

# **Organizational, Effectiveness and Efficiency Study of the Fire Department**

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**City of Milwaukee, Wisconsin**



**October 12, 2005**

# Presentation Outline

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- ◆ Review scope of services for the project.
- ◆ Discuss basis for standards in fire and EMS services.
- ◆ Review primary recommendations from the report.

# Scope of Services

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- ◆ Review management and administration of staffing.
- ◆ Conduct a comparative survey of other large cities.
- ◆ Evaluate command staffing levels.
- ◆ Assess service delivery objectives and performance.
- ◆ Recommend line staffing and deployment.

# Service Delivery Standards

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- ◆ NFPA 1710 is an effort to formalize a long running debate about service delivery standards.
- ◆ A recommended approach that applies to MFD.
- ◆ Recommendation for staffing includes 4-person companies (fire units).
- ◆ “Typical” first alarm for a 2,000 s.f. house includes at least 15 responders.
- ◆ Milwaukee has many neighborhoods where the “typical” fire involves significant expansion risk.

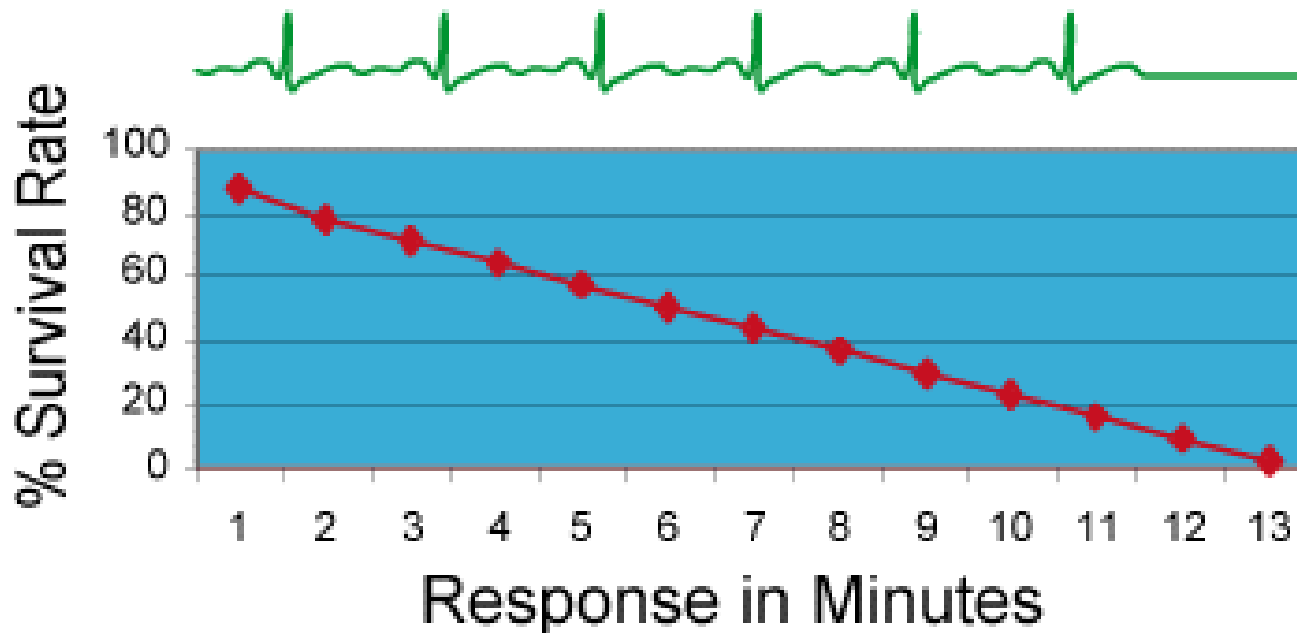
# Service Delivery Standards

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- ◆ Response time objectives (goal: for 90% of “emergency” calls):
  - (1) Minute for processing and dispatching a call.
  - (1) Minute for “reflex” or “reaction” time after dispatch.
  - (4) Minutes for first unit drive time.
  - (8) Minutes for arrival of the first full response / paramedics.
- ◆ Managers can only address the first two elements in the short term!
- ◆ Unsolved issue: definition of “dispatch” time.

