exchange information and prioritize communications needs at the quarterly communication program management meetings.
Status or Outcome:	The Communications Program Management team meets as needed to address regional, state, and national initiatives. CFD#1 requested guidance from Communications to assist with the station alerting system issues experienced after Narrowbanding; the Comtech IP tap-out device was recommended. Staff conducted site visits, and provided programming and technical assistance with the installation of the first Comtech device at CFD #1's Station #10. Installation training was provided. Subsequently, CFD #1 successfully upgraded all fire stations. The technology upgrade better aligns both departments with the CAD upgrade scheduled for 2015. Actively participate in the CAD replacement project meetings.

- Forecast Communications expenditures and meet budgetary expectations.

Goal(s)/Call(s) for Action:	VIII/5
Service Type(s):	Essential
Measured By:	Provide Finance with a 15-year capital spending plan to meet District technology requests.
Status or Outcome:	Completed and posted to the SharePoint budget site.

Communications, continued
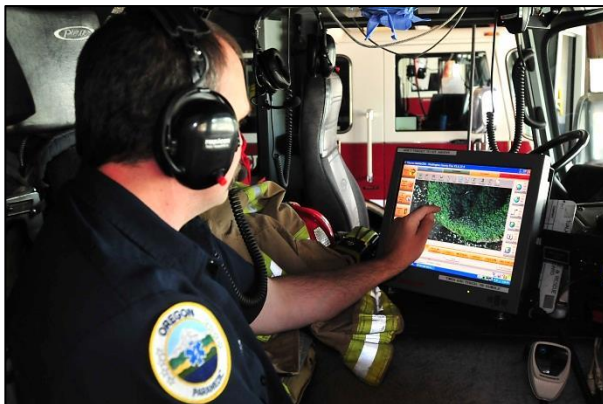
Status of 2013-14 Change Strategies

- Base station Simplex protocol during disaster operations - Update the Disaster Operations Communications Protocol. Utilizing the 20 base station radios in the fire stations, eliminate the need to use Human Repeaters outside of District facilities. The plan is to use fewer human repeaters stationed in predetermined fire stations to provide repeater functions to the District on Simplex in the event of 800Mhz Trunking System failure. Simplex radio coverage in West Linn is problematic and there is the potential need for a base station radio in one of the city buildings. With the South Operating Center coming online later this year as the alternate FOC, the Disaster Operations Communications Plan will be updated.

Goal(s)/Call(s) for Action:	III/2, 3, and 4
Budget Impact:	None
Duration:	Year 1 of 2
Budget Description:	Year 1 - no increase
	Year 2 – budget for recommended changes
Partner(s):	Fire Chief's Office/Emergency Management
Status or Outcome:	Base stations were purchased from WCCCA and will be installed at Stations 67 and 34 to provide additional resources during Emergency Operations. Budgeted for antenna replacement for ten stations in fiscal year 2014-15. Will continue to work with Emergency Manager to update Disaster Operations Communications Plan.

- Evaluate future mobile network options – This is a two year plan to upgrade the District MDCs to 4G connectivity and potential replacement or upgrade of the onboard mobile gateways (OMGs). The first phase is to upgrade from 3G to 4G, and test CradlePoint, along with other mobile platforms. The second phase will be the recommendation for the future mobile network platform.

Goal(s)/Call(s) for Action:	VI/5; VII/1
Budget Impact:	Slight increase required
Duration:	Year 1 of 2
Budget Description:	Year 1 – OMG air card upgrade
	Year 2 – budget for recommended changes
Partner(s):	Information Technology, Integrated Operations, Fleet
Status or Outcome:	Communications and Information Technology successfully evaluated the CradlePoint and one 4-port OMG; and determined that it is not prudent to upgrade the OMGs to support 4G due to the end of support of the current model in December 2015. Additionally, continuing to research and evaluate reported issues with MDCs operating in a 3G and 4G environment. Further evaluation on replacement hardware is ongoing. Communications is partnering with fleet to R&D several different vehicle Telemetry systems to provide real time onboard diagnostics, vehicle locations, and automatic problem notifications similar to what Communications uses with the OMM. Until the R&D is completed, staff feels it is better to wait to see what kind of connectivity requirements are needed before upgrading. The preference is to use and pay for one connection.

Status of 2013-14 Change Strategies, continued

- Nationwide Public Safety Broadband Network - Ensure TVF&R is positioned to take advantage of the national public safety wireless broadband network initiative. This is a $6.5 billion endeavor by the FCC to promote the next generation 9-1-1 and emergency alert systems for first responders. Additionally, the plan promotes critical infrastructure survivability. This is not intended to replace the current 800Mhz radio network, but will provide a secure, reliable, dedicated, and interoperable network for emergency responders. Communications will stay abreast of the progress and implementation of this network regionally, as well as nationally, to determine how this initiative meets current and future operational needs.

