

EMERGENCY COMMUNICATIONS

Mission Statement:

The Minneapolis Emergency Communications Center's (MECC) mission is to operate, in a professional manner, a complete public safety answering point and dispatching service for police, fire, and emergency medical service to support the needs of residents, visitors, and businesses in the City of Minneapolis.

Primary Business: Emergency Public Safety Communications Services (MECC 9-1-1)

Key Trends and Challenges Impacting the Department:

Strengths

- Entry level training (for 9-1-1 Operators) is excellent
- Largest 9-1-1 Center in the State
- Knowledge level and skills of employees/supervisors/mgrs
- 800 MHz radio system (interoperability, coverage, clarity)
- Physical plant is newly modernized (and has excess capacity)
- Dispatchers remain cross-trained to do Operator duties when needed

Weaknesses

- Computer Aided Dispatch (CAD) system is outdated ('89 for software; mid-90's for hardware)
- Phone records management system (MagIC) is troublesome
- Staff shortages lead to burnout/injuries (Repetitive Stress Injury)

Opportunities

- Partnerships with:
 - Adjacent agencies for technology acquisition (Hennepin County Sherriff's Office or St. Paul)
 - Adjacent agencies for consolidated service providing
 - Adjacent organizations for training opportunities
- Grant funding/Surcharge funding
- 3-1-1 will relieve 9-1-1 demands (one-third of calls are not dispatched)
- 3-1-1 can be 9-1-1 back-up and overflow center
- Excess physical capacity (unused work-stations)
- Mobile Data Computeers (MDC's) will increasingly decrease demand on "channel 7"
- Off-load some channel 7 duties to 3-1-1 and other departments
- Rotation of personnel between 9-1-1 and 3-1-1 Centers is possible, as is a career progression.
- Can utilize the time/resources spent at "Channel 7" more for other things as the PD increases its use of Mobile Data Computers to directly access drivers' license and law enforcement data bases.

Threats

- Funding
 - E.g. Maintenance contracts go up faster than Consumer Price Index (e.g. 10% increase in '05 for phones)
 - New CAD will have recurring costs, including maintenance contract of ~18% of purchase price
- Grants might dry up
- BIS staff/funding pressures may rob 9-1-1 support personnel
- Surcharge could diminish and probably won't increase
- Security (physical and cyber)

- Back-up facility currently a “bare bones” operation
- Co-location of MECC and City Hall is a potential terrorist target
- HCMC dispatch may elect to use HCSO CAD; result would be the need to transfer 70% of the calls that HCMC dispatches (currently they use the MECC CAD); result would be significant time delay.
- Immigrants unwilling or uncomfortable with contacting 9-1-1 and 3-1-1.

Trends/Challenges (For full narrative see 5-Year Plan)

Trend 1: Technological change is accelerating; resident contact and responder/staff dispatch is also increasingly reliant on technology.

- Challenge: Fund the changes through increases in General Fund and Capital Funds. The minimal 9-1-1 Surcharge revenues (\$~250K annually) will probably not be increasing, but in fact, may be decreasing as more and more citizens move to wireless and/or VoIP technology which reduces the number of "phone" surcharge revenue.
- Challenge: Train people to use the changes (generally) that are and will be occurring.
- Challenge: Stay interoperable and/or standard with City and other agency's tools. This issue is most recognized in the CAD and radio environments. The solution for radio is the advent of the regional 800 MHz system. CAD interoperability, however, is in its infancy. To this end, the CAD acquisition partnership with Hennepin County Sheriff's Office and/or the City of St. Paul are aimed at improving interoperability (as well as saving on the total cost of ownership).
- Challenge: Stay with 9-1-1 industry changes and hope/help the industry stay abreast of user methods. This challenge refers to the aforementioned VoIP trend that has started and may take off like a wildfire. Other, unforeseen, trends such as the shift from installed phones to wireless phones that tripped up the industry over the last 10 years will also come along and cause expense and training investments. One such example already on the radar screen is “smart vehicles” or automatic collision notification (A.C.N.).

