

Enhancing Fire Service Training Through Regional Training Centers



Prepared at the Request of Legislators Interested in Fire Training Facility Issues

By the

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Fire Service Training in Iowa

Organized fire service training in Iowa has its origins in 1923 as an effort by officials of the Iowa State College (now Iowa State University) and the progressive fire chiefs of the state to provide basic fire training. The development of the first state fire school in 1925 illustrates these efforts. This fire school now is the second longest continuous running fire school in the nation. For many years, fire training was a component of Iowa State University Extension. In July of 2000, the Fire Service Institute was re-designated as the Fire Service Training Bureau. Administrative control is now in the Division of State Fire Marshal, Iowa Department of Public Safety.

The Problem

The demand for high-quality fire service training has increased and continues to do so throughout Iowa. This demand is driven by several factors:

1. Improved access to training is a top priority for the Iowa fire services. Regional fire service training centers and mobile fire service training units remain a major strategy to addressing training problems, as expressed by the State Fire Service and Emergency Response Council.
2. A serious desire on the part of the Iowa fire service to deliver high-quality fire and rescue services that communities need for good public safety and economic development. The quality of these services relate not only to the quality of life in a community, but also to insurance rates and the protection of valuable economic assets.
3. Changing state and federal fire service standards require significant time-consuming training and certification in fire and rescue skills. Delivery of that training in a safe and effective way is problematic.
4. Equipment, procedures, and tactical approaches are constantly being updated. Awareness of these changes relates directly to the ability of our fire service to maintain competency and support the economic growth of both urban and rural Iowa.
5. Recruiting and retaining volunteer firefighters is a difficult problem. Training must be efficient in terms of both the limited hours available for volunteers to train and the necessity to deliver safe and comprehensive training.
6. The Fire Service Training Bureau is currently leasing an office/classroom building, along with training grounds, from Iowa State University. This lease expires on June 30, 2010.

Obstacles

Currently, basic fire suppression skills are taught in a given community or a neighboring community. Qualified instructors travel to these locations to provide training during evening hours and on weekends. Practical skills are limited to the resources within the community. Live fire training was limited, at best, to acquired structures (or, in some locations, at existing, locally controlled training facilities). With more and stringent regulations, live fire training in acquired structures is getting more difficult. Mobile training units (live fire training simulators) provide for much of this training need. Currently there is limited "live fire" training capabilities in Iowa.

The Proposed Solution

The establishment of a network of training facilities, and the use of mobile fire service training units, is critical to the process of fire training in Iowa. This network should consist of a comprehensive state fire service training facility (centrally located), regional fire service training centers, mobile fire service training units, and locally controlled fire service training centers. The following is information regarding the proposed training facilities and mobile training units:

1. The comprehensive state fire service training facility would serve as the headquarters for the Fire Service Training Bureau, and provide a comprehensive training program to all fire service and emergency response personnel in Iowa. This facility would provide the development, planning, and coordination of all training (based on the needs and recognized standards of the fire service). Basic training, specialized training, conferences and seminars, and "train-the-trainer" programs would be conducted at this facility. This facility would also be available to host meetings and special events (training programs, seminars and workshops, conferences) conducted by the state fire service associations and others in fire and emergency response.
2. The regional training centers are designed to serve the basic and some advanced skills training needs of the fire service. The training centers should consist of a burn building/drill tower that would support the basic "live fire training" component necessary to develop firefighters prior to real fire situations. These facilities would support the basic training (and certification testing) at a local and regional level, reaching the most fire service personnel at the lowest cost.
3. The regional training center concept should utilize existing training centers as a part of the overall plan. New training centers should be developed at locations (utilizing either community colleges or local fire departments) that meet the suggested criteria identified on page 4. The regional training center should be responsible for scheduling at their location. The Bureau should assist each regional training center with establishing consistent rules and maintenance. Partnerships are the key to the success of regional training centers.

4. The Fire Service Training Bureau should provide the necessary training materials, curriculum, and training aids.
5. Mobile fire service training units should be designed and developed based on fire service training needs. The Fire Service Training Bureau and its network of field instructors and delivery partners should operate these mobile training units.

Mobile Training Units

Mobile training units are also a major component of the master plan for training Iowa firefighters. Mobile training units allow the Fire Service Training Bureau to bring various "hands-on" or "live" training to the local level. These mobile training units should be designed and built based on training needs and recognized standards. These mobile training units will assist with gaps found in the locations of regional training centers.

Currently, the Fire Service Training Bureau has the following Mobile Training Units:

- Interior Fire Attack Simulator
- Breathing Apparatus Trainer (Smoke Trailer)
- Vehicle Extrication
- LP Gas "Tank" Trainer
- LP Gas "Bobtail" Trainer
- Confined Space Rescue Trainer

Criteria for Determining Possible Regional Training Center Locations

In determining the possible locations for regional training centers, the following criteria are recommended:

1. **Educational Support Services:** This would include the availability and proximity of quality classroom space with proper audio-visual support. Available storage and restrooms should also be a consideration.
2. **Fire Service Support:** The local fire service will need to supply adequate support equipment such as pumping apparatus, fire hose, breathing air (with the use of a cascade system and/or breathing air compressor), and hand tools. All must be done without compromising local fire and rescue protection.
3. **Environmental Concerns:** The site should not be located in an area where limited, safe open burning would be challenged or prohibited due to environmental or community relations issues.
4. **Proximity to Medical Facilities:** Due to the nature of fire service related training activities, the proximity to a medical facility is important.

