

DEPARTMENT OF PUBLIC SAFETY

Division of Fire Prevention and Control

8 CCR 1507- 60

RULES FOR FIRE SUPPRESSION PONDS

STATEMENT OF BASIS, STATUTORY AUTHORITY, AND PURPOSE

Pursuant to Section 24-33.5-1203.5, C.R.S., the Director of the Colorado Division of Fire Prevention and Control shall promulgate rules as necessary to carry out the duties of the Division of Fire Prevention and Control. This rule is proposed pursuant to this authority and is intended to be consistent with the requirements of the State Administrative Procedures Act, Section 24-4-101, et seq., C.R.S.

In Senate Bill 22-114, the General Assembly determined that more resources are needed for wildfire mitigation to reduce fire risk and to keep fires from becoming large and catastrophic. The General Assembly further found that remote areas in Colorado lack sufficient resources to suppress fires without external support. To address these concerns, the General Assembly declared that it is in the public interest to create a process to identify, designate, and preserve critical fire suppression ponds. The purpose of this rule is to establish the criteria for Boards of County Commissioners, in consultation with Fire Protection Districts or Fire Authorities, to identify and evaluate potential fire suppression ponds. Senate Bill 22-114 section 2(5)(a) requires the Director of the Division of Fire Prevention and Control to promulgate these rules on or before May 1, 2023.



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Colorado Department of Public Safety
Division of Fire Prevention and Control

3/8/2023

Date of Adoption

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SECTION 1 INTRODUCTION AND BACKGROUND INFORMATION

Senate Bill 22-114, which was signed into law on June 8, 2022, declares that it is in the public interest to create a process to identify, designate, and preserve critical fire suppression ponds. Section 37-82-107(5)(a), C.R.S. requires that:

“On or before May 1, 2023, the Director of the Division of Fire Prevention and Control in the Department of Public Safety, pursuant to the Director’s authority under section 24-33.5-1203.5, shall promulgate rules establishing criteria for Boards of County Commissioners, in consultation with Fire Protection Districts or Fire Authorities, to use to identify and evaluate potential fire suppression ponds, as described in subsection (3) of this section. At a minimum, the criteria must require that a fire suppression pond:

- (I) Be readily accessible by a fire protection district, fire authority, fire department, or other firefighting entity;
- (II) Be located in the wildland-urban interface or another location that faces an elevated threat of fire risk; and
- (III) Be located in an area without timely or adequate access to fire hydrants or other water supplies and where the pond provides a needed supply.”

These three categories of criteria are addressed in individual sections of these Rules.

SECTION 2 DEFINITIONS

The definitions provided in section 24-33.5-1202, C.R.S., apply to these Rules. The following additional definitions also apply:

- 2.1 “*Aviation Resource*” means rotary wing aircraft with equipment to pick up water and deliver it to a fire for the purposes of suppression or retardant application.
- 2.2 “*Fire Authority*” means a fire and emergency services provider organized and established pursuant to 29-1-203.5, C.R.S..
- 2.3 “*Fire Protection District*” means a special district which provides protection against fire by any available means and which may supply ambulance and emergency medical and rescue services.
- 2.4 “*Fire Suppression Pond*” means a pond with water that may be used in a fire emergency, which pond has been designated as a Fire Suppression Pond by the State Engineer pursuant to C.R.S. 37-80-124.
- 2.5 “*Firefighting Entity*” means a fire protection district, fire authority, fire department, or other firefighting entity.
- 2.6 “*Ground Resource*” means ground vehicles used in the suppression of fires, such as engines, tenders, and brush trucks.
- 2.7 “*Local Authority Having Jurisdiction*” means the fire chief, fire marshal or other designated official of a county, municipality, or special district that has fire code enforcement responsibilities.
- 2.8 “*Locations of Elevated Threat of Fire Risk*” means locations where the outbreak of a fire could result in a major wildfire disaster.
- 2.9 “*NFPA*” means the National Fire Protection Association.
- 2.10 “*NWCG*” means the National Wildfire Coordinating Group.

