Skills Crosswalk

Wildland Training for Structural Firefighters

Overview

Skills Crosswalk (*Crosswalk*) identifies critical wildland firefighting skills that structural firefighters need to be safe and effective in either of two situations: when making an initial attack on a wildland fire in their jurisdiction, or when working with state and federal wildland firefighter agencies.

The *Crosswalk* was developed by analyzing and comparing National Fire Protection Association (NFPA) structural firefighting standards with National Wildland Coordinating Group (NWCG) wildland firefighting Position Task Books. The resulting Crosswalk identifies wildland skills and knowledge not incorporated within standard structural firefighting training. By incorporating a structural firefighter's existing fire suppression knowledge and skills, use of *Crosswalk* reduces required classroom hours, minimizes curriculum redundancies, and makes efficient use of limited training hours.

Coursework, practical demonstration of skills using NWCG Task Books (or other appropriate means), and the use of materials in resource kits assembled for each position have been incorporated into the *Crosswalk*.

Purpose of the *Skills Crosswalk*

In every area of the nation, rural development is expanding into wildland areas. Since the 1980's the rural population has more than doubled, with 140 million people now living in rural areas.[1] As a result, rural and volunteer firefighters increasingly manage fire in the Wildland Urban Interface (WUI). The *Crosswalk* provides a performance-based methodology and a learning resource guide for qualified structural firefighters to develop wildland firefighting knowledge and skills in a focused and time-efficient format. Structural firefighters with wildland skills work more safely and effectively on initial and extended attack operations. Cooperative firefighting efforts with neighboring jurisdictions and with federal wildland firefighters are enhanced.

The *Crosswalk* provides a standardized resource to guide local agencies in the development of training programs structured to meet needs of structural fire department personnel. By implementing the *Crosswalk*, wildland fire protection capacity and capability will be increased throughout the nation.

[1] US Census bureau statistics from 2006 report on migration from urban to rural America, **www.census.gov/** Population living in WUI 1960's 25,000,000; 1970's 47,000,000; 1980's 60,000,000; 1990's 97,000,000; 2000's 140,000,000.

FEMA

NWCG Positions Used for the *Skills Crosswalk*

Four specific NWCG positions are incorporated in *Crosswalk*, each paired with a counterpart structural position, as shown below:

Structural Fire Counterpart Position	Entering Qualifications	NWCG Position
Non-Supervisory Structural Firefighter, Basic	Meets NFPA 1001 for Firefighter 1, or equivalency	Firefighter 2 (FF2)*
Non-Supervisory Structural Firefighter, Advanced	Meets NFPA 1001 for Firefighter 2, or equivalency	Firefighter 1 (FF1)*
Driver/Operator/Engineer or Company Officer	Meets NFPA 1021 for Fire Officer 1, or equivalency	Single-Engine Resource Boss (ENGB)
Experienced lieutenants, captains, chief officers	Meets NFPA 1021 s for Fire Officer, or equivalency	Strike Team Leader (STEN)

*NWCG firefighter position designations 1 and 2 are opposite of NFPA designation (Firefighter 1=advanced)

Using *Skills Crosswalk*

Authority Having Jurisdiction

The designated "Authority Having Jurisdiction" (AHJ) plays a primary role in the use and administration of the *Crosswalk*. The AHJ is defined by NFPA as an organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, installation, or a procedure. State and/or local law designate the AHJ for wildland fire protection within a given jurisdiction. Fire department chiefs, state fire marshals, state foresters, training officers, and other qualified fire protection officials are typically designated as the AHJ. The AHJ determines firefighter eligibility for *Crosswalk* use.

Training Organizations

State fire training authorities, state, county or city municipalities, rural fire districts, individual fire departments, or other agencies and organizations responsible for local firefighter training and/or certification may use the *Crosswalk. Crosswalk* can serve as an avenue of equivalency with NWCG standards. It may also be used to guide local firefighters in the development of wildland firefighting skills.

