

108.1 *Board of appeals established.* In order to hear and decide appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretation of this code, there is hereby created a board of appeals comprised of three (3) members of the Fire Administrative Board. Elected or non-elected officials may be appointed to serve as members of the board of appeals in

ADMINISTRATIVE CODE
OFFICE OF THE FIRE CODE OFFICIAL
SECTION 108.1

108.2 *Limitations on authority.* An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent method of protection or safety is proposed. The board shall have no authority to waive the requirements of this code.

ADMINISTRATIVE CODE
OFFICE OF THE FIRE CODE OFFICIAL
SECTION 108.2

108.3 *Qualifications.* The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to hazards of fire, explosions, hazardous conditions or fire protection systems.

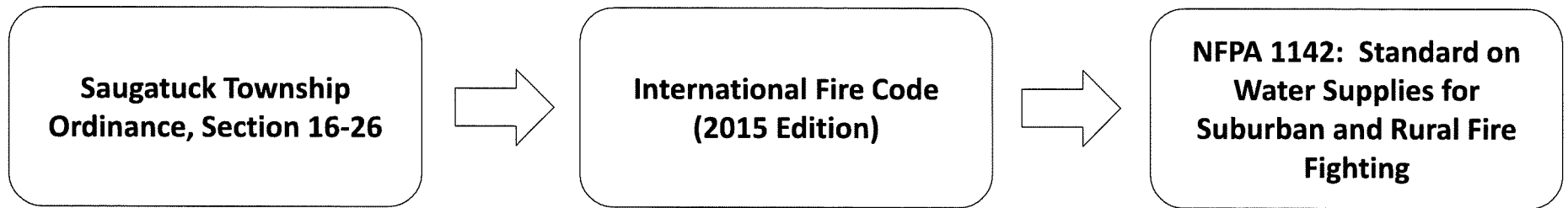
ADMINISTRATIVE CODE
OFFICE OF THE FIRE CODE OFFICIAL
SECTION 108.3

FINDING #1

We, the Board of Appeals, find that NFPA 1142 should be applied to Lot 15. With approximately 150 persons per square mile, Saugatuck Township is a “rural” area (NFPA 1142 § 3.3.20) and Lot 15 is not served by a municipal water supply system (NFPA 1142 § 3.3.20).

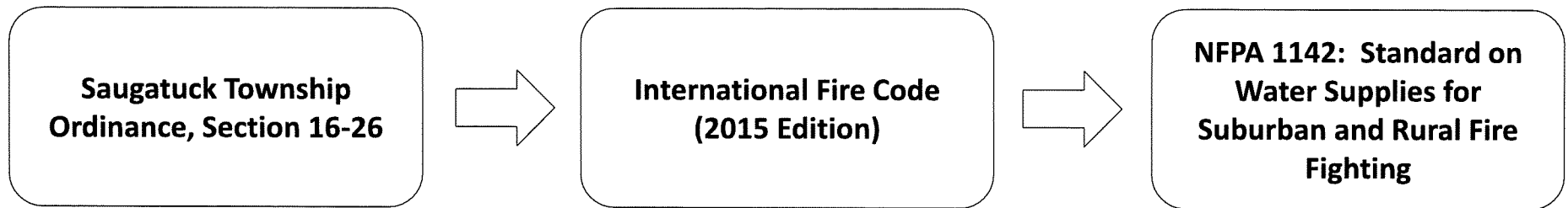
FINDING #2

We, the Board of Appeals, find that the existing dry hydrants located near Lot 15 constitute an acceptable alternative water supply under NFPA 1142 capable of providing sufficient water flow (i.e., more than 500 GPM) to fight a potential fire in the residential home proposed on Lot 15 (NFPA 1142, § 1.1.1, 4.2).



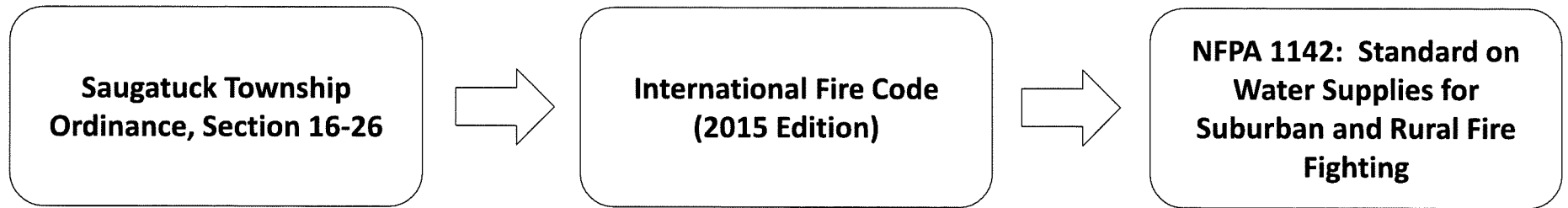
“Pursuant to authority granted by law, the International Fire Code, 2015 Edition, including all appendices, except Appendix A, ... is adopted as the Fire Code of the Township of Saugatuck ... as if fully set out in this ordinance”