- 2.11 *“Potential Fire Suppression Pond”* means a pond of water within the borders of a county that is under consideration by the board of county commissioners of such county for inclusion in an application to the State Engineer for designation as a Fire Suppression Pond.
- 2.12 *“Proposed Fire Suppression Pond”* means a Potential Fire Suppression Pond that meets all of the requirements of these Rules and is selected by a board of county commissioners for inclusion in an application to the State Engineer for designation as a Fire Suppression Pond.
- 2.13 *“Professional Engineer”* means an individual licensed as an engineer in Colorado and working within competence, training and/or education pertinent to the fire sprinkler industry.
- 2.14 *“Wildland-Urban Interface”* means the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation fuels.

SECTION 3 CODES, DOCUMENTS, AND STANDARDS INCORPORATED BY REFERENCE

- 3.1 The technical requirements of these rules are supported primarily by codes, documents, or standards developed by the National Wildfire Coordinating Group (NWCG) and the National Fire Protection Association (NFPA). These Rules establish minimum requirements for the identification and evaluation of potential fire suppression ponds using prescriptive and performance related provisions, which are widely used to identify and evaluate potential fire suppression ponds. The appropriate portions of the adopted codes, documents, or standards (particularly in relation to the general design requirements of fire suppression ponds) will be applied as prescribed by the adopted codes, documents, or standards themselves.
- 3.2 The following standards are adopted and promulgated as recommended minimum standards for the design and maintenance of all Fire Suppression Ponds in Colorado:
 - 3.2.1 NFPA 1142 Standard on Water Supplies for Suburban and Rural Firefighting – 2022 Edition, First Printing: June 2021 (Copyright 2021 by National Fire Protection Association).
- 3.3 The following documents and their referenced standards are adopted and promulgated as recommended minimum standards for the design and maintenance of all Fire Suppression Ponds in Colorado:
 - 3.3.1 NWCG Standards for Helicopter Operations – 2019 Edition, First Printing: May 2019 (Copyright 2019 by National Wildfire Coordinating Group).
- 3.4 The Division will maintain electronic copies of the complete texts of the adopted codes, documents, and standards, which are available for public inspection during regular business hours. Interested parties may inspect the referenced incorporated materials by contacting the Wildland Fire Management Section Chief at the Division, 690 Kipling St, Lakewood, CO, and/or The State Depository Libraries. Copies of the adopted codes, documents, and standards are available directly from the organization originally issuing the codes and standards: the National Fire Protection Association, reached by calling 800-344-3555 or on the web at www.nfpa.org; and National Wildfire Coordinating Group, available on the web at <https://www.nwcg.gov/publications>.

SECTION 4 CRITERIA FOR EVALUATING POTENTIAL FIRE SUPPRESSION PONDS - ACCESSIBILITY BY FIREFIGHTING ENTITIES

- 4.1 This section provides the criteria to comply with section 37-82-107(5)(a)(I), C.R.S., which requires that a Fire Suppression Pond “Be readily accessible by a fire protection district, fire authority, fire department, or other firefighting entity”. Proposed Fire Suppression Ponds shall be accessible by ground fire apparatus or by rotary wing firefighting aircraft, or both.
- 4.2 General Design and Accessibility Criteria for All Proposed Fire Suppression Ponds:
 - 4.2.1 A Proposed Fire Suppression Pond shall be located where they may be maintained and accessed for firefighting purposes. (NFPA 1142, 7.1.4)
- 4.3 Written Landowner Approval:

- 4.3.1 Section 37-82-107(3)(c), C.R.S., requires the board of county commissioners to acquire the voluntary written approval of each owner of private property that abuts the pond before the board of county commissioners applies to the State Engineer for designation. It is further recommended that this written approval be a legal agreement establishing access to and use of the water in the pond and that it be recorded in the records of the county clerk and recorder by the board of county commissioners within 30 days of the date of designation by the State Engineer as a Fire Suppression Pond. (NFPA 1142, 7.2)
- 4.4 A Proposed Fire Suppression Pond identified by a board of county commissioners for Ground Resource access must meet the following additional minimum criteria:
- 4.4.1 It is recommended that vehicular access to the Proposed Fire Suppression Pond shall be in accordance with NFPA Standard 1142 “Water Supplies for Suburban and Rural Firefighting”, 2022 Edition, Chapter 7, section 7.5 “Access to Water Sources.”
- 4.4.2 A usable volume that is no less than 3,500 gal (13,249 L) of water shall be provided.
- 4.4.3 Proposed Fire Suppression Ponds identified by a board of county commissioners for Ground Resource access that are in excess of 30,000 gal (113,550 L) of water shall be provided with a dry hydrant.
- a) Installation of a dry hydrant shall be in accordance with NFPA Standard 1142 “Water Supplies for Suburban and Rural Firefighting”, 2022 Edition, Chapter 8.
- b) Installation of the dry hydrant must occur within 2-years of the State Engineer’s date of designation of a Fire Suppression Pond.
- 4.4.4 The minimum water delivery rate from a Proposed Fire Suppression Pond for Ground Resource access shall not be less than 250 gpm (950 L/min).
- 4.5 A Proposed Fire Suppression Pond identified by a board of county commissioners for Aviation Resources access must meet the following additional minimum criteria:
- 4.5.1 It is recommended that such ponds meet all requirements as listed in NWCG Standards for Helicopter Operations, Chapter 15.
- 4.5.2 A minimum depth of 48 inches at maximum capacity to allow for adequate filling of aerial fire apparatus (Bambi Buckets, snorkels, etc.)
- 4.5.3 A minimum diameter of 150 feet.
- 4.5.4 A usable volume that is no less than 30,000 gal (113,550 L) of water shall be provided.
- 4.5.5 Additionally, there shall be no obstacles in all directions from the edge of the pond within the clearances identified in the following chart:

Distance from perimeter of pond	Height of Obstacle
80’	10’
160’	20’
240’	30’
320’	40’

SECTION 5 CRITERIA FOR EVALUATING POTENTIAL FIRE SUPPRESSION PONDS - LOCATIONS OF ELEVATED THREAT OF FIRE RISK

- 5.1 This section provides the criteria to comply with section 37-82-107(5)(a)(II), C.R.S., which requires that a Fire Suppression Pond, “Be located in the Wildland-Urban Interface or another location that

faces an elevated threat of fire risk”.

- 5.1.1 Mapping shows the location of the pond is within useful driving distance (for Ground Resource access) or useful flying distance (for Aviation Resource access) from locations with an elevated threat of fire risk. Elevated fire risk locations are indicated by mapping which may include, but is not limited to, the Colorado Wildfire Risk Public Viewer (Wildland Urban Interface Risk and Wildfire Risk themes).

SECTION 6 CRITERIA FOR EVALUATING POTENTIAL FIRE SUPPRESSION PONDS - PROVIDES A NEEDED WATER SUPPLY

- 6.1 This section provides the criteria to comply with section 37-82-107(5)(a)(III), C.R.S., which requires that a Fire Suppression Pond, “Be located in an area without timely or adequate access to fire hydrants or other water supplies and where the pond provides a needed supply”
- 6.2 Proposed Fire Suppression Ponds identified by a board of county commissioners for Ground Resource access must meet one of the following additional minimum requirements:
 - 6.2.1 If mapping shows that the travel distance to other Ground Resource accessible water supplies including hydrants, other Fire Suppression Ponds, and cisterns in an identified Location of Elevated Threat of Fire Risk is more than 1000 feet, the subject pond must shorten the existing travel distance; or
 - 6.2.2 If the volume or flow rate for other water supplies in an identified Location of Elevated Threat of Fire Risk is deficient based on industry best practices, which are outlined in the General Design Criteria in these Rules, the subject pond must reduce or eliminate the deficiency.
- 6.3 Proposed Fire Suppression Ponds identified by a county board of commissioners for Aviation Resources access must meet the following additional minimum requirement.
 - 6.3.1 The subject pond must shorten the flight travel distance compared to the travel distance when using water from other reliable sources of water for Aviation Resources or must meet another need for Aviation Resources that is described in the Needs Assessment Report.