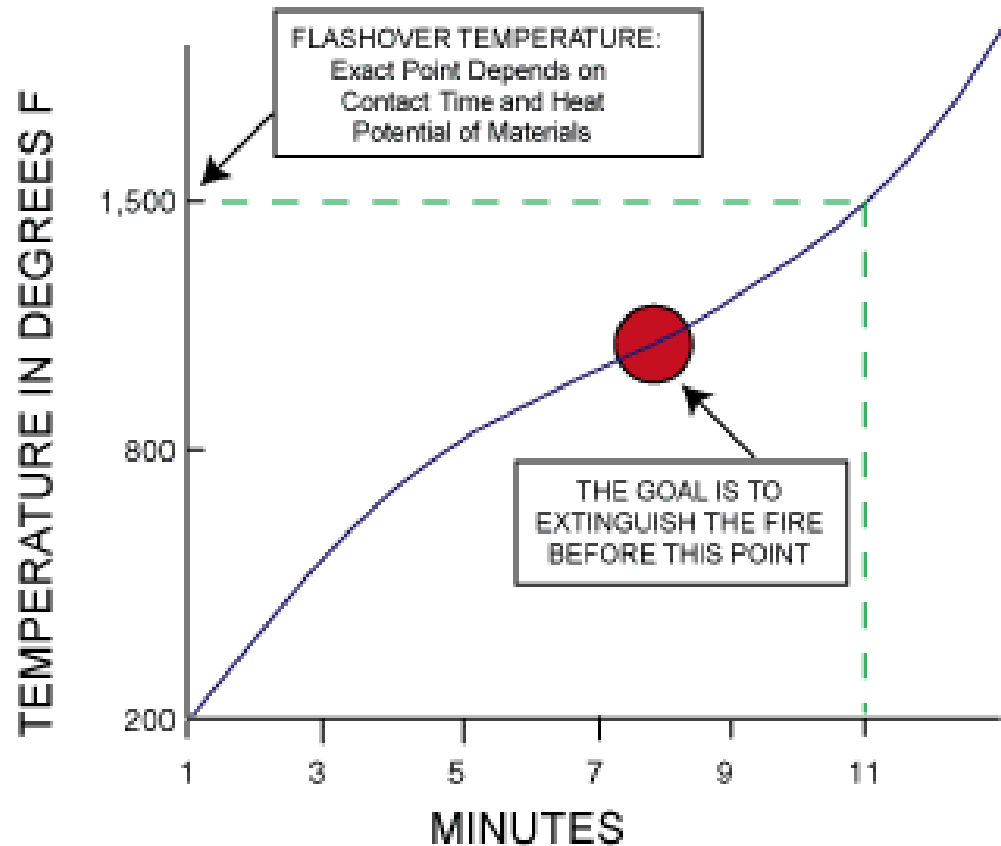
# Cardiac Arrest Impact on EMS

Cardiac Survival vs Response Time



# “Room and Contents” Fire

## Generalized Flashover Curve



# Recommendations

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- ◆ Consolidate three Deputy Chief commands into one. Reduce staffing by two positions, for estimate annual savings of \$225,000.
- ◆ Continued focus on dispatch processing and reaction time is critical to maintaining and improving services.
- ◆ Consider addition of both Heavy Equipment Operators and Lieutenants to reduce reliance on overtime for annual savings of \$562,000.