Trend 2: Funding becoming increasingly tight (see Finance Plan appendix for details) but, as mentioned above, other traditional sources of funding may also be constricted. Federal grants, relatively available in the 1990's and this decade thus far (e.g. the \$4.2M for CAD), could be severely restricted if fiscal restraint is mandated after the November '04 elections. Likewise, the 9-1-1 Surcharge may be restricted, either because fewer subscribers will be assessed the surcharge and/or because the State will need a larger portion than what they keep now to pay their bills.

- Challenge: Fund the technology changes. As detailed above, technology is becoming more ubiquitous, and even though it is becoming less expensive for yesterday's technology, there is enough of tomorrow's technology to add and thus the expenses persist. A larger share of the budget must be earmarked for technology support/maintenance/upgrading than is now happening.
- Challenge: Fund the people (training and entry requirements) that will cope with tech/training
- Challenge: 7 X 24 staffing is expensive, especially due to the fact that MECC has prescribed “minimum staffing” that we strive for at any given time. That means, as alluded to above, that training involving classroom participation must be done at a time when the participant is not doing their regular duty on the floor.
- Challenge: Budget for an expected 3-year lifecycle for desktop hardware and software and 5-years for server hardware.

Trend 3: Consolidation is looming as a likely issue in the 9-1-1 industry, both here in Minnesota and throughout the country. If/when it can be shown that it is less expensive to consolidate geographical

separate 9-1-1 Centers/jurisdictions into joint facilities and still provide good, safe service. Policy makers will find it difficult to not combine. MECC is not seen as an entity that should be consolidated with another, but some in the surrounding areas are. They might be candidates for consolidating among themselves or perhaps consolidating with MECC. A form of consolidation might include joint purchasing or other forms of partnering on technology purchases, training, staffing, etc. The current effort to partner with Hennepin County or St. Paul/Ramsey County, on the CAD acquisition is a form of this consolidation.

- Challenge: Don't get caught behind the 8-ball. Partner with others for better efficiency and interoperability before a mandate occurs that could hinder or under-emphasize the complex nature of a full consolidation. If Minneapolis is to consolidate, it needs to ensure that the planning is full, methodical and not rushed by political and fiscal imperatives.
- Challenge: Use excess capacity (physical plant) to invite other agencies into the Center to fully utilize the 28 workstations that we now have.

Trend 4: Internal Business Process changes are common and seem to be increasing with new management and new technology in our customer departments. The advent of the new regional 800 MHz radio system brought with it a number of FD on-scene and dispatch changes in radio procedures. Similarly, changes in geographic responsibilities in the police department caused changes in the CAD software and the procedures used by Dispatchers. On-scene or changes in the field processes continue to challenge our ability to keep the technology consistent and accurate for those procedures and to keep the personnel trained and competent in those changes.

- Challenge: Training to keep up without breaking the overtime bank.
- Challenge: Keeping personnel motivated and reducing stress in the face of changes that keep seeming to churn on.
- Challenge: Develop a successful working relationship with the PD and FD so that their operational changes are planned in concert with the technological and training changes needed in MECC.

Trend 5: Homeland Security including physical security and backup issues.

- Challenge: Ensure MECC is secure physically and from cyber-attacks. Cyber security is now a distant concern for the CAD, phone and radio systems because they are all "closed" systems that do not connect to the Internet. That will change with the advent of Internet Protocol Telephony or Voice over Internet Protocol (VoIP). The next generation of both CAD and phone systems will use Internet Protocol almost certainly. Additional challenges regarding hacking, viruses and other forms of cyber-attack will heighten.
- Challenge: Ensure back-up procedures and physical plant is ready. Currently, numerous back-up and business continuity measures exist, but more are needed. For now, a physical back-up center is located at the 5th Precinct Headquarters building and has been shown to be effective and utilitarian for short periods of time. The electronics systems, whether in City Hall or at the back-up site are backed up, but not fail-safe to all sorts of physical or cyber attacks (or "mistake" for that matter). Manual and/or portable systems are available for CAD and radio, but the phone system for citizens to call on may be the least able to be backed up with manual or portable systems. The 9-1-1 phone switches, either at MECC or in the Qwest system could go "down" and calls could still get through on the public telephone system through a process of re-routing or "translating". But, if phones are out at the customer end, the only access to the "9-1-1 system" is for individuals to make their needs known with a visit to Police and Fire Stations (a system