5. **Site Suitability:** Water mains, roadway, drainage, electrical service, and reasonably flat terrain must be considered with selecting a regional training center site.
6. **Accessibility to Fire Service:** The locations of regional training centers should be accessible to as many fire departments as possible. Driving distance should be a consideration when locating regional training centers.

Existing Training Facilities

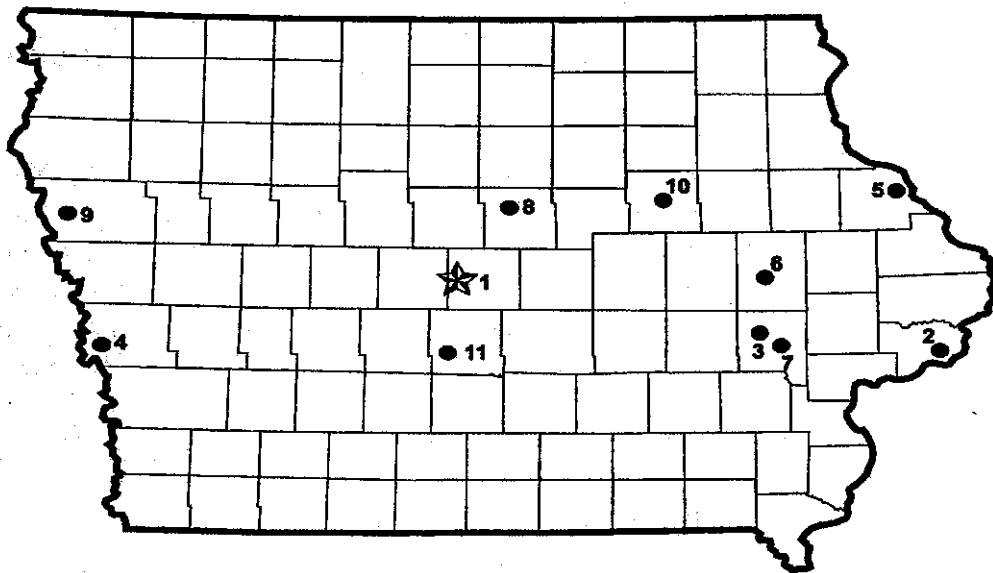
The following table illustrates the locations and capabilities of existing training facilities. While some are new training facilities, others are in need of upgrade. The upgrades may be in areas such as: remodeling or rebuilding of key components (such as burn buildings), additional training props, etc. A map showing the locations of existing training facilities is included.

Location	Capabilities
Fire Service Training Bureau (Ames)	<p>Currently located on the NW portion of Iowa State University.</p> <ul style="list-style-type: none"> • Classroom facility (with 2 rooms) • Skills building (smoke house, skills development, search & rescue, hose operations, ladder work, etc.) • Confined Space props • Live fire skills (flammable gas) props, extinguisher props • Pipeline training prop • Agriculture Rescue props • Area for vehicle extrication • Storage of mobile training units, fire engine, etc. • Drafting pit • Supports Winter and Summer Fire Schools <p>A master plan has been developed for centralized fire training facility, regional training centers, and mobile training units.</p>
Bettendorf Fire Department	<ul style="list-style-type: none"> • Classroom (for 50) • Double high shipping container (serves as burn facility) • Capability for confined space, rope rescue • Pad for vehicle extrication • Flammable gas props (including car fire, dumpster, etc.)
Coralville Fire Department	<p>Started construction of training center.</p> <ul style="list-style-type: none"> • Footing and foundation poured for burn building/drill tower (on order – delivery expected early 2006), which will include 5 burn rooms, confined space prop, rope rescue • Drafting pit to be placed in ground this year • Flammable gas props to be built (plus access to Megellan Pipeline training field adjacent to training center).