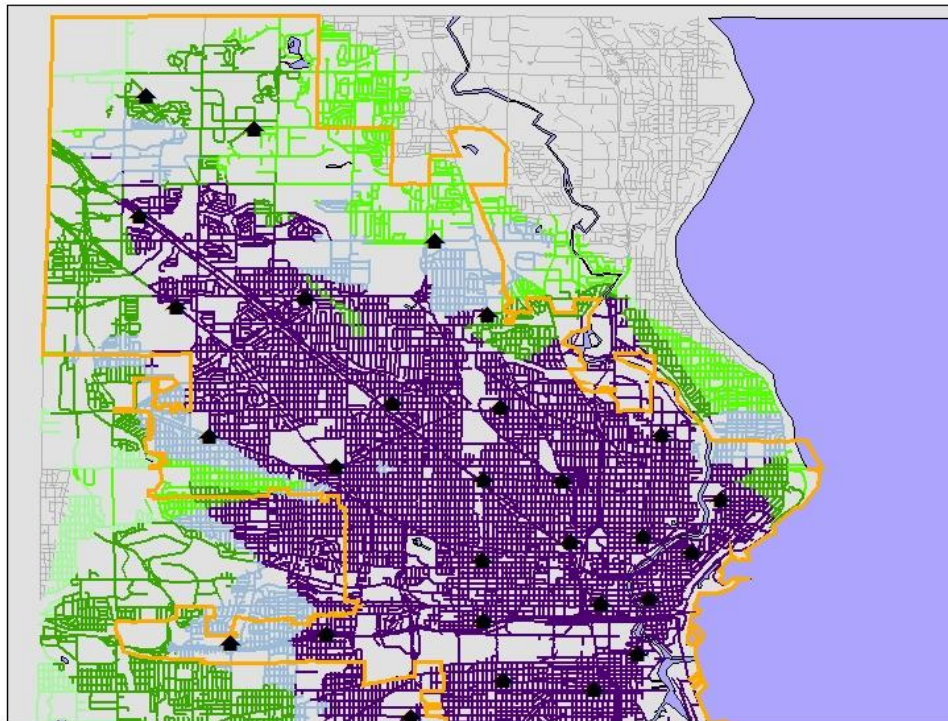
# Recommendations

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- ◆ Reduce minimum staffing of ladder companies to four. Maintain special teams units at minimum of five. Total annual savings of \$3.2 million.
- ◆ Current station location and deployment of units will allow the MFD to maintain an exceptional level of coverage and response overlap at national standards.

# Current 4 Minute (North)

## Milwaukee Fire Department Projected Unit Response at Four Minutes of Drive Time Current Staffing Levels - Northern View



### Legend

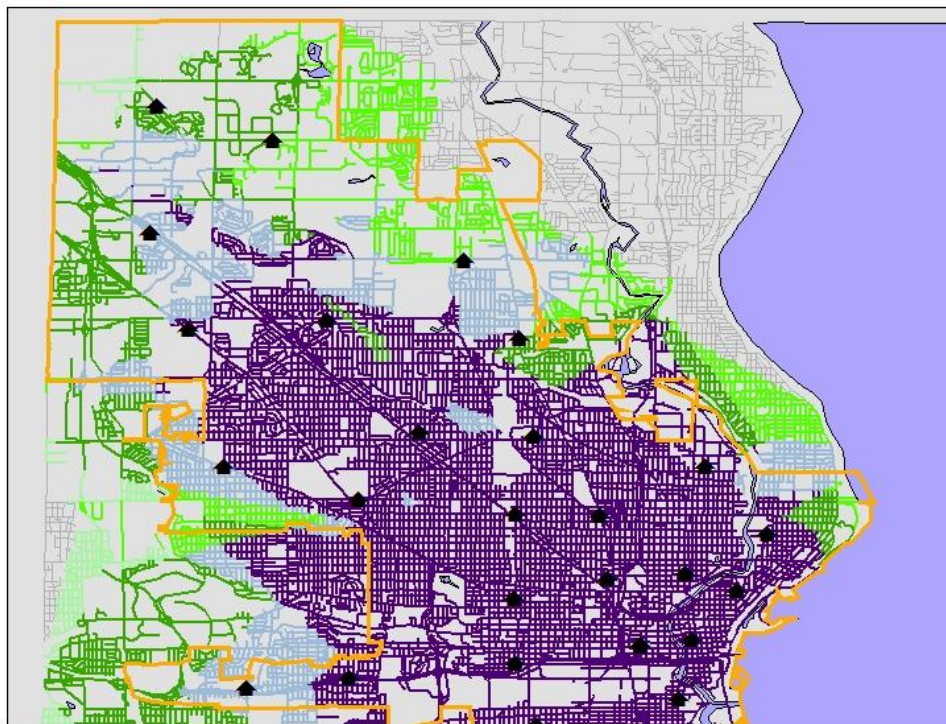
- ▲ MFD Stations
- City of Milwaukee
- Streets with # of Units**
- 0
- 1 Unit
- 2 Units
- 3 Units
- 4 Units
- 5 or more
- Water



Developed by Matrix Consulting Group. Source data provided by Milwaukee Fire Department & Census.