Goal(s)/Call(s) for Action:	III/2, 3, and 4; VI/3, 4, and 5; VII/1
Budget Impact:	None required
Duration:	Year 1 of 6
Budget Description:	Year 1-3: resource neutral
	Year 4-6: potential increase
Partner(s):	Fire Chief's Office/Emergency Management, Integrated Operations, Information Technology, WCCCA, BUG/BOT
Status or Outcome:	Continue to monitor activities and attend meetings, seminars, etc., as opportunities are presented.

Additional 2013-14 Accomplishments

- Assisted CFD#1 in the installation of Comtech IP tap-out devices. Project included site visits, coordinating with WCCCA, programming training, and system design.

- Communications and lighting package installations on three Light Brush rigs.

- Communications started using the South shop for installations to free up space at North shop and increase the efficiency of installations.

- One additional staff member became Communications Unit Leader (COML), certified after the COMLEX exercise in November 2013.

2014-15 Service Measures

Technical Services Provided	2010-11 Actual	2011-12 Actual	2012-13 Actual	2013-14 Estimated	2014-15 Projected
Mobile, portable, base station, patch kits	636	636	636	642	685
Mobile data computers, VRM, OMGs, and cellular connectivity devices	186	156	156	171	171
Cell phones	125	105	105	95	85
Smartphones	70	68	68/33 [1]	68/33	79/33 [1]
Pagers	225	150	150	150	150
Satellite phones	10	10	11	10	10
Work orders completed	425	585	625	325	325
Preventative maintenance inspections	400	400	400	480	400
Cellular tower leases managed	9	9	9	9	*
Standalone GPS units	25	25	12	14	22
Installations – apparatus and vehicles	5	3	5	6	14

[1] Represents stipend.
* Cell tower lease management moved to Finance.

Communications, continued

2014-15 Service Measures, continued

- Ensure intra- and inter-agency communication operability during disasters and/or exercises.

Goal(s)/Call(s) for Action:	III; VII
Service Type(s):	Mandatory
Measured By:	Maintain an appropriate matrix of communications requirements for use when the District is operating in Disaster Operations mode. Ensure that a comprehensive deployment plan for backup communications exists during an exercise or a real event. Provide emergency communications equipment training to all District personnel.

- Maintain consistent up-time of mobile data computers. Ensure critical response aids resources are updated and function as expected.

Goal(s)/Call(s) for Action:	I/1; IV; VI/1; VII
Service Type(s):	Essential
Measured By:	Real-time monitoring and reporting on the Onboard Mobile Gateways (OMGs) performance metrics.

- Provide technical support for and maintain the communications infrastructure, equipment, and maintenance needs of the District. Maintain a solid relationship with WCCCA. Manage policies and procedures to ensure proper operation and use of the District's communications resources.

Goal(s)/Call(s) for Action:	VI/1; VII
Service Type(s):	Mandatory
Measured By:	Munis work orders are monitored to ensure issues are dealt with in a timely fashion. Partner with WCCCA on applicable projects and maintain active committee participation.

- Participate as an active partner in project management, planning, and implementation to support District-wide communications needs.

Goal(s)/Call(s) for Action:	VI/1 and 2
Service Type(s):	Management
Measured By:	Open lines of communication are experienced from inception to completion, resulting in a smooth and successful conclusion of the project.

- Monitor opportunities at the regional, state, and national levels that support efforts in the area of voice and data interoperability.

Goal(s)/Call(s) for Action:	III/1; VI/1
Service Type(s):	Essential
Measured By:	Ensure regular attendance at regional meetings. Exchange information and prioritize communications needs at the quarterly communication program management meetings.

- Forecast Communications expenditures and meet budgetary expectations.

Goal(s)/Call(s) for Action:	VI/E; VII/E and 3
Service Type(s):	Essential
Measured By:	Provide Finance with a 15-year capital spending plan to meet District technology requests.

2014-15 Change Strategies

- Enhance use of station simplex protocol during disaster operations - Update the Disaster Operations Communications Protocol. Utilizing the 20 base station radios in the fire stations, eliminate the need to use Human Repeaters outside of District facilities. The plan is to use fewer human repeaters stationed in predetermined fire stations to provide repeater functions to the District on Simplex in the event of 800 MHz Trunking System failure. Simplex radio coverage in West Linn is problematic and there is the potential need for a base station radio in one of the city buildings. With the South Operating Center coming online later this year as the alternate FOC, the Disaster Operations Communications Plan will be updated.

Goal(s)/Call(s) for Action:	III/1
Budget Impact:	Minimal
Duration:	Year 2 of 2
Budget Description:	Year 1 – no increase
	Year 2 – budget for recommended changes
Partner(s):	Fire Chief's Office/Emergency Management

- Evaluate future mobile network options – Based on the evaluation in fiscal year 2013-14, the duration of this change strategy has changed. This is a three-year plan to upgrade the District MDCs to 4G connectivity and potential replacement or upgrade of the Onboard Mobile Gateways (OMGs). The first phase is to evaluate 4G options, and test CradlePoint, along with other mobile platforms. The second phase will be to evaluate connectivity options that include vehicle telemetry. The third phase will be the recommendation for the future mobile network platform. There are many changes coming in the next two years, including CAD Replacement, Fleet Telemetry Change Strategy, and potential devices other than standard MDCs that will affect connectivity options. For these reasons, it is prudent to evaluate all of these options and extend this Change Strategy from two to three years.