Instructor Qualifications

Qualifications for instructors to teach the NWCG curriculum are described in the Field Manager's Course Guide, Publication 901-1. Certification of instructor qualifications is the responsibility of the employing agency. All instructors should have training in how to be an instructor and be experienced in the content that they are teaching. For more information consult the Field Manager's Course Guide found on the NWCG Web site at http://www.nwcg.gov/pms/training/training.htm

Structural Firefighters

Crosswalk can be used as an NWCG equivalency and certification tool by structural firefighters and fire officers who meet the qualifications of firefighters as specified by NFPA 1001 and NFPA 1021, respectively, or the training standard determined as equivalent by the AHJ.

Skills Crosswalk Contents

For each position level, *Crosswalk* has three components:

1) Knowledge and skills
2) Performance evaluation and documentation
3) Resource kits

Knowledge and Skills

The *Crosswalk* identifies the specific knowledge and skills identified as gaps for structural firefighters. It indicates the corresponding NWCG class or lesson component, the lesson style (e.g. web-based or classroom presentation) and the length of the exercise. The *Crosswalk* will be posted on the USFA Website with links to NWCG resources. Portions of the curriculum are available in modular self-study formats, such as Web-based interactive lessons, CD-ROM, or written material. Demonstrations and field exercises are sometimes required to complement the curriculum. Ideally, training officials should use the NWCG lesson components within the context of their own training development.

Performance Evaluation and Documentation

The NWCG Position Task Books for each position level are the recommended tool to evaluate successful performance and they serve as documentation of required tasks, behavior and knowledge. Alternative types of training and experience documentation are acceptable, but must be equivalent in content to the position task book used for the position.

Resource Kits

Crosswalk Resource Kits containing materials integral to the successful suppression and management of wildland fires are included in the *Crosswalk*.

The *Skills Crosswalk* and NWCG Position Certification

Upon completion of the required academic and performance tasks, the AHJ reviews the candidate's C*rosswalk* documentation. Taking into account the candidate's skills, abilities, experience, aptitudes, and overall fit for the position, the AHJ may certify the individual as qualified for the NWCG position at once, or may require additional study and/or practical training for certification.

Position certifications of firefighters and company officers completing the *Crosswalk* process are accepted by NWCG member organizations as fully equivalent to standard NWCG certifications.

Roles, Responsibility, and Accountability

The NWCG and the US Fire Administration expect that fire protection organizations assuming wildland duties do so with safety as their first priority. The *Crosswalk* was developed to improve safety and operational effectiveness in wildland fire suppression activities. The process allows for a performance-based approach to qualifications by acknowledging the existing skills of qualified structural personnel. Successful implementation of *Crosswalk*—and its credibility as a system of certification and equivalency

for the structural fire service—depends on the professionalism and accountability of its users. As such, participants in the *Crosswalk* process have distinct roles and responsibilities to protect *Crosswalk* integrity.

The AHJ is responsible for:

- Ensuring and certifying that a firefighter has satisfied *Crosswalk* requirements according to guidelines.
- Conducting rigorous and appropriate testing and assessments that demonstrate the firefighter's knowledge and ability to safely and effectively perform required skills through on-the-job performance, simulations, drills and exercises, or a combination of like situations.
- Completing a thorough evaluation of the firefighter's overall suitability for wildland firefighting position certifications attained through the *Crosswalk* process. The AHJ assumes considerable professional responsibility in this determination.
- Issuing qualifications cards or other documentation of qualification, as locally appropriate or legally required.
- Maintaining documentation supporting certifications for all personnel using *Crosswalk*.

The firefighter is responsible for:

- Honest assessment of his or her own abilities, aptitudes, and overall suitability for assuming wildland firefighting positions.
- Completion of all *Crosswalk* academic and practical lesson components.
- Consistent review of learning materials and completion of appropriate refresher sessions and exercises.

Benefits of the *Skills Crosswalk*

Qualified structural firefighters already possess basic knowledge and competencies, and the *Crosswalk* focuses study and practical learning exercises on only critical wildland fire suppression concepts that are not addressed in structural training curriculum. Redundancies between wildland and structural fire suppression training programs are then significantly reduced. Completion of the standard NWCG curriculum requires about 233.5 classroom hours to complete coursework required for Strike Team Leader. *Crosswalk* enables a qualified company officer (NFPA Standard 1021 or equivalent) to complete focused coursework in 94 hours.