Council Bluffs Fire Department	Existing burn building/drill tower is obsolete. See planning process in next section.
Dubuque County Firefighters Association	<p>Training center located on west side of Dubuque.</p> <ul style="list-style-type: none"> • New burn building/drill tower (3 burn rooms), includes confined space prop, elevator shaft, rope rescue (will open in 2006) • Evolutions lab (with classroom space) to be built this year • Will be adding exterior props, drafting pit • Will support regional fire school
Kirkwood Community College (at Cedar Rapids)	<p>Located on the Kirkwood CC (Cedar Rapids) campus.</p> <ul style="list-style-type: none"> • Burn complex (made with shipping containers) • Smoke training building • Burn pads (flammable gas and liquid fires) • Propane and natural gas props, extinguisher props • Pump house • Classrooms, restrooms, etc. • Supports regional fire school <p>Request funding to upgrade burn facility.</p>
Iowa City Fire Department	<p>Located at old waste water treatment facility.</p> <ul style="list-style-type: none"> • Burn building/drill tower (with live fire, rope rescue, high rise drill capabilities) • Classrooms (2) • SCBA maze, roof simulator • Flashover simulator <p>Request funding for facility improvements.</p>
Iowa Falls Fire Department	<p>Located behind fire station.</p> <ul style="list-style-type: none"> • Burn building/drill tower (with live fire, rope rescue, confined space capabilities) • Classroom, etc. at fire station
Sgt. Bluff Fire Department	<ul style="list-style-type: none"> • Mobile burn trailer (with live fire, confined space, roof operations capabilities) • Drill tower (2 stories) for drills, rope rescue, confined space training • Trench rescue, car fire, various burn props
Waterloo Fire Department	<p>Regional Hazardous Materials Training Center.</p> <ul style="list-style-type: none"> • Drill tower (with rope rescue, confined space capabilities) • Burn building (under construction) • Various hazardous materials training props (including railroad cars, various simulators) • Flashover simulator • Confined space training prop • Natural gas fire props • Classrooms (3), etc. • Supports regional fire school (in previous years)

<p>West Des Moines Fire Department</p>	<p>Located behind West Des Moines training station.</p> <ul style="list-style-type: none"> • Burn building/drill tower (5 stories) • Roof simulator • Car fire, dumpster fire, pan, tank fire props • Confined space prop, trench rescue prop • Drafting pit • Classroom (in fire station) <p>Request funding to upgrade burn facilities.</p>
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Existing Training Centers



- 1 FSTB (Ames)
- 2 Bettendorf
- 3 Coralville
- 4 Council Bluffs
- 5 Dubuque County
- 6 Kirkwood Community College
- 7 Iowa City
- 8 Iowa Falls
- 9 Sgt. Bluff
- 10 Waterloo
- 11 West Des Moines

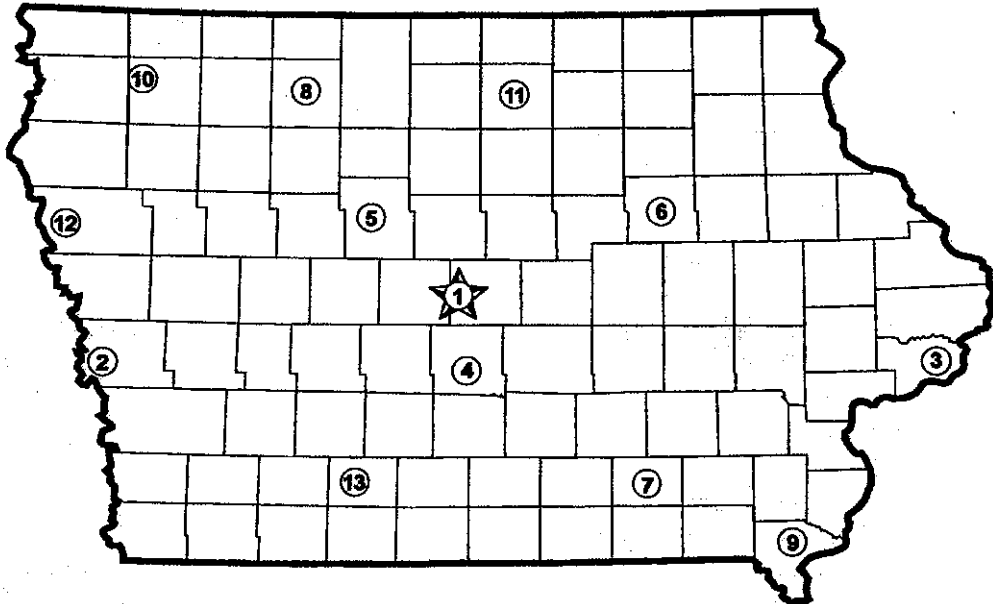
Proposed Training Facilities

The following locations have expressed an interest in hosting a regional training facility. Some have provided extensive planning, while others are just starting the planning process. A map showing the locations of proposed training facilities is included, along with a map merging existing and proposed training facilities.