that was discussed and adopted for Y2K and subsequent emergency exercises). A back up EOC is not functional and should be considered in conjunction with other capital projects such as the 3-1-1 Center or the Police/Fire Training Center.

Trend 6: Changing demographics are a reality, both for our own staffing in MECC and for the customers we serve. The population is becoming increasingly tilted toward the over-65 population and is also becoming more and more diverse in increasing numbers of non-English speaking citizens. The elderly are sometimes reluctant to call 9-1-1 for medical concerns because they are not sure they have an “emergency”. More and more non-English speaking residents are reluctant to call the “authorities” represented by 9-1-1 or have trouble communicating their concerns to emergency personnel. Internally and further discussed in the workforce-planning appendix in our 2004 business plan, is the issue of retirement age approaching for many of our Operators, Dispatchers, Supervisors, and Managers.

- Challenge: Provide service and general information to non-English speakers via education and real-time services and direct telephone services through continued use of Language Line, Inc. translators.
- Challenge: Aging workforce will increase retirements. The “corporate memory” that exits with them will need to be replaced with continued training and professional development of the newer employees and future trainees.
- Challenge: Aging citizens will increase medical calls and the ability of ambulance services to respond in a timely manner. The importance of medical pre-arrival instructions will continue to grow and thus the reliance on HCMC and North Memorial Medical Center (NMMC) to provide those services will be crucial. First responder services via the Fire Department should be manageable if fire personnel numbers remain at or near their current levels.

Key Initiatives or Other Models of Providing Service to be implemented in 2005

1. Consolidation or partnering probably is not applicable to General Fund, because suburbs may not join MECC and provide revenues. However, it is still possible that MECC and St.Paul/Ramsey may partner on the acquisition of a new CAD system and thus obtain better interoperability and some economies of scale for the purchase price.

2. CAD upgrade/replacement funding for hardware, software, and implementation phase personnel support will be available from Federal grant money in the amount of \$4.2M.

3. Phone upgrade: Add features and functionality such as ACD, VoIP, 3-1-1 overflow. Funding should be completely available from 9-1-1 surcharge funds. No impact on General Fund dollars.

4. Right-size for 3-1-1: Not applicable in '05 unless 3-1-1 is opened early, at which point MECC can down-size 1 Operator FTE position for every 20,000 call decrease in 9-1-1 calls that occurs (FTE position can be transferred to 3-1-1).

5. Right-size for 5-year budget direction. This is the only General Fund impact. An approximate 1.5 FTE decrease per year is needed to meet the 5-year financial direction. This is absorbable with no material negative impact on operations and/or performance measures for the first 2 years.

Other models of providing services in '05: None needed/anticipated, unless 3-1-1 is expedited and/or the 10% decrease scenario is made necessary.

Primary Business: Emergency Public Safety Communications Services (MECC/9-1-1)

Description of Primary Business: The Minneapolis Emergency Communications Center receives all 911 calls made in the City of Minneapolis, including those from homes (landlines) and most wireless phones within the City. By mutual agreement with the Minnesota State Patrol most wireless calls from highways will first route to State Patrol.