Ord. Sec. 16-26



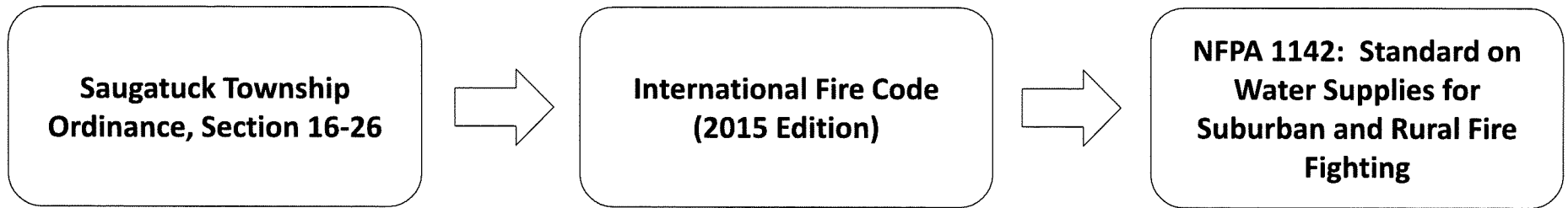
“For information regarding water supplies for fire-fighting purpose in rural and suburban areas in which adequate and reliable supply systems do not exist, the fire code official is authorized to utilize NFPA 1142 ...”

IFC B103.3



“This standard identifies a method of determining the minimum requirements for alternative water supplies for structural fire-fighting purposes in areas where the authority having jurisdiction determines that adequate and reliable water supply systems for fire-fighting do not otherwise exist.”

NFPA 1142 1.1.1



“In locations where adequate municipal-type water systems are not provided and additional fire protection is needed, minimum water supplies shall be established in, or transportable to, the designated area.”

NFPA 1142 7.1.5

Rural: “Those areas that are ... sparsely populated with densities below 500 persons per square mile”

Suburban: “Those moderately inhabited areas with population densities of at least 500 persons per square mile but less than 1000 persons per square mile.”

NFPA 1142 3.3.20, 3.3.22

National Fire Protection Association (NFPA) 1142 is not applicable, as there is a water supply available; Lake Michigan and the Kalamazoo River. The only reference to NFPA 1142 in the Fire District's site plan review #1 is in relation to the design, construction, and maintenance of the

“...adequate and reliable supply systems do not exist...”