The table below portrays training hours savings realized with use of the *Crosswalk* for the equivalent structural firefighter position.

NWCG Positions	NWCG Curriculum Hours	Structural Equivalent Positions	*Skills Crosswalk* Hours
Firefighter 2 (FF2)	67.5	Non-Supervisory Structural Firefighter, Basic	21
Firefighter 1 (FF1)	54	Non-Supervisory Structural Firefighter, Advanced	17.5
Single-Engine Resource Boss (ENGB)	88	Driver/Operator/Engineer or Company Officer	44
Strike Team Leader (STEN)	24	Experienced lieutenants, captains, chief officers	12.25
Total	233.5	Total	94.75

Background

In June 2003, the National Association of State Foresters issued a report to the United States Congress titled “The Changing Role and Needs of Local, Rural and Volunteer Fire Departments in the Wildland-Urban Interface.” The report described the expansion of wildland fire responsibilities of America’s structural fire service, in particular the predominantly rural and volunteer organizations serving communities near the wildland-urban interface. Several important training-related recommendations were offered to boost safety and capacity in wildland fire suppression operations undertaken by these departments.

NWCG member organizations (Department of Interior Bureaus, United States Forest Service, United States Fire Administration, the Intertribal Timber Council, and the National Association of State Foresters) coordinated with subject matter experts from the North American State Fire Training Directors, the International Association of Fire Chiefs and the National Fire Protection Association. As a result of this effort, training programs and policies were developed to create a training and qualifications reciprocity system. The *Crosswalk* is among these projects.

After construction of the *Crosswalk* methodology, structural and wildland fire personnel from Arizona, Arkansas, Florida, Montana, New Jersey, Oregon, Pennsylvania, Texas and New Jersey tested and validated the system. “Skills gaps” were then developed for each position. The International Association of Fire Chiefs (IAFC) refined the *Crosswalk* through trial applications with personnel. The *Crosswalk* is a dynamic document. Modifications to the process will likely result as user input is incorporated into the *Crosswalk* structure and procedures

For Additional Information

The *Skills Crosswalk* can be found at: http://www.usfa.dhs.gov

NWCG publications for ordering training support materials can be found at**:** http://www.nwcg.gov

Contacts for questions:

Michael Dougherty, USFA Representative, 208-387-5698

Kelly Hawk, BLM Representative, 208-387-5984

Skills Crosswalk

Wildland Training for Structural Firefighters

The levels of training have been defined as:

- **Non-supervisory Structural Firefighter: Basic**
- **Non-supervisory Structural Firefighter: Advanced**
- **Company Officer**
- **Strike Team/Task Force Leader**

Required for equivalency:

Non-supervisory Structural Firefighter: Basic

- Academic knowledge as listed in the Skills Crosswalk
- **Performance Component:** Completion of Field Exercise for NWCG Firefighter 2 (FF2)
- List of Personal Protective Equipment
- Resources Kit

Non-supervisory Structural Firefighter: Advanced

- ***Prerequisite:*** *Field exercise for "Non-supervisory Structural Firefighter: Basic"*
- Academic knowledge as listed in the Skills Crosswalk
- **Performance Component:** Completion of NWCG Position Task Book for Firefighter 1 (FF1)
- Resources Kit

Company Officer

- ***Prerequisite:*** *Completion of NWCG Position Task Book for Firefighter 1*
- Academic knowledge as listed in the Skills Crosswalk
- **Performance Component:** Completion of NWCG Position Task Book for Single-Engine Resource Boss (ENGB)
- Resources Kit

Strike Team/Task Force Leader

- ***Prerequisite:*** *Completion of NWCG Position Task Book for Single-Engine Resource Boss (ENGB)*
- Academic knowledge as listed in the Skills Crosswalk
- **Performance Component:** Completion of NWCG Position Task Book for Strike Team/Task Force Leader (STEN)
- Resources Kit

Non-supervisory Structural Firefighters: BASIC

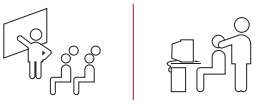
A non-supervisory structual firefighter requires both academic knowledge and skill performance. The table below lists the skills required and where the skills are taught in the NWCG curriculum. Also listed is the Field Exercise required at the basic level to prove skill attainment.