Goal(s)/Call(s) for Action:	VI/1 and 2
Budget Impact:	Slight increase required
Duration:	Year 2 of 3
Budget Description:	Year 1 – R&D
	Year 2 – R&D
	Year 3 – budget for recommended changes
Partner(s):	Information Technology, Integrated Operations, Fleet

- Nationwide Public Safety Broadband Network - Ensure TVF&R is positioned to take advantage of the national public safety wireless broadband network initiative. This is a $6.5 billion endeavor by the FCC to promote the next generation 9-1-1 and emergency alert systems for first responders. Additionally, the plan promotes critical infrastructure survivability. This is not intended to replace the current 800 MHz radio network, but will provide a secure, reliable, dedicated, and interoperable network for emergency responders. Communications will stay abreast of the progress and implementation of this network regionally, as well as nationally, to determine how this initiative meets current and future operational needs.

Goal(s)/Call(s) for Action:	III/1; VI/1 and 2
Budget Impact:	Resource neutral
Duration:	Year 2 of 6
Budget Description:	Years 1-3: resource neutral
	Years 4-6: potential increase
Partner(s):	Fire Chief's Office/Emergency Management, Integrated Operations, Information Technology, WCCCA, BUG/BOT

Communications, continued

		Actual Prior FY 2012	Actual Prior FY 2013	Budget Prior FY 2014	Budget Proposed FY 2015	Budget Approved FY 2015	Budget Adopted FY 2015
10175	**General Fund**						
5002	Salaries & Wages Nonunion	$ 216,220	$ 232,853	$ 253,694	$ 263,918	$ 263,918	$ 263,918
5004	Vacation Taken Nonunion	9,198	14,419	19,517	20,303	20,303	20,303
5006	Sick Taken Nonunion	8,629	10,035	3,904	4,062	4,062	4,062
5008	Personal Leave Taken Nonunion	1,812	2,194	1,674	1,741	1,741	1,741
5010	Comp Taken Nonunion	1,538	530				
5015	Vacation Sold			6,702	6,972	6,972	6,972
5021	Deferred Comp Match Nonunion	5,675	9,941	12,547	14,504	14,504	14,504
5121	Overtime Nonunion		174	1,000	1,000	1,000	1,000
5201	PERS Taxes	27,087	34,395	64,263	62,736	62,736	62,736
5203	FICA/MEDI	17,774	19,407	22,910	24,046	24,046	24,046
5206	Worker's Comp	7,311	4,186	5,391	5,658	5,658	5,658
5207	TriMet/Wilsonville Tax	1,633	1,799	2,139	2,309	2,309	2,309
5208	OR Worker's Benefit Fund Tax	97	105	152	152	152	152
5211	Medical Ins Nonunion	35,176	42,415	40,802	47,075	47,075	47,075
5221	Post Retire Ins Nonunion	2,700	4,425	3,600	3,600	3,600	3,600
5230	Dental Ins Nonunion	4,288	4,946	4,854	5,404	5,404	5,404
5240	Life/Disability Insurance	2,381	2,502	4,388	4,503	4,503	4,503
5270	Uniform Allowance	448	914	1,350	978	978	978
5295	Vehicle/Cell Allowance		1,350	1,800	1,800	1,800	1,800
	Total Personnel Services	**341,968**	**386,591**	**450,687**	**470,761**	**470,761**	**470,761**
5300	Office Supplies	12	2	75	75	75	75
5301	Special Department Supplies	12,030	19,586	14,025	18,735	18,735	18,735
5330	Noncapital Furniture & Equip	840	27,805	46,955	78,385	78,385	78,385
5350	Apparatus Fuel/Lubricants	2,307	2,041	2,500	2,500	2,500	2,500
5364	M&R Fire Comm Equip	21,977	19,372	17,075	16,243	16,243	16,243
5368	M&R Computer & Network Hdwe	199					
5415	Printing	192		550	250	250	250
5420	Dispatch	1,526,037	1,567,102	1,598,022	1,677,059	1,677,059	1,677,059
5430	Telephone	230,024	215,000	226,408	271,868	271,868	271,868
5450	Rental of Equip	1,824	1,632	1,920	1,920	1,920	1,920
5461	External Training	775	1,114	649	750	750	750
5462	Travel and Per Diem	46	716	1,000	1,000	1,000	1,000
5500	Dues & Subscriptions	120	120	360	360	360	360
5570	Misc Business Exp	44	80	100	100	100	100
	Total Materials & Services	**1,796,428**	**1,854,568**	**1,909,639**	**2,069,245**	**2,069,245**	**2,069,245**
	Total General Fund	**$ 2,138,396**	**$ 2,241,160**	**$ 2,360,326**	**$ 2,540,006**	**$ 2,540,006**	**$ 2,540,006**