# Alternative 4 Minute (North)

## Milwaukee Fire Department Projected Unit Response at Four Minutes of Drive Time Alternative Staffing Levels - Northern View



### Legend

- ▲ MFD Stations
- City of Milwaukee
- Streets with # of Units**
- 0
- 1 Unit
- 2 Units
- 3 Units
- 4 Units
- 5 or more units
- Water

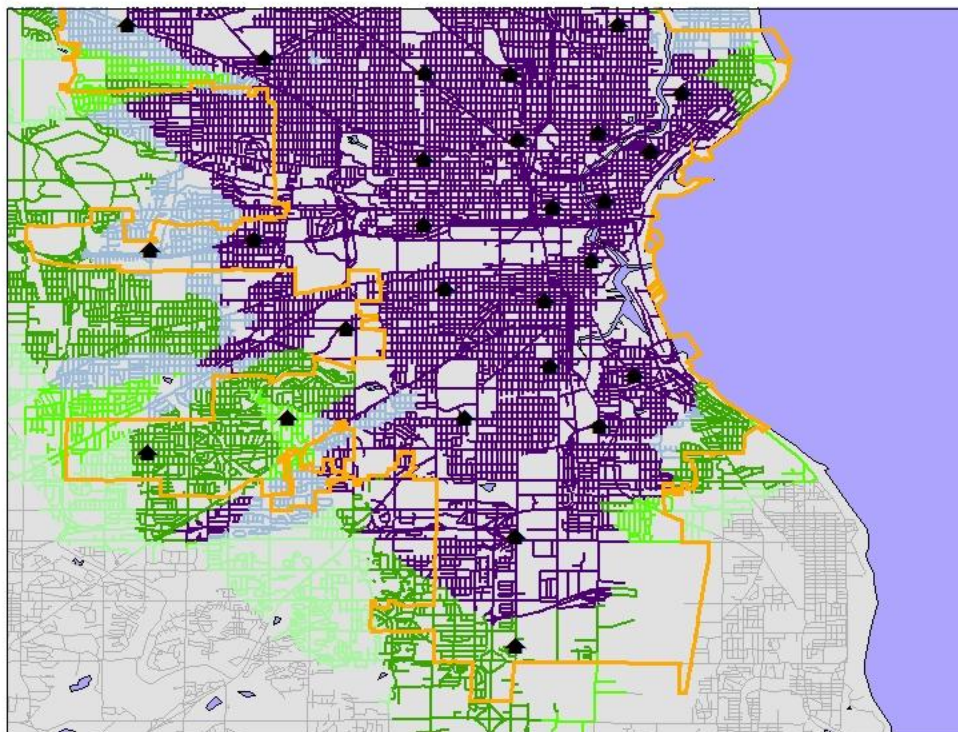


Developed by Matrix Consulting Group. Source data provided by Milwaukee Fire Department & Census.