Location	Status of Planning Process
Ames Fire Department	Preliminary discussions have occurred. Has expressed an interest in working with the Fire Service Training Bureau.
Council Bluffs Fire Department	Started the planning process cooperatively with Iowa Western Community College. <ul style="list-style-type: none"> • Identified city owned land • Working on local funding • Would also be used to support regional fire school
Davenport Fire Department	Developed business plan cooperatively with the Eastern Iowa Community College District. <ul style="list-style-type: none"> • Secured site • Allocated approximately \$700,000 in FY 08 budget • Would also be used to support regional fire school
Des Moines Fire Department	Developing master plan (evaluating responses to RFP) for regional training center and (for DSM FD) maintenance facility. <ul style="list-style-type: none"> • Approximately \$500,000 to develop plan • Approximately \$1.25 Million proposed in next years budget • Approximately \$5 Million proposed in FY08 budget
Fort Dodge Fire Department	Preliminary discussions have occurred with the City of Fort Dodge and Iowa Central Community College. <ul style="list-style-type: none"> • Identified city owned land (multiple locations) • Would also be used to support regional fire school
Hawkeye Community College (Waterloo)	Has expressed an interest.
Indian Hills Community College (Ottumwa)	Has expressed an interest. They are in the early planning process. <ul style="list-style-type: none"> • Would also be used to support regional fire school
Iowa Lakes Community College (Emmetsburg)	Has expressed an interest. They are in the early planning process. <ul style="list-style-type: none"> • Would also be used to support regional fire school
Lee County	Developed a master plan (with assistance from Iowa State University – College of Design)
Northwest Iowa Technical College (Sheldon)	Has expressed an interest. Very interested in mobile training units.

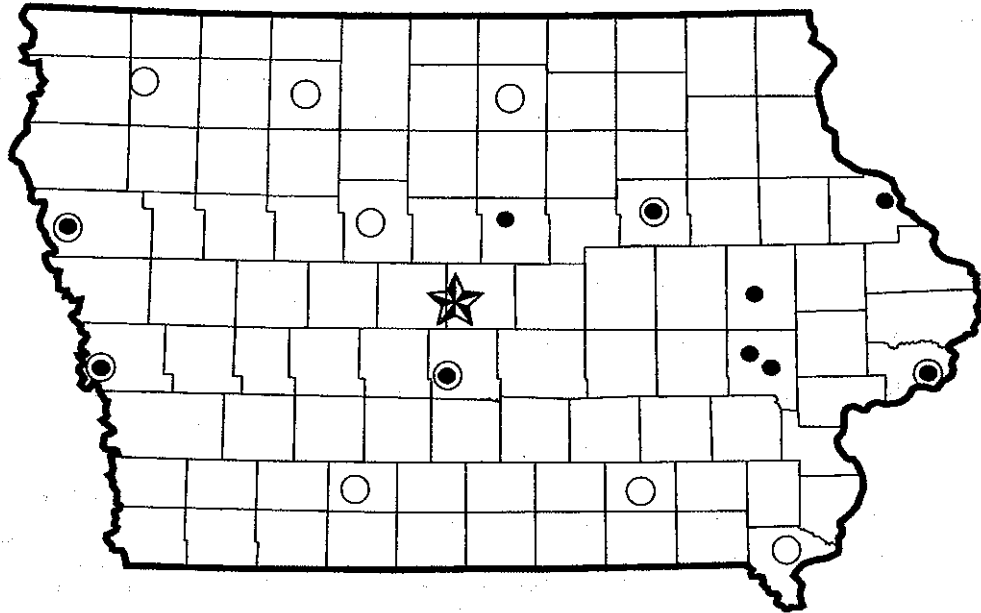
Mason City Fire Department	Has expressed an interest. Also expressed an interest in working with North Iowa Area Community College.
Sioux City Fire Department	Developed a master plan. Working with Western Iowa Technical Community College. <ul style="list-style-type: none"> • Acquired land (and secured FAA approval for land use) • Approximately \$750,000 in FY07 capital budget
Southwestern Community College (Creston)	Has expressed an interest.

Proposed Training Centers



- 1 Ames (w/FSTB)
- 2 Council Bluffs
- 3 Davenport
- 4 Des Moines
- 5 Fort Dodge
- 6 Hawkeye Community College
- 7 Indian Hills Community College
- 8 Iowa Lakes Community College
- 9 Lee County
- 10 Northwest Iowa Technical College
- 11 Mason City
- 12 Sioux City
- 13 Southwestern Community College