Performance Component
Completion of Field Exercise in NWCG Firefighter 2 (FF2) training.

Wildland Skills	NWCG Resources		
	Where to Find It	Lesson Style	Length (in hours)
Basics			
Wildland fire behavior • Identify principle environmental factors affecting fire behavior. • Explain how fuel size affects fire behavior. • Explain how the arrangement of fuels affects fire behavior. • Describe how wind affects fire spread. • Give weather factors which affect fuel moisture. • Describe how topography affects fire spread. • Describe how building construction and arrangement affect fire spread.	S-190[1]	CD-ROM/Web-based OR Classroom	6-8 Hours
Fireline Construction			
Follow established procedures in securing the fireline. • when working around fireline equipment. • Identify hazards and safety procedures when working around fireline machinery. Black lining Coordinated fire crew methods: leap frog and bump up	S-130[2] Unit 9 Suppression	Classroom	1.5 Hours
Suppression and Mopup			
Systematic procedures for locating and suppressing fire	S-130 Unit 11 Mopup and Securing the Fireline	Classroom/video	2 Hours
Firing devices: preparation and use	S-130 Unit 7 Firing Devices	Hands-on demo	1 Hour

[1] *Introduction to Wildland Fire Behavior*
[2] *Firefighter Training*
[3] *Water Use and Pumps*

Non-supervisory Structural Firefighters: BASIC (cont.)

Wildland Skills	NWCG Resources		
	Where to Find It 	Lesson Style 	Length (in hours) 
Wildland hoses: Hose pack construction, fittings, progressive hose lay and deployment	S-211[3] Unit 2, Lesson A Fittings and Hose Unit 2 Lesson D Hose lays	Classroom	Lesson A 1 Hour Lesson D 45 Minutes
Safety			
List life threatening situations in wildland fires.	S-130 Unit 4A Watch out situations and Fire Orders	Classroom/demo/ video	2-2.5 Hours
Follow established procedures in securing the fireline. Follow established procedures when working around fireline equpment. Identify hazards and safety procedures when working around fireline machinery.	S-130 Unit 4B LCES	Classroom/video	1 hour
Fire shelter use	S-130 Unit 4C Fire Shelter	Classroom/video	2 Hours
Identify situations which warrant immediate action and/or reporting	S-130 Unit 4D Potential Hazards and Human Factors on the Fireline	Classroom/video	3 Hours
Safely transport personnel and equipment, appropriate to locality, commercial and small fixed wing aircraft required Safety procedures around engine, dozers and tractor plows Safety procedures for retardant/water drops	S-130 Unit 5 Transportation Safety	Classroom	0.5 Hours
		Estimated Total Training Time:	**21 Hours**

Personal Protective Equipment (PPE)

Required
Meets the requirement of NFPA 1977 Standard On Protective Clothing And Equipment For Wildland Firefighting, 2005 edition; and a fire shelter approved by the AHJ.

Recommended
A backpack for personal equipment and at least 2 quarts of drinking water.

Resources Kit

- Incident Response Pocket Guide (IRPG) (PMS 461)
- Fireline Handbook (PMS 410-1)
- Fuels, Fire Behavior, and Tactics by geographic areas of the US.
- Local specific materials.

Non-supervisory Structural Firefighters: ADVANCED

A non-supervisory advanced structual firefighter requires both academic knowledge and skill performance. The table below lists the skills required and where the skills are taught in the NWCG curriculum. Also listed is the Position Task Book required at this level to prove skill attainment.

Performance Component
Successful completion of NWCG Position Task Book for Firefighter 1.

