

# ANALYTICS REPORT

Generated: January 29, 2026 at 11:19 PM

SECTION 1: WHAT IS HAPPENING

| Metric          | Value      |
|-----------------|------------|
| Total Records   | 10         |
| Total Variables | 10         |
| Data Quality    | 100.0%     |
| Analysis Date   | 2026-01-29 |

Key Performance Metrics:

| Metric                   | Current   | Average   | Min       | Max       | Trend      |
|--------------------------|-----------|-----------|-----------|-----------|------------|
| Calls for Service        | 130.00    | 129.50    | 110.00    | 145.00    | Increasing |
| Emergency Response Calls | 105.00    | 99.50     | 85.00     | 115.00    | Increasing |
| Fire Incidents           | 33.00     | 32.10     | 25.00     | 40.00     | Increasing |
| Medical Incidents        | 62.00     | 59.50     | 50.00     | 70.00     | Increasing |
| Property Damage (USD)    | 650000.00 | 590000.00 | 450000.00 | 750000.00 | Increasing |

# SECTION 2: HOW IT'S HAPPENING

## Trend Analysis:

| Metric                   | Direction | Strength | R²    | Growth Rate         | Explanation   |
|--------------------------|-----------|----------|-------|---------------------|---|
| Calls for Service        | Upward    | Weak     | 0.156 | 1.42 per period     | Calls for Service is slightly increasing over time with R² = 0.156. This trend i... |
| Emergency Response Calls | Upward    | Moderate | 0.170 | 1.30 per period     | Emergency Response Calls is moderately increasing over time with R² = 0.170. Thi... |
| Fire Incidents           | Upward    | Weak     | 0.006 | 0.12 per period     | Fire Incidents is slightly increasing over time with R² = 0.006. This trend is w... |
| Medical Incidents        | Upward    | Moderate | 0.167 | 0.79 per period     | Medical Incidents is moderately increasing over time with R² = 0.167. This trend... |
| Property Damage (USD)    | Upward    | Weak     | 0.136 | 12121.21 per period | Property Damage (USD) is slightly increasing over time with R² = 0.136. This tre... |

## Key Relationships:

| Variable 1               | Variable 2                  | Correlation | Type     | Explanation   |
|--------------------------|-----------------------------|-------------|----------|---|
| Calls for Service        | Emergency Response Calls    | 0.902       | Positive | When Calls for Service goes up, Emergency Response Calls typically increases. This strong positive      |
| Calls for Service        | Fire Incidents              | 0.805       | Positive | When Calls for Service goes up, Fire Incidents typically increases. This strong positive relationshi... |
| Calls for Service        | Medical Incidents           | 0.845       | Positive | When Calls for Service goes up, Medical Incidents typically increases. This strong positive relation... |
| Calls for Service        | Property Damage (USD)       | 0.916       | Positive | When Calls for Service goes up, Property Damage (USD) typically increases. This strong positive re...   |
| Emergency Response Calls | Fire Incidents              | 0.792       | Positive | When Emergency Response Calls goes up, Fire Incidents typically increases. This strong positive re...   |
| Emergency Response Calls | Medical Incidents           | 0.915       | Positive | When Emergency Response Calls goes up, Medical Incidents typically increases. This strong positiv...    |
| Emergency Response Calls | Property Damage (USD)       | 0.958       | Positive | When Emergency Response Calls goes up, Property Damage (USD) typically increases. This strong           |
| Emergency Response Calls | Average Response Time (min) | -0.527      | Negative | When Emergency Response Calls goes up, Average Response Time (min) typically decreases. This            |
| Fire Incidents           | Medical Incidents           | 0.778       | Positive | When Fire Incidents goes up, Medical Incidents typically increases. This strong positive relationshi... |
| Fire Incidents           | Property Damage (USD)       | 0.885       | Positive | When Fire Incidents goes up, Property Damage (USD) typically increases. This strong positive relati...  |
| Medical Incidents        | Property Damage (USD)       | 0.942       | Positive | When Medical Incidents goes up, Property Damage (USD) typically increases. This strong positive re...   |