Existing and Proposed Training Centers



● **Existing Training Centers**

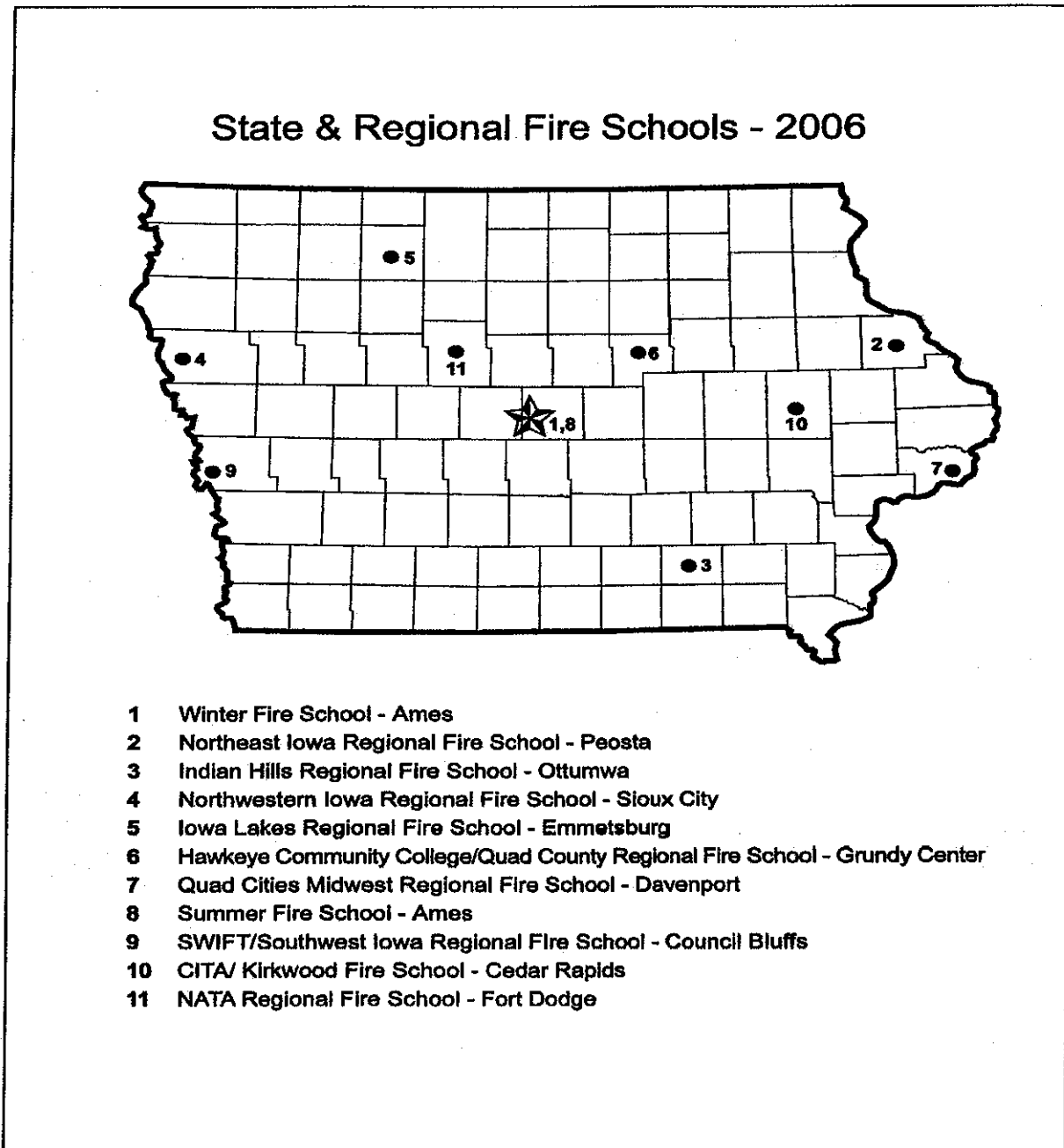
- FSTB (Ames)
- Bettendorf
- Coralville
- Council Bluffs
- Dubuque County
- Kirkwood Community College
- Iowa City
- Iowa Falls
- Sgt. Bluff
- Waterloo
- West Des Moines

○ **Proposed Training Centers**

- Ames (w/FSTB)
- Council Bluffs
- Davenport
- Des Moines
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State and Regional Fire Schools

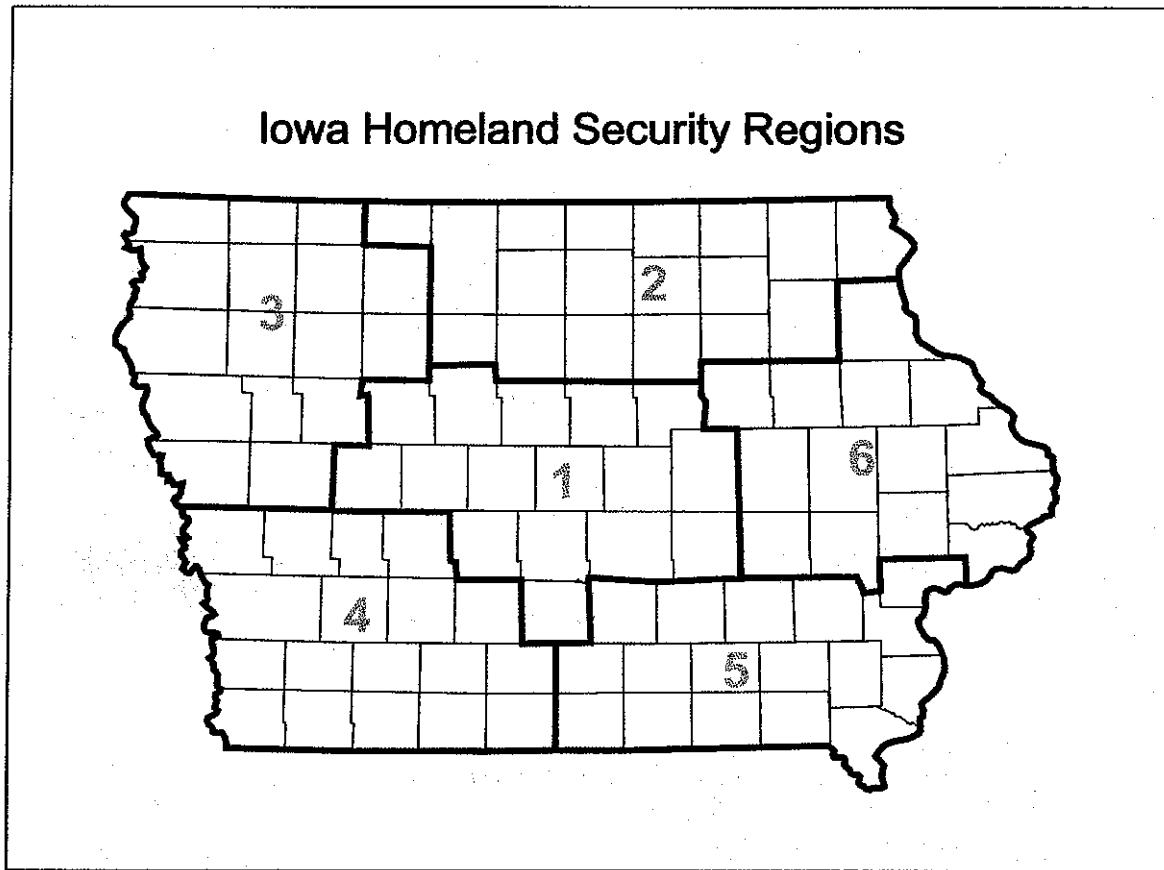
The state and regional fire schools are major fire training events in Iowa. The following map of the state and regional fire schools is provided for a perspective on these major training events.