Wildland Skills	NWCG Resources		
	Where to Find It	Lesson Style	Length (in hours)
Resources			
Apply Risk Management Process found in PMS 410-1 Fireline Handbook and PMS 461 Incident Response Pocket Guide	S-131 Fireline Reference Materials	Classroom/video	1 Hour
Sizeup			
Sizeup wildland fire • Define hazards and evaluate escape routes/safety zones • Point of origin and cause • Size of fire • Location of head • Values to be protected (improved properties, agricultural, recreational, etc.) • Weather conditions (current/forecasted) • Fuel group (may also include building materials and arrangement of improved properties) • Topography • Time of day • Current and expected fire behavior/intensity.	S-231[5] Sizeup Considerations Unit 3	Classroom	1.5 Hours
Safety			
Continuously evaluate incident/apply L.C.E.S.	S-131 Unit 3 Tactical Decision Making	Exercises (Sandtable)	5 Hours
Serve as a lookout			
Operate and maintain chainsaw in wildland environment, esp. sharpening and low-limbing techniques.	S-212[6] Unit 2 Maintenance S-212 Unit 3 Chain Saw Tasks and Techniques	Demonstration/ lecture Classroom/video	4 Hours 5 Hours

[4] *Firefighter Type 1*
[5] *Engine Boss*
[6] *Wildland Fire Chain Saws*

Non-supervisory Structural Firefighters: ADVANCED (cont.)

Wildland Skills	NWCG Resources		
	Where to Find It 	Lesson Style 	Length (in hours) 
Radio			
Training in programmable radios and narrow band radio use.	Narrow band tutorial in PowerPoint	http://www.fireradios.net/Tutorial.aspx	1 Hour
Maps and Compass			
• Accurately determine local declination • Use compass to point to true north • Accurately orient map using compass, landmarks, improved properties, streets, access roads, and topographic features • Accurately identify current location by determining back azimuths to two identifiable landmarks or topographic features • Verify location by comparing topographic features or street references with map. Describe location in terms of coordinates or other acceptable description. • Accurately read map symbols • Accurately compute distance and bearing • Navigate from point to point using map, compass, and pacing • Accurately navigate to an assigned destination • Utilize available property improvement maps to identify areas of concern	*Basic Land Navigation* PDF (PMS 465)	http://www.nwcg.gov/pms/pubs/pubs.htm	Self-study
		Estimated Total Training Time:	**17.5 Hours**

Resources Kit

- Incident Response Pocket Guide (IRPG) (PMS 461)
- Fireline Handbook (PMS 410-1)
- Fuels, Fire Behavior, and Tactics by geographic areas of the US.
- Radio programming guide.
- Equipment Safety Inspection Checklist (OF-296)
- Local specific materials.

Company Officer

Company Officer requires both academic knowledge and skill performance. The table below lists the skills required and where the skills are taught in the NWCG curriculum. Also listed is the NWCG Position Task Book to prove skill attainment at the Company Officer level.

Performance Component
Successful completion of NWCG Position Task Book for Single-Resource Boss (Engine).

Wildland Skills	NWCG Resources		
	Where to Find It	Lesson Style	Length (in hours)
Situational Awareness			
Evaluate fuels, topography, and weather through entire operational period.	S-290 Intermediate Wildland Fire Behavior	Classroom	32 Hours
Keep supervisor informed about progress, changes in conditions, fire behavior, and special events. Inform face-to-face, if possible.			
Fireline Construction and Safety Leadership			
Identify escape routes and safety zones.	S-230 Unit 4B Entrapment	Classroom	
Complete fireline construction assignment • Determine type of line construction. Locate fireline, reevaluate LCES as conditions change and work progresses. • Construct fireline based on principles of fireline construction, including burnout and backfiring.	S-230[7] Unit 4C Fireline Operations, Tactics and Safety	Classroom / video	4 Hours
Take special precautions for downhill and/or indirect line construction			
Adjust fireline location to specific conditions and provide for safety of assigned personnel			
Modify production standards and time frames for accomplishment of fireline construction tasks			
Utilize appropriate safety orders: Standard Fire Orders, Watch Out Situations, WUI Watch out situations and agency policy. • Develop plans based on safety guidelines, Spot check tactical operation for compliance in safety, and ensure all ops. Comply with LCES			
Complete fireline construction assignment. • Supervise portable pump/hose lay delivery system for tactical work assignment.	S-211[8] Unit 1D Portable Pump Setup	Classroom	1 hour

[7] *Crew Boss (Single Resource)*
[8] *Portable Pumps and Water Use*

Company Officer (cont.)

