



EPFR Unit and Response Benchmarks

Adopted: 3/21/23

Turnout Times

Turnout times are measured from when a unit is alerted until the unit responds to the incident. The demands placed on the crews vary by the nature of the call necessitating various levels of protective equipment that needs to be donned. A structure fire requires the firefighters to put on full “bunker gear”, while responding to a simple aid call does not.

The East Pierce Fire & Rescue established benchmark for turnout time is:

- Two minutes (2:00) 90% of the time for all responses and all hours of the day.

Unit Reliability

Unit Reliability is a measure of how often a unit is available in its first due service area when an emergency incident occurs. Low reliability results in increased travel times as secondary units handle the incident, impacts on incidents outcomes (CPR, fires, etc.), and potential impacts on customer satisfaction and expectations.

The East Pierce Fire & Rescue established benchmark unit reliability (based on national standards) is:

- Units are no less than 80% reliable.

Unit Hour Utilization

Unit Hour Utilization is a measure of how much time a unit spends assigned to emergency incidents in a 24-hour period. This metric is measured from the time of unit notification (alert) until that unit is clear of the incident and available for another incident in its first due area. Increased utilization can result in increased employee fatigue, burnout, and turnover. High utilization can also result in decreased unit reliability and impact appropriate unit deployment.

The East Pierce Fire & Rescue established benchmark unit hour utilization (based on national standards) is:

- Units are no more than 30% utilized.



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Travel times

Travel times are broken down by population density areas. These areas are defined as Urban, Suburban, Rural, and Wilderness areas. EPFR establishes realistic response goals based on local distribution of assets as well as local topography, weather, and traffic patterns.

Urban/Dense Urban: NFPA 1710 defines these areas of having a population greater than 1,000 people per square mile.

Suburban: NFPA 1710 defines these areas of having a population between 500 and 1,000 people per square mile.

Rural: NFPA 1710 defines these areas of having a population less than 500 people per square mile.

Wilderness: NFPA 1710 defines these as an area in which development is essentially nonexistent except for roads, railroads, powerlines, and similar transportation facilities with structures widely scattered. There are industry standard recommendations for targeted response times for those areas with the exception of Wilderness where the standard is “best effort” for response.



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Travel Time 1st Unit, Fire Incidents: This metric looks at the 90th percentile travel time for the first apparatus to arrive at a fire scene (NFIRS 100 series) for the four population-density areas. The travel time only includes priority or emergent responses (i.e. lights and sirens).

The East Pierce Fire & Rescue established benchmark for the travel time of the 1st unit to fire incidents is:

- **Urban:** 8 minutes 30 seconds
- **Suburban:** 10 minutes
- **Rural:** 15 minutes
- **Wilderness:** Best effort

Travel Time Effective Response Force (ERF), Fire Incidents: This metric looks at the 90th percentile travel time for the full ERF to arrive at a fire scene. The ERF was established and defined in EPFR Standard of Cover Document. The ERF means there are enough resources to fill all identified critical tasks necessary for mitigation of the incident. The risk-hazard of the incident drives what critical tasks get filled. As an example, a single-family residential structure fire is categorized as “low-risk” and requires a minimum of 16 personnel to accomplish the critical tasks for effective hazard mitigation. A commercial structure fire is considered “high-risk” and requires 27 personnel to accomplish the critical tasks. The travel time only includes priority or emergent responses (i.e. lights and sirens).

The East Pierce Fire & Rescue established benchmark for the travel time for an Effective Response Force is:

- **Urban:** 13 minutes 30 seconds
- **Suburban:** 15 minutes
- **Rural:** 20 minutes
- **Wilderness:** Best effort

Travel time for 1st unit arrival for any EMS call: This metric looks at the travel time for the first arriving unit, regardless of unit type, to an EMS call. Within EPFR this may be either an Advanced Life Support (ALS) unit with at least 1 certified paramedic, or Basic Life Support (BLS) with an EMT. All responding EPFR units have AED capabilities at a minimum. The travel time only includes priority or emergent responses (i.e. lights and sirens).