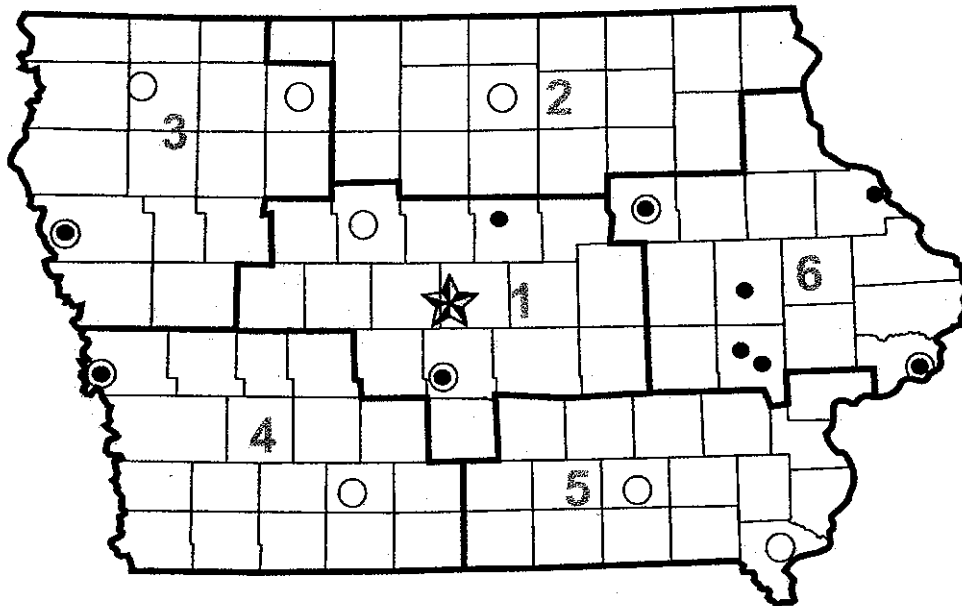
Examples of Established Regions in Iowa

The following regional maps are provided, along with an overlay of existing and proposed regional training facilities:

- Iowa Homeland Security Regions
- Community College Districts
- Iowa Bureau of EMS Regions