SECTION 7 NEEDS ASSESSMENT REPORT

- 7.1 Before applying for the designation of a pond as a Fire Suppression Pond or seeking redesignation of a pond under section 37-80-124(8), C.R.S., a board of county commissioners, in consultation with its Fire Protection District or Fire Authority, shall perform a Needs Assessment of each pond, as required by section 37-82-107(3)(a)(II), C.R.S. Needs Assessment Reports shall show that Proposed Fire Suppression Ponds meet the criteria of these Rules by including the following information in the following format:
 - 7.1.1 Overview map(s) at a county, or its Fire Protection District or Fire Authority scale, including:
 - a) areas with elevated threat for fire risk (including a description of the source of this information)
 - b) locations of major roads
 - c) locations of other water supplies available for fighting fires including hydrants and water bodies. Areas served by hydrants may be shaded (rather than identifying each hydrant)
 - d) location of each Proposed Fire Suppression Pond labeled with pond name or identification number
 - e) location of aviation or ground access resources and any other relevant emergency infrastructure
 - 7.1.2 Details for all Proposed Fire Suppression Pond shall include:
 - a) Pond name and/or identification number
 - b) description of pond refill mechanism: groundwater, diversion on the stream channel (on-channel pond), diversion off the stream channel (provide name of ditch filling pond), or well (include well permit number)
 - c) listing of any water rights associated with the pond, including relevant Water Court decree number

- d) description of how the pond meets the requirements of these Rules
- e) description of how each the pond meets the following requirements outlined in 37-80-124(10)(a), C.R.S.:
 - I. The pond existed with the same or greater surface area as of June 1, 1972, (include historical aerial photo, USGS quad map, or other source of information)
 - II. The surface area does not exceed six acres (include current aerial photo or USGS quad map showing current pond surface area)
 - III. Any decreed storage rights for the pond are limited to use within the pond and only for livestock watering, wildlife, or other nonconsumptive uses
 - IV. The pond is not included as a structure in a decreed plan for augmentation, an appropriative right of exchange, or a state-approved substitute water supply plan, and
 - V. The designation of the pond as a Fire Suppression Pond will not result in more than thirty total surface acres of Fire Suppression Ponds in the county.

7.1.3 Details for each Proposed Fire Suppression Pond identified for Ground Resource access should include:

- a) a detailed map or annotated aerial photo showing:
 - I. location or intended location of dry hydrant(s)
 - II. location of access road and vehicle turning area
- b) description of typical seasonal fluctuation in water level
- c) a geo-tagged photo of the pond from all access points is recommended, but not required.

7.1.4 Details for each Proposed Fire Suppression Pond identified for Aviation Resource access should include:

- a) a detailed map or annotated aerial photo showing:
 - I. the height of nearby obstacles and distance from pond perimeter
 - II. pond diameter
- b) description of typical seasonal fluctuation in water level and available information on pond depth

7.1.5 A table, provided in the following format, summarizing the name and locations of Proposed Fire Suppression Ponds, which includes the following information:

Name and/or identification number	Type (ground, aviation, or both)	Area (acres)	Latitude	Longitude	UTM X	UTM Y

- a) Pond name, type (ground access, aviation access, or access by both ground and aviation), surface area (acres, to the tenth of an acre),
- b) Pond point location in both Latitude and Longitude (in Degrees Decimal Minutes (DDM), which is the IAW interagency GPS standards for suppression activities) and UTM coordinates (the standard used by the Division of Water Resources).
 - I. Datum should be submitted in WGS 84 format,

7.1.6 In any application to the State Engineer for the designation of more than one Proposed Fire Suppression Pond, where the cumulative proposed acreage exceeds 30, the board of county commissioners, in consultation with its Fire Protection District or Fire Authority, will include information about which ponds should be prioritized within the borders of the county.

SECTION 8 INQUIRIES

8.1 Questions, clarification, or interpretation of these Rules should be addressed in writing to: Wildland Fire Management Section Chief, Colorado Division of Fire Prevention and Control, 690 Kipling St, Suite 2000, Denver, CO 80215. Telephone number: (303) 239-4600.
