

CHAPTER 1

To meet these definitions, the committee established the minimum values for pump capacity (bench rating of gpm and psi), chassis size, tank capacity, and crew size. Table 1 summarizes the NWFEF Wildland Fire Engine Classes to meet the mission definitions.

Table 1—Engine classes (engine capability) LP, A, B, C, and D.

Wildland Engine Class (engine capability) LP, A, B, C, and D					
Class	LP	A	B	C	D
Pump (bench rating)					
GPM	8	20	50	90	200
@pressure (psi)	65	100	200	300	300
Tank Size Minimum	50	50	200	300	500
Crew Size	1–2	1–2	2–3	3–5	3–5

Figure 1 is a graphical presentation of the committee's concept of increasing fire behavior and increasing suppression capacity of wildland engines. While each class of wildland engine is intended for suppression in a specific fire behavior region, larger capacity wildland engines are capable of meeting the missions of lesser capacity. The extended dashed lines represent this concept from the corners of suppression design region for the larger class fire engines.

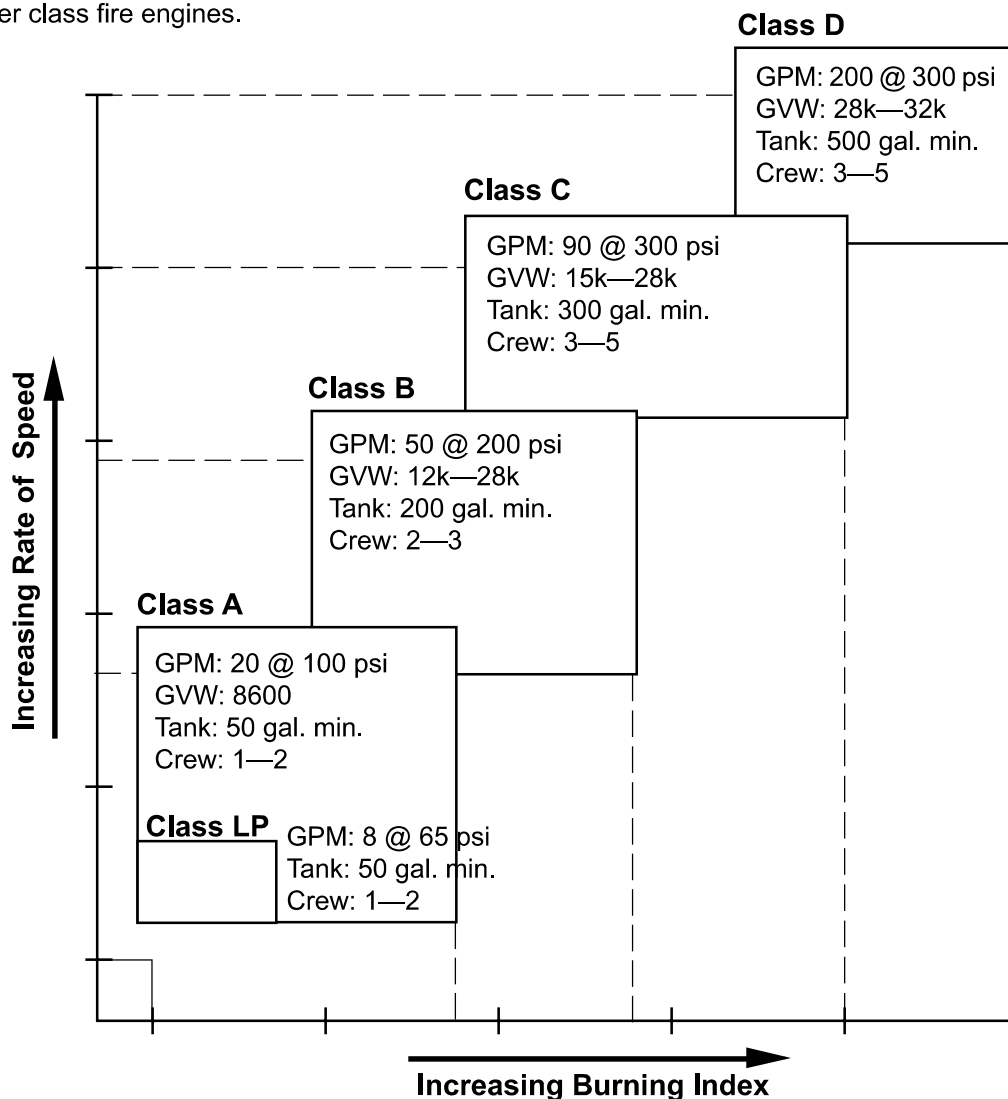


Figure 1—Wildland fire engine capability: pump capacity, tank size, crew size in relation to fire behavior—fire intensity, burning index, and rate of spread.

Figure 2 is provided to illustrate the relationship between the NWCG Engine Typing System and the NWFE Wildland Fire Engine Classes. Direct comparison is difficult because of the multiple parameters of each system. Therefore, pump capability is the predominate measure for the comparison below.

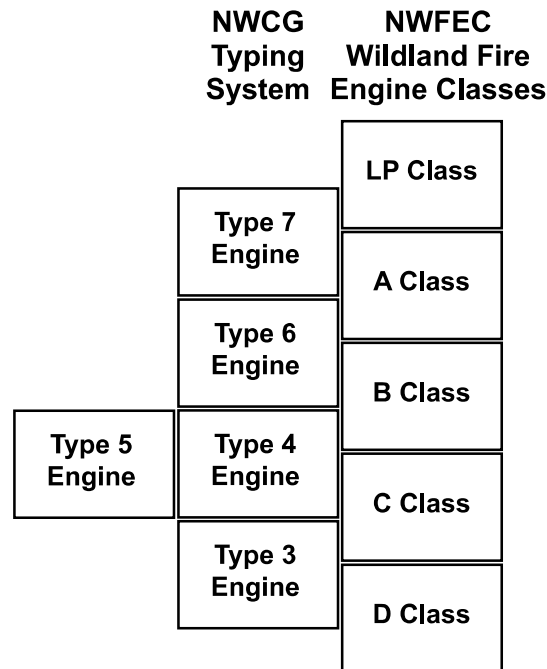


Figure 2—Engine types and engine class comparisons.

NWCG Engine Types

Using the Fire Equipment Working Team (FEWT) and the National Fire Protection Association (NFPA), the National Wildfire Coordinating Group (NWCG) categorizes information on fire engines into logical groups and provides common options often requested by fire managers. The Incident Command System (ICS) uses this engine type system based on the equipment. The NWFE Wildland Fire Engine Classes used throughout this guide (LP, A, B, C, and D) are based on its mission and engine capability in relation to fire behavior. Table 2 shows NWCG minimum requirements for engine and water tender resource types.

Table 2—NWCG Engine Types—Minimum Requirements.

Components	STRUCTURE ENGINES		WILDLAND ENGINES				
	1	2	3	4	5	6	7
Pump Rating							
minimum flow (gpm)	1000+	250+	150	50	50	30	10
at rated pressure (psi)	150	150	250	100	100	100	100
Tank Capacity Range (gal)	400+	400+	500+	750+	400–750	150–400	50–200
Hose (feet)							
2-1/2 inch	1200	1000	~	~	~	~	~
1-1/2 inch	400	500	500	300	300	300	~
1 inch	~	~	500	300	300	300	200
Ladders (ft)	48	48	~	~	~	~	~
Master Stream (GPM)	500	~	~	~	~	~	~
Personnel (minimum)	4	3	2	2	2	2	2