The East Pierce Fire & Rescue established benchmark for the travel time of the first unit arriving at any EMS call is:

- **Urban:** 8 minutes 30 seconds
- **Suburban:** 10 minutes
- **Rural:** 15 minutes
- **Wilderness:** Best effort



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Travel time first Medic unit: All EPFR medic units are staffed with a paramedic (ALS). The engines are either ALS or BLS and staffing varies from day-to-day depending on personnel assigned. Since all the medic units at EPFR are ALS, and we do not collect data for whether engines are staffed as ALS or BLS on any given day, the data reflected is based on arrival of the first medic unit to the scene. The travel time only includes priority or emergent responses (i.e. lights and sirens).

The East Pierce Fire & Rescue established benchmark for the travel time of the 1st arriving medic unit arrival is:

- **Urban:** 11 minutes
- **Suburban:** 13 minutes
- **Rural:** 15 minutes
- **Wilderness:** Best effort

Travel times for Special Operations responses: Other services provided by EPFR include Water Rescue, HazMat, Technical Rescue, and Wildland. Travel times for the first units to arrive to the special operations responses is not broken down by population density areas, as these incidents are not nearly as frequent. The travel time only includes priority or emergent responses (i.e. lights and sirens).

The East Pierce Fire & Rescue established benchmark for the travel time of the 1st unit to arrive at special operations incidents is:

- **HazMat:** 12 minutes
- **Water:** 12 minutes
- **Tech:** 12 minutes
- **Wildland:** 12 minutes

2023 Performance 1/1/2023 -12/31/2023	Benchmark	90th%		Total Incidents
		2022	2023	
Turnout Times - 90th percentile	2:00	2:32	2:29	22,797
Travel Time 1st unit - Fire All				
Urban/Dense Urban	8:30	9:24	8:31	60
Suburban	10:00	10:53	8:48	18
Rural	15:00	13:23	10:18	16
NOTE: Travel Effective Response Force (ERF) looks at the total time from dispatch to arrival of the first unit to complete the full needed complement as defined in the SOC. E.g., a residential fire requires 16 personnel for the ERF. Time starts at dispatch and ends upon arrival of 16th person that meets the qualifications as outlined in SOC.				
Travel Time ERF - Fire All				
Urban/Dense Urban	13:30	15:02	18:54	21
Suburban	15:00	15:39	11:08	1
Rural	20:00	0	20:04	1
Travel Time 1st Unit - Any EMS All				
Urban/Dense Urban	8:30	8:59	8:28	2905
Suburban	10:00	11:18	9:43	793
Rural	15:00	14:26	12:16	502
Travel Time 1st Medic Unit - All				
Urban/Dense Urban	11:00	12:27	8:22	1516
Suburban	13:00	13:58	9:24	393
Rural	15:00	16:26	12:10	253
Travel Time 1st Unit - HazMat				
	12:00	12:37	10:28	51
Travel Time 1st Unit - Water Rescue				
	12:00	8:32	14:54	1
Travel Time 1st Unit - Tech				
	12:00	4:30	7:08	6
Travel Time 1st Unit - Wildland				
	12:00	13:07	11:42	74

Unit Hour Utilization		
Unit	% Time Committed 2022	% Time Committed 2023
E111	14.96%	15.32%
E112	7.65%	8.15%
E114	7.59%	7.03%
E116	12.39%	12.24%
E118	13.08%	14.36%
L113	14.97%	14.95%
M111	28.7%	28.68%
M112	13.06%	13.88%
M113	24.89%	24.8%
M116	22.38%	23.64%
M118	21.87%	22.35%

Reliability YTD Thru 12/31/2023		
Station 1st Unit	2022	2023
111	80%	76%
112	68%	67%
113	80%	80%
114	81%	31%
116	82%	83%
118	87%	86%