

# **Kansas Wildland Firefighter**

**Lesson 5 – Wildland  
Resources**

# Water Supply

- Water tenders are the most common source for refilling engines
- Water tenders are apparatus
- Water tenders are not “tankers”
- Tactical tenders can usually go off-road
  - May be able to refill engines in the field

# Water Tender

- Water Tender



Photo: Geary  
County FD

# Wildland Engines

- “Engine” is any fire apparatus designed to carry and pump water
- Many wildland engines in Kansas are built in-house

# Wildland Engines

- Typical use in Kansas:
  - Mobile direct attacks using pump-and-roll capabilities
  - Prepositioned around threatened structures
  - Supply hose lays along fire edges

# Wildland Engine Types

- Type 1 and 2 engines are structural/municipal pumpers
- Type 3 to 7 engines are wildland engines.
  - Brush trucks, Grass rigs, Squad trucks, etc.
- Type 3 and 4 engines are heavy engines
  - Type 3 has more hose and a larger pump
  - Type 4 carries more water



# Wildland Engines



Type 4  
Department  
Built

Photos: KFS



Type 4  
Commercial  
Type

# Wildland Engine Types

- Type 5 to 7 engines are pickup sized engines with different tank sizes
  - Type 5 (greater than 400 gals.)
  - Type 6 (150-400 gals.)
  - Type 7 (less than 150 gals.)
  - Type 7 includes most UTVs



# Wildland Engines



Type 6  
Department  
Built

Photos: KFS



Type 6  
Commercial  
Type

# NWCG Engine Typing Min. Requirements

Requirements	Engine Type						
	Structure		Wildland				
	1	2	3	4	5	6	7
Tank Min. Capacity (gal)	300	300	500	750	400	150	50
Pump Minimum. Flow (gal/min)	1000	500	150	50	50	50	10
At Rated Pressure (psi)	150	150	250	100	100	100	100
Hose 2 ½ inch	1200	1000	-	-	-	-	-
1 ½ inch	500	500	1000	300	300	300	-
1 inch	-	-	500	300	300	300	200
Ladders per NFPA 1901	Yes	Yes	-	-	-	-	-
Master Stream 500 gal/min	Yes	-	-	-	-	-	-
Pump and Roll	-	-	Yes	Yes	Yes	Yes	Yes
Maximum GVWR (lb)	-	-	-	-	26K	19.5K	14K
Personnel (minimum)	4	3	3	2	2	2	2

# NWCG Water Tender Typing Min. Requirements

Requirements	Water Tender Type				
	Support			Tactical	
	S1	S2	S3	T1	T2
Tank Capacity (gal)	4,000	2,000	1,000	2,000	1,000
Pump Minimum Flow (gal/min)	300	200	200	250	250
At Rated Pressure (psi)	50	50	50	150	150
Maximum Refill Time (minutes)	30	20	15	-	-
Pump and Roll	-	-	-	Yes	Yes
Personnel (minimum)	1	1	1	2	1

# Aviation

- The use of aircraft in wildland firefighting operations is still new to most areas of Kansas
  - Invaluable, but costly resource
  - Buys more time for ground operations to finish the job
  - Water is applied directly to the flanks or flaming front
  - Retardant laid down for an indirect attack

# Air Tankers

- Large tankers carry up to 24,000 gallons. Single Engine Air Tankers (SEATs) carry between 400 – 800 gallons
  - Many Kansas ag pilots have offered the use of their SEATs to assist local fire departments
  - Communication and coordination is critical
  - Ground resources need to quickly move in after the drops

# Air Tanker

- Large Air Tanker



Photo: Kari Greer



# SEAT

- Single Engine Air Tanker (SEAT)



Photo: Kari Greer

# Helicopters

- Range from Type 1 down to Type 3
  - Type 1 (1000 – 2,500 gals.)
  - Type 3 (less than 300 gals.)
  - Spot Drop: Entire load is dumped on a single hot spot
  - Trail Drop: Load is dumped while moving forward

# Helicopters

- Type 1 Helicopter



Photo: NIFC

# Heavy Equipment

- The use of heavy equipment to create fire breaks is a valuable tool
  - Includes road graders, tractors with disks, plows and bulldozers
  - Can be used at a distance to create control lines to stop the fire
  - Can be utilized directly on the fire's edge to plow out the flaming flanks

# Heavy Equipment

- Bulldozer



Photo: Keri Greer



# Hand Crews

- Not common in Kansas, but necessary when the use of engines and heavy equipment is not practical
  - Standard hand crews consists of 20 firefighters divided into 3 or 4 squads
  - Hand crews use hand tools to create control lines, break up burning logs, etc.
  - An experienced sawyer is often part of the crew to fall burning trees