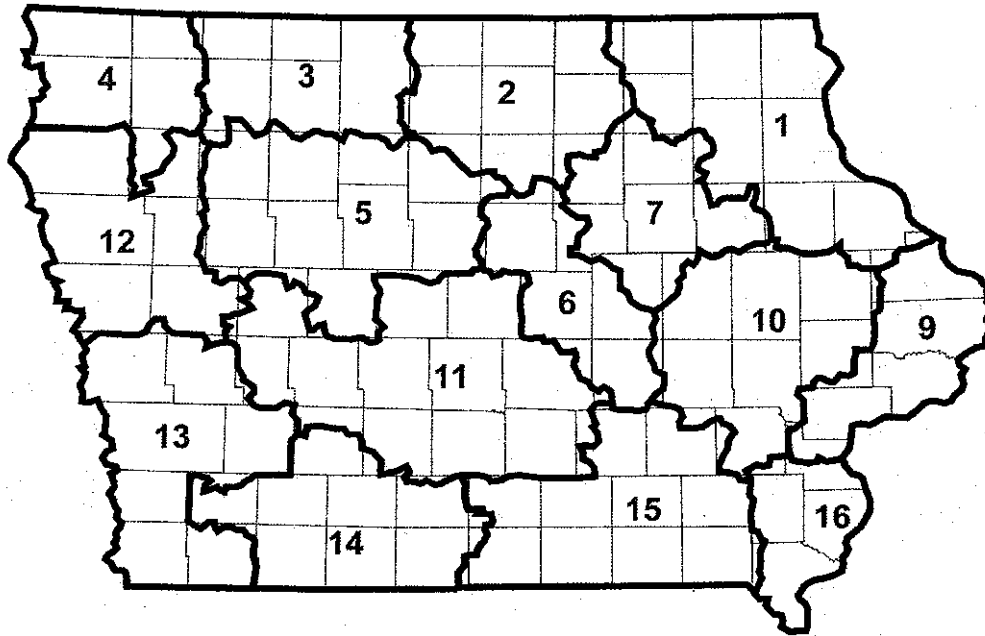


Existing and Proposed Training Centers Within Iowa Homeland Security Regions



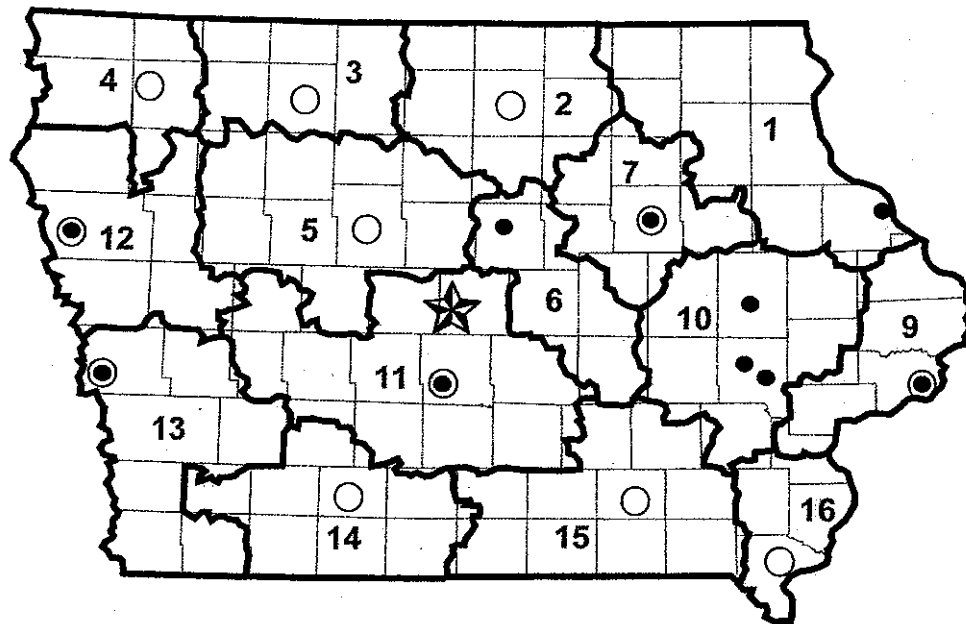
- Existing Training Centers
- Proposed Training Centers
- ★ Fire Service Training Bureau

Community College Districts



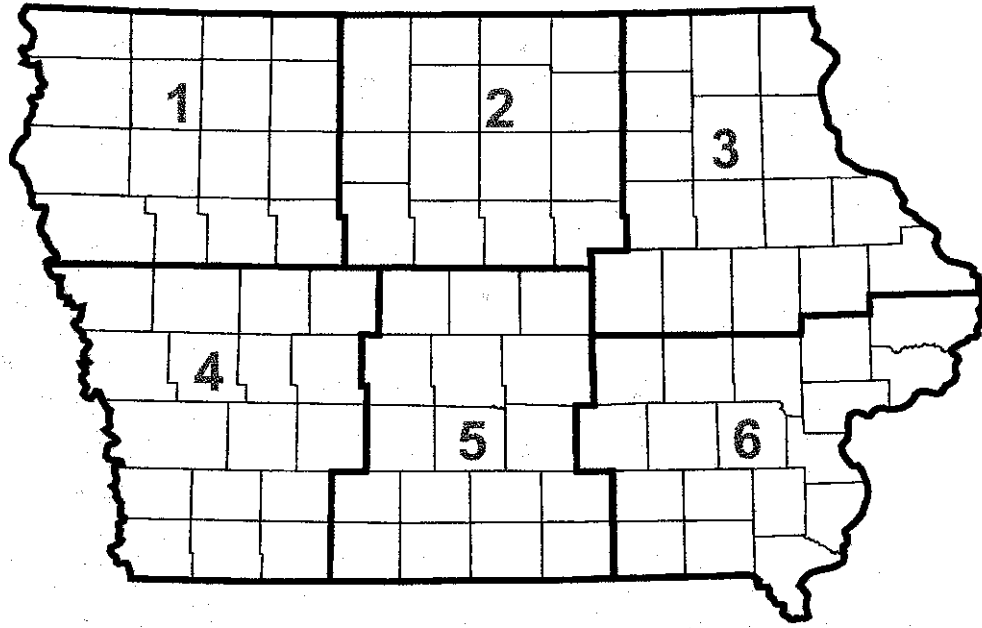
- 1 Northeast Iowa Community College
- 2 North Iowa Area Community College
- 3 Iowa Lakes Community College
- 4 Northwest Iowa Technical College
- 5 Iowa Central Community College
- 6 Iowa Valley Community College District
- 7 Hawkeye Community College
- 9 Eastern Iowa Community College District
- 10 Kirkwood Community College
- 11 Des Moines Area Community College
- 12 Western Iowa Technical Community College
- 13 Iowa Western Community College
- 14 Southwestern Community College
- 15 Indian Hills Community College
- 16 Southeastern Community College