# SECTION 3: WHAT WILL HAPPEN

## Predictive Forecasting & Future Outlook

### Multi-Period Forecasts:

Predictions for next 1, 3, 5, and 10 periods with confidence intervals

| Metric                   | Current   | +1        | +3        | +5        | +10       | Change | Confidence | CI         |
|--------------------------|-----------|-----------|-----------|-----------|-----------|--------|------------|------------|
| Calls for Service        | 130.00    | 137.33    | 140.18    | 143.03    | 150.15    | 10.0%  | Low        | ±18.65     |
| Emergency Response Calls | 105.00    | 106.67    | 109.27    | 111.88    | 118.39    | 6.6%   | Low        | ±16.19     |
| Fire Incidents           | 33.00     | 32.73     | 32.96     | 33.19     | 33.77     | 0.6%   | Low        | ±8.45      |
| Medical Incidents        | 62.00     | 63.87     | 65.45     | 67.04     | 71.01     | 8.1%   | Low        | ±9.97      |
| Property Damage (USD)    | 650000.00 | 656666.67 | 680909.09 | 705151.52 | 765757.58 | 8.5%   | Low        | ±171853.88 |

### Forecast Explanations:

**Calls for Service:** Based on historical patterns ( $R^2=0.156$ ), Calls for Service is forecasted to increase by 10.0% over the next 5 periods. The prediction has low reliability with a confidence interval of ±18.65.

**Emergency Response Calls:** Based on historical patterns ( $R^2=0.170$ ), Emergency Response Calls is forecasted to increase by 6.6% over the next 5 periods. The prediction has low reliability with a confidence interval of ±16.19.

**Fire Incidents:** Based on historical patterns ( $R^2=0.006$ ), Fire Incidents is forecasted to increase by 0.6% over the next 5 periods. The prediction has low reliability with a confidence interval of ±8.45.

**Medical Incidents:** Based on historical patterns ( $R^2=0.167$ ), Medical Incidents is forecasted to increase by 8.1% over the next 5 periods. The prediction has low reliability with a confidence interval of ±9.97.

**Property Damage (USD):** Based on historical patterns ( $R^2=0.136$ ), Property Damage (USD) is forecasted to increase by 8.5% over the next 5 periods. The prediction has low reliability with a confidence interval of ±171853.88.



# STRATEGIC RECOMMENDATIONS

Prioritized, Actionable Recommendations with Timelines & KPIs

| Priority | Category           | Recommendation  | Action Plan (Top 3)   | Timeline    | KPIs  |
|----------|--------------------|---|---|-------------|---|
| High     | Growth Opportunity | Capitalize on Emergency Response Calls growth   | 1. Allocate additional resources to capitalize on growth<br>2. Scale successful initiatives<br>3. Expand market reach   | 90-180 days | Target: Maintain R² >0.170, Increase growth rate by 10% |
| High     | Growth Opportunity | Capitalize on Medical Incidents growth  | 1. Allocate additional resources to capitalize on growth<br>2. Scale successful initiatives<br>3. Expand market reach   | 90-180 days | Target: Maintain R² >0.167, Increase growth rate by 10% |
| Medium   | Strategic Insight  | Leverage Calls for Service-Emergency Response as leading indicator for Emergency Response Calls | 1. Set up automated alerts when Calls for Service changes >10%<br>2. Set up automated alerts when Calls for Service changes >10%<br>3. Build predictive model using this relationship | 1-60 days   | Forecasting accuracy >85%, Response time to change <10% |
| Medium   | Strategic Insight  | Leverage Calls for Service-Fire Incidents as leading indicator for Fire Incidents               | 1. Set up automated alerts when Calls for Service changes >10%<br>2. Set up automated alerts when Calls for Service changes >10%<br>3. Build predictive model using this relationship | 1-60 days   | Forecasting accuracy >85%, Response time to change <10% |
| Medium   | Strategic Insight  | Leverage Calls for Service-Medical Incidents as leading indicator for Medical Incidents         | 1. Set up automated alerts when Calls for Service changes >10%<br>2. Set up automated alerts when Calls for Service changes >10%<br>3. Build predictive model using this relationship | 1-60 days   | Forecasting accuracy >85%, Response time to change <10% |