# Hand Crews

- Hand Crews



Photo: NIFC

# Non-Fire Service Resources

- Possible non-public resources available to assist
  - Prescribed fire cooperatives
  - Farmers and ranchers with heavy equipment
  - Pickups with spray units
  - Most have not been trained in NIMS/ICS
  - Meet with these resources ahead of time
  - Plan to make operations safe and effective



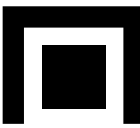
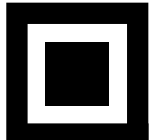
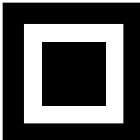
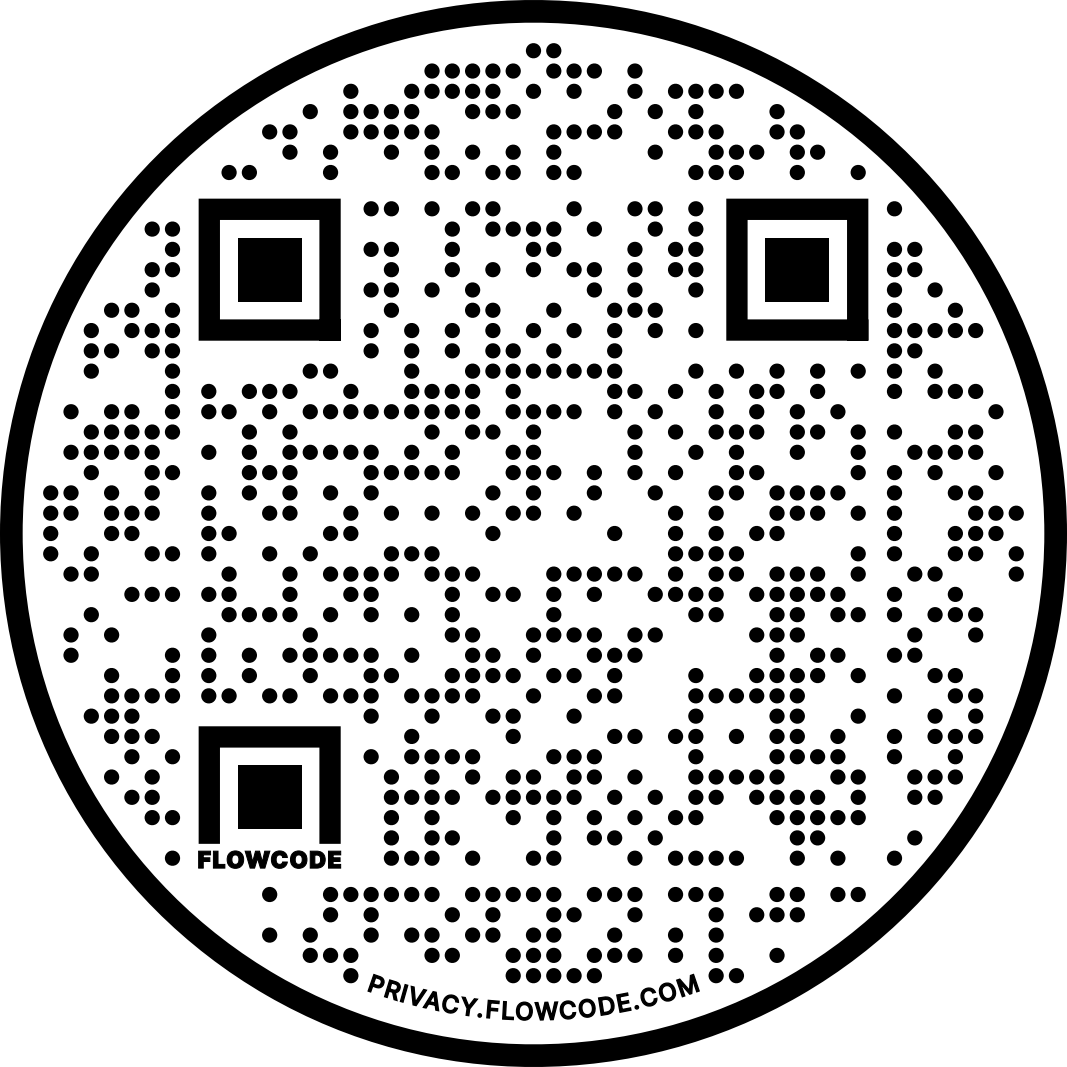
# Non-Fire Service Resources

- Farm Equipment



Photo: [Wickimedia.org](https://commons.wikimedia.org/)

**Questions?**



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