Once calls are received in the MECC the 911 operators determine if a Police, Fire or Ambulance response is needed. If so, the operator enters information into a Computer Aided Dispatch (CAD) terminal, which relays the information to dispatchers. Those dispatchers (Fire and Police in Minneapolis, Ambulance at HCMC and North Memorial) determine and assign the appropriate units based on factors such as type of emergency, location and priority. On some medical calls the operator may transfer a caller to HCMC or North Memorial for pre-arrival medical instructions that the caller may use for "first aid" until the paramedics or EMTs arrive.

MECC also receives calls of a non-emergency nature, some of which still require a police response. Other calls include referrals, including requests for police reports that may be made over the phone through the MPD telephone reporting service. Because MECC is open 24 hours a day other administrative tasks are handled here, including the reporting of missing or runaway juveniles and entry (and subsequent cancellation) of that information into (and from) the National Crime Information Center (NCIC) database.

Key Performance Measures that are impacted by 2005 resources:

	2001 Actual	2002 Actual	2003 Actual	2004 Estimated	2005 Projected
9-1-1 Call answer time	5.5	5.8	5.8	6.2	6.5
MECC Response time					
Priority 1	N/A	2m17s	2m18s	2m20s	2m25s
Priority 2	N/A	13m46s	14m31s	15m	15m30s
Priority 3	N/A	16m46s	17m6s	17m30s	18m
Citizen Complaints					
Total	104	105	105	105	105
Sustained	67	64	68	68	68

Explanation of Key Performance Measures: The above-listed performance measures are the salient ones; others of interest are included below.

9-1-1 call answer time is measured each week as the average answer time of all three shifts. It should be recognized that the answer time when call volume is high (typically during the "3 to 11" shifts) is slightly slower. Whereas answer time is slightly quicker during the slower times such as the wee hours of the morning.

MECC response time is the time from call entry (by the 9-1-1 Operator into the Computer Aided Dispatch system) to call dispatching (by the Police/Fire Dispatcher).

Citizen complaints are recorded when a citizen, or an officer or firefighter contacts MECC with a concern. Sustained complaints are those that reveal an error was made by the Operator or Dispatcher involved with the call/incident this is determined after a supervisor reviews the audio tape and computer entries made by the employee.

Complaint summary:

*'00; 34 of 89 (38%) complaints sustained;
'01; 67 of 104 (64%) complaints sustained;
'02; 64 of 105 (61%) complaints sustained;
'03; 68 of 105 (65%) complaints sustained.*

Hiring/Promotion/Retention Statistics

Hiring Statistics - Dispatcher

Year	Hired	Retained
1997	1	0
1998	4	1
1999	1	1
2000	4	3
2001	4	2
2002	0	0
2003	0	0
2004	4	2

Hiring Statistics - Operator

Year	Hired	Retained
1997	19	14
1998	9	6
1999	9	7
2000	12	9
2001	4	2
2002	11	9
2003	6	2
2004	3	3

Promotions to Dispatcher

Year	#Promoted	Demoted	Resigned	# Retained
1997	3	2	0	1
1998	6	2	0	4
1999	5	1	0	4
2000	4	1	0	3
2001	5	2	0	3
2002	4	1	0	1
2003	2	1	0	1
2004	1	0	0	1

Cost per transaction (1,050,351 transactions include calls plus cases dispatched): \$7.71/x-action.

Cost per 9-1-1 call: \$19.14/call (based on total annual costs; budget + capital investments amortization + overhead based on Finance Office models); 90-99th percentile according to a State study conducted in '03 and lowest in Hennepin County based on information in a '03/'04 report on 9-1-1 consolidation.

Cost per capita (based on Minneapolis 2000 population): \$19.48/citizen.

Cost per FTE (based on authorized strength of 90.5): \$89,480/year.

Complaint rate, ~66% of complaints are sustained. Stated another way, 1 in 18,000 calls are defective, a success rate of 99.994%.