	NWCG Resources		
	Where to Find It	Lesson Style	Length (in hours)
Identify tactical capability and limitations of an engine.	S-231 Unit 1 Engine and Crew Capabilities and Limitations	Classroom	1 Hour
Locate water sources and check for volume, cleanliness, and permission from owner to use water source in engine re-supply.	S-215 Unit 5A Initial Operations and Site Preparation	Classroom	2 Hours
Compare engine attack method alternatives to type of assignment specifically Wildland engine tactics	S-215 Unit 5B Structure Protection Tactics, Engine Operations, Water Use and Class A Foam.	Classroom	2 Hours
Sustain water and chemical agent supply for engine assignment.			
Make specific assignments to protect structures.			
Check engine communications. Ensure compatibility and operation.			
Obtain engine maintenance schedule and ensure engine is maintained.			
Arrange/provide for en route logistical needs and check point	S-230 Unit 2 Mobilization	Classroom	1 Hour
Assemble assigned personnel for departure from incident and brief supervisors/subordinate personnel. Depart incident. Arrange/provide for enroute logistical needs. Demobilization procedures.	S-230 Unit 6 Demobilization and Post-Incident Responsibilities	Classroom	1 Hour
Check in with agency dispatcher prior to disassembly of crew at home location.			

[9] *Fire Operations in the Wildland Urban Interface*

Company Officer (cont.)

Resources Kit

- Incident Response Pocket Guide (IRPG) (PMS 461)
- Fireline Handbook (PMS 410-1)
- Fuels, Fire Behavior, and Tactics by geographic areas of the US.
- Radio programming guide

- Equipment Safety Inspection Checklist (OF-296)
- ICS 201 Incident Briefing form
- ICS 214 Unit Log form
- ICS 213 General Message form
- ICS 224 Crew Evaluation form
- ICS 221 Demobilization Checkout
- CA-1 Traumatic Injury Form (Federal form)
- OF-289 Property Loss or Damage Report
- Regional & National Mobilization Guides
- Local Specific Materials

Finance Forms

- Form 261 Crew Time Report
- Form 297 Emergency Equipment Shift Ticket
- Form 288 Emergency Firefighter Time Report
- Form 286 Emergency Equipment – Use Invoice

Strike Team/Task Force Leader

The role of the Strike Team/Task Force Leader requires academic knowledge and skill performance.

Performance Component
Position Task Book for Task Force Leader (TFL) Strike Team Leader (STL).

Wildland Skills	NWCG Resources		
	Where to Find It	Lesson Style	Length (in hours)
Plan Tactical Actions	S-330[10] Unit 3, Engagement	Classroom	8 Hours
Monitor work progress Line scouting and beyond			
Long-term logistics			
Provide for structural protection from wildland fire exposure	S-215, Unit 4 Structure Triage	Classroom Video	2.5 Hours
	S-215, Unit 5C, Support Resources and Unit 5D, Firing Devices	Classroom Video	1.75 Hours
		Estimated Total Training Time:	**12.25 Hours**

Resources Kit

- Incident Response Pocket Guide (IRPG) (PMS 461)
- Fireline Handbook (PMS 410-1)
- Fuels, Fire Behavior, and Tactics by geographic areas of the US.
- Radio programming guide
- Regional & National Mobilization Guides

- Equipment Safety Inspection Checklist (OF-296)
- ICS 201 Incident Briefing form
- ICS 214 Unit Log form
- ICS 213 General Message form
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[10] *Task Force/Strike Team Leader*