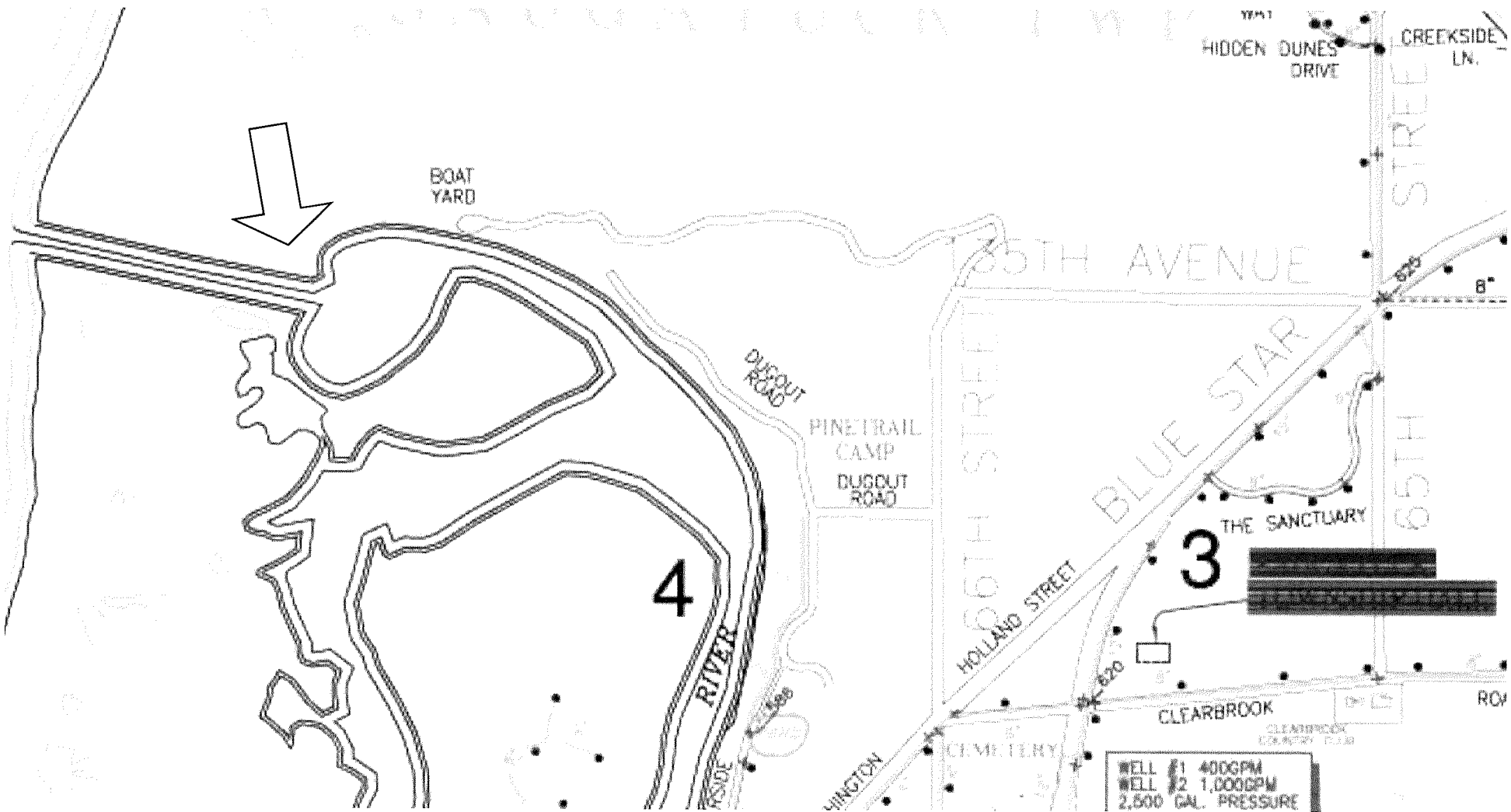
IFC B103.3

“...adequate and reliable water supply systems ... do not otherwise exist...”

NFPA 1142 1.1.1

“...adequate municipal-type water systems are not provided ...”

NFPA 1142 7.1.5



National Fire Protection Association

NFPA 1142: Standard on Water Supplies for
Suburban and Rural Fire Fighting



Fire Apparatus
& Emergency Equipment

Rethinking Rural Water Supplies

dwelling, etc., depending on the types of construction you encounter in your response district. You will find that for average-sized single-family dwellings, the required flow rate is 250 gpm and the total water supply needed is around 2,500 gallons. For larger dwellings, the flow rate will generally be in the 500-gpm range and the total water required is 10,000 gallons or less. These types of structures represent the bread-and-butter

incident

Floor Area = _____
 Second Floor = _____
 Third Floor = _____
 Ceiling Height = _____
 Area Height = _____
 Area Height = _____
 Area Height = _____

Total Sq. Ft. = DHC = _____
 Gallons = OCN = Gallons = _____
 Gallons = _____
 Gallons = _____

Total Sq. Ft. =
 Sq. Ft. = _____
 Sq. Ft. = _____
 Sq. Ft. = _____
 Sq. Ft. = _____
 Total Sq. Ft. =
 Gallons = _____
 Gallons = _____

6.2.2 For dwellings, the maximum construction classification number shall be 1.0.

Flow	Required GPM's = <input type="text" value="1234"/>
Flow	
Flow	
Flow	
Flow	
Flow	



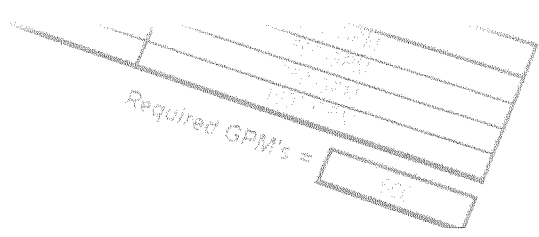
Total Cu. Ft. = **69,030** OHC = **7** Gallons = **9,861**



Additional exposure. (Example: 1.0 + .5 + .5 + .5 = 2.5 exposure factor for 3 exposures.)

Total Gallons Required	GPM Flow
Up to 2,499 Gallons	250 GPM
2,500 to 9,999 Gallons	500 GPM
10,000 to 19,999 Gallons	750 GPM
20,000 or more	1000 GPM

Required GPM's = **500**



“The fire department operating without a water system ... has the following three means of getting adequate water for fire fighting:

- 1) From supplies at or near the incident scene, which can be either constructed or natural supplies
- 2) From supplies transported to the scene, and
- 3) By relaying water from a source to the fire scene using large-diameter hose “

NFPA 1142 B.1



Fire Apparatus
A Emergency Equipment

Rethinking Rural Water Supplies

For the higher flow rates. Know the hose loads of your apparatus and any incoming mutual aid apparatus. Four-inch hose can effectively deliver 1,000 gpm through a 1,000-foot hoselay or 500 gpm through a 4,000-foot hoselay using a single pumper at the source.

Since this supply will take some time to set up, initial attack will be done with tank water. Equipped with a commander, the delivery of the hose that must be addressed by the incident control and extinguish the fire is a

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