Number of incidents/Dispatcher

*13,576 (in '02); (actual FTE was 33.13/authorized 40);
12,902 (in '03); (actual FTE was 31.83/authorized 38).*

*Number of phone calls/Operator: 647,084 ('02)/36.63 = 17,665
654,063 ('03)/38.75 = 16,879*

Calls received/dispatches (emergency ratio);

*647,084/411,342 ('02) = 1.57 (or 63.7%)
654,063/395,175 ('03) = 1.66 (or 60.2%)*

Primary Business: 3-1-1 (deferred until '06 budget cycle)

Financial Analysis:

EXPENDITURE

The Minneapolis Emergency Communication Center's budget is \$6.9 million, a 7.5% increase over the 2004 Adopted Budget. Personnel expense makes up 86% of the department's budget. This greatly restricts the Department's ability to manage budget constraints without personnel reductions.

Non-personnel expenses represent approximately 14% of the department's budget, of which 79% is paid to the City's Internal Service funds for BIS charges, phones, self insurance, parking and benefit administration fees. The remainder is for training, equipment, a contract with Qwest for \$80,000 for memberships, and supplies.

The budget for this department includes \$240,000 in BIS charges calculated on a city-wide rate model and \$15,000 for benefits administration. Both charges were centrally budgeted in the past. Backing out these charges, the Emergency Communication Center's budget for 2005 is \$6.7 million, a 3.6% increase over 2004.

REVENUE

Revenue for 2005 is \$305,000, a 1.2% increase over the 2004 budget. The Department has a \$50,000 contract with Hennepin County to provide EMS call dispatch and CAD services. The Department receives \$255,000 in 911-franchise fees from the state. The spending of this revenue has limitations specified by state statute.

FUND ALLOCATION

Approximately 96% of the Emergency Communication Center's budget for 2005 comes out of the General Fund.

MAYOR'S RECOMMENDED BUDGET

The Mayor's Recommended Budget reduced the Emergency Communication Center's employees by 4 positions keeping them within their five-year financial plan. It also recommended the department's target strategy of absorbing budget cuts through reduced staffing of the MECC's Operations floor for two years, saving approximately \$65,000 per position.