# Current 4 Minute (South)

## Milwaukee Fire Department Projected Response at Four Minutes of Drive Time Current Staffing Levels - Southern View



### Legend

▲ MFD Stations

### Streets with # of Units

— 0

— 1 Unit

— 2 Units

— 3 Units

— 4 Units

— 5 or more

City of Milwaukee

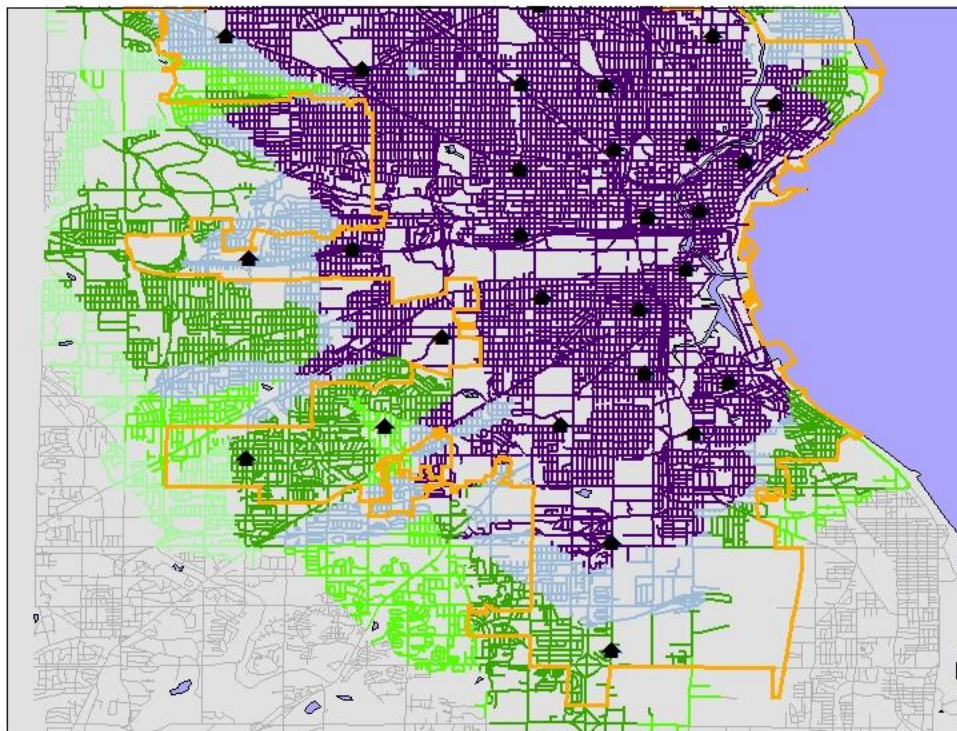
Water



Developed by Matrix Consulting Group. Source data provided by Milwaukee Fire Department & Census.

# Alternative 4 Minute (South)

Milwaukee Fire Department  
Projected Unit Response at Four Minutes of Drive Time  
Alternative Staffing Levels - Southern View



## Legend

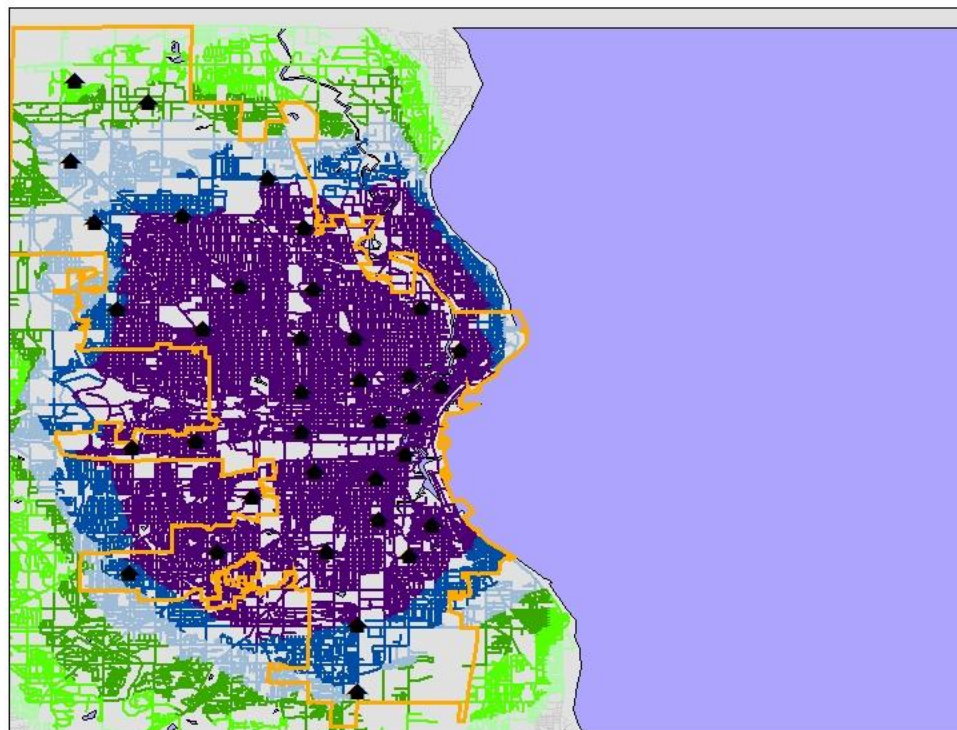
- ▲ MFD Stations
- City of Milwaukee
- Streets with # of Units**
- 0
- 1 Unit
- 2 Units
- 3 Units
- 4 Units
- 5 or more units
- Water