Existing and Proposed Training Centers Within Community College Districts



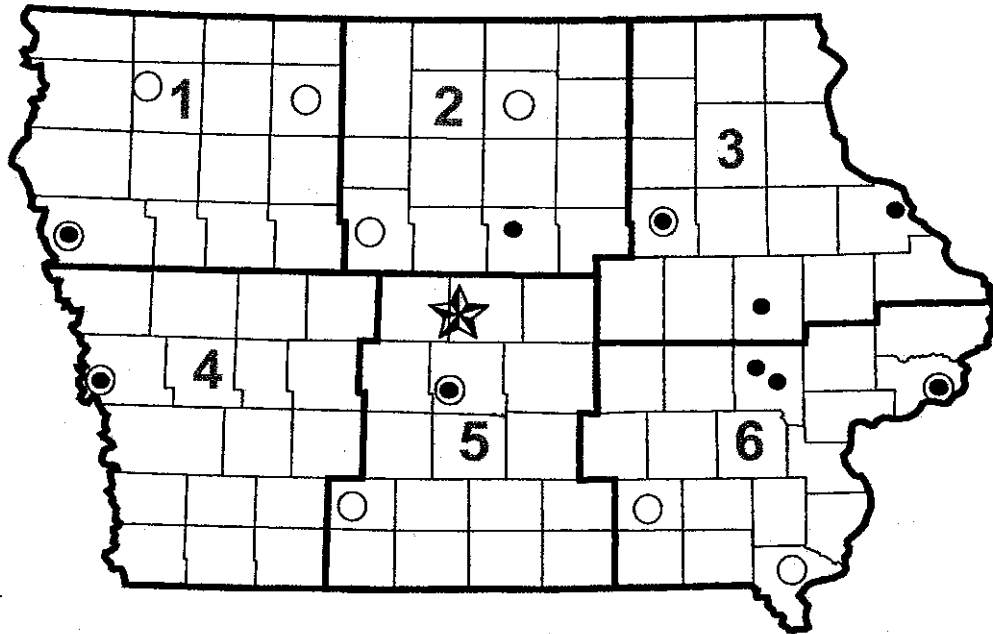
- Existing Training Centers
- Proposed Training Centers
- ★ Fire Service Training Bureau

EMS Regions



- 1 Northwest Region
- 2 North-Central Region
- 3 Northeast Region
- 4 Southwest Region
- 5 South-Central Region
- 6 Southwest Region

Existing and Proposed Training Centers Within EMS Regions



- Existing Training Centers
- Proposed Training Centers
- ★ Fire Service Training Bureau

- 1 Northwest Region
- 2 North-Central Region
- 3 Northeast Region
- 4 Southwest Region
- 5 South-Central Region
- 6 Southwest Region

Conclusions and Recommendations

Regional training centers will greatly benefit the Iowa fire service. The placement of these regional training centers, along with the local support, will determine the overall success of this activity. The Fire Service Training Bureau recommends the following:

1. It is important that all proposed sites be given equal consideration (based on the proposed training facilities matrix, pages 8-9). Based on the locations of existing training facilities, the northern, western, and southern parts of the state are lacking in regional training center support. Consideration should first be given to locating regional training centers in these areas of the state.
2. There are several existing training facilities that need funding to improve or enhance their capabilities (pages 5-7). With infrastructure already in place, these sites should also be given consideration.
3. The Bureau recommends that the suggested criteria for determining locations for regional training centers should be a consideration (pages 4-5).
4. Even with the addition of more regional training facilities, many Iowa firefighters will still not be served by these centers. Additional mobile training units will enable the Fire Service Training Bureau to bring this critical "hands-on" skill development to the local level. The Bureau recommends consideration for the following additional mobile training units (and the support equipment needed for each):
 - Second Interior Fire Attack Simulator: Single-story unit to facilitate single evening or weekend classes for volunteer fire departments. (estimated cost = \$400,000)
 - Second tractor: for moving mobile training units throughout the state. (estimated cost = \$75,000)
 - Confined Space Rescue trainer: with associated training equipment. (estimated cost = \$35,000 – \$40,000)
 - Mobile Drill Tower: to facilitate various non-fire skill development, including hose and ladder work, rescue scenarios, standpipe usage, etc. (estimated cost = \$175,000 – \$200,000)
 - Skills Development Trainer: to facilitate all non-fire related skills associated with Firefighter I and II standards. (estimated cost = \$20,000)
 - Hazardous Materials Trainer: for Operations Level skill development. (estimated cost = \$30,000)