ADOPTED BUDGET

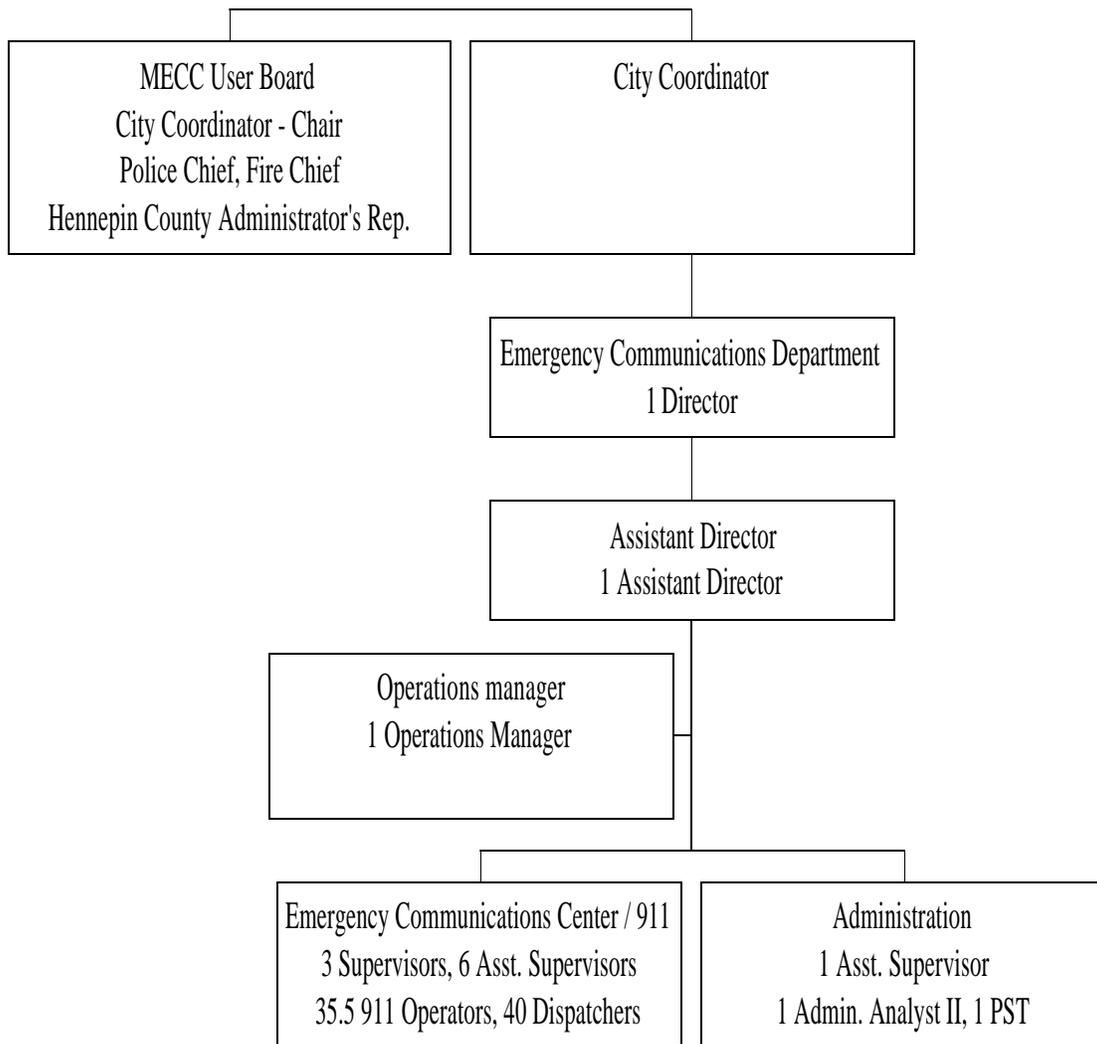
The Council adopted the Mayor's recommendation.

**EMERGENCY COMMUNICATIONS
Staffing Information**

	2002 Adopted Budget	2003 Adopted Budget	2004 Adopted Budget	2005 Adopted Budget	% Change	Change
Total FTE's	90.50	90.50	90.50	86.50	-4.42%	(4.00)

Emergency Communications Department Organization (Current; 9-1-1 only)

(90.5 FTE)



EMERGENCY COMMUNICATIONS
Expense Information

	2002 Actual	2003 Actual	2004 Adopted Budget	2005 Adopted Budget	% Change	Change
General Fund - City						
Contractual Services	0	0	146,970	409,452	178.6%	262,482
Equipment	0	0	0	9,126		9,126
Fringe Benefits	0	0	1,286,953	1,318,780	2.5%	31,827
Operating Costs	0	0	294,609	302,410	2.6%	7,801
Salaries and Wages	0	0	4,473,343	4,644,098	3.8%	170,755
Total for General Fund - City	0	0	6,201,875	6,683,866	7.8%	481,991
Special Revenue Funds						
Equipment	0	0	251,650	255,173	1.4%	3,523
Total for Special Revenue Funds	0	0	251,650	255,173	1.4%	3,523
Total for EMERGENCY COMMUNI	0	0	6,453,525	6,939,039	7.5%	485,514

EMERGENCY COMMUNICATIONS
Revenue Information

	2002 Actual	2003 Actual	2004 Adopted Budget	2005 Adopted Budget	% Change	Change
General Fund - City						
Charges for Service	0	0	50,000	50,000	0.0%	0
<i>Total for General Fund - City</i>	0	0	50,000	50,000	0.0%	0
Special Revenue Funds						
State Government	0	0	251,650	255,173	1.4%	3,523
<i>Total for Special Revenue Funds</i>	0	0	251,650	255,173	1.4%	3,523
Total for EMERGENCY COMMUNICATIONS	0	0	301,650	305,173	1.2%	3,523