Developed by Matrix Consulting Group. Source data provided by Milwaukee Fire Department & Census.

# Current 8 Minute

## Milwaukee Fire Department Projected Response at Eight Minutes of Drive Time Current Staffing Levels



### Legend

- ▲ MFD Stations
- Streets with # of Personnel**
- 0
- Less than full response
- 1 full response
- 2 full responses
- 3 full responses
- 4 full responses
- 5 or more full responses
- ▭ City of Milwaukee
- ▭ Water

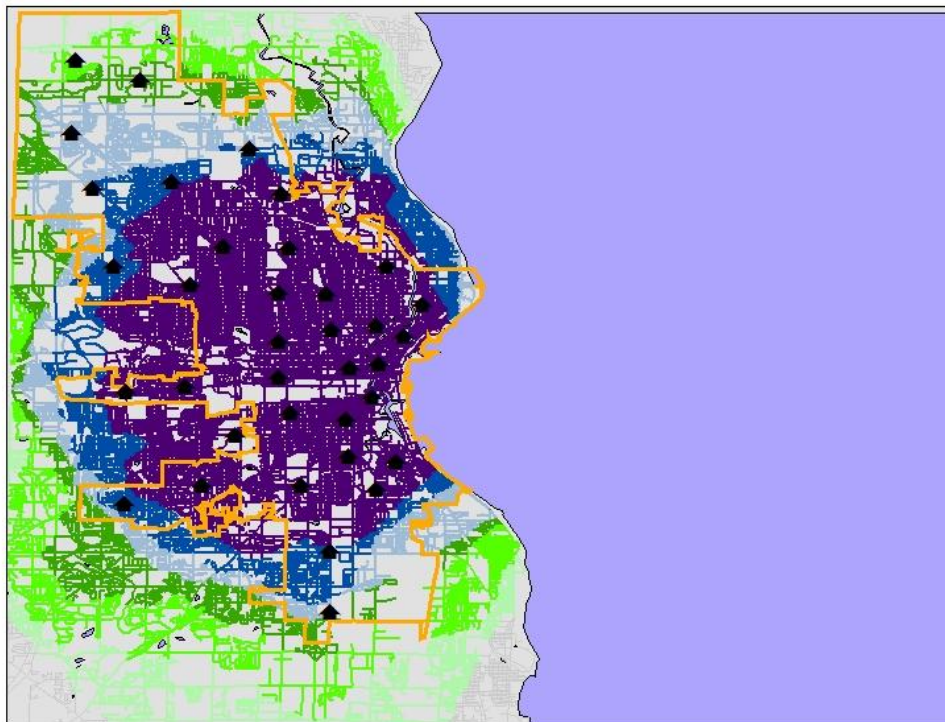


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# Alternative 8 Minute

## Milwaukee Fire Department Projected Response at Eight Minutes of Drive Time Alternative Staffing Levels



### Legend

▲ MFD Stations

### Streets with # of Personnel

— 0

— Less than 1 full response

— 1 full response

— 2 full responses

— 3 full responses

— 4 full responses

— 5 or more full responses

— City of Milwaukee

— Water



Developed by Matrix Consulting Group. Source data provided by Milwaukee Fire Department & Census.