



COLORADO
Division of Water Resources
Department of Natural Resources

September 17, 2018

Jeff Mark
LRMD No. 1
212 N. Wahsatch Ave STE 301
Colorado Springs, CO 80903
JMark@landhuisco.com

VIA EMAIL

When replying, please refer to:
**Lorson Ranch Pond CR2 DAM Non-
Jurisdictional
Water Division 2 Water District 10**

SUBJECT: Signed Notice of Intent to Construct a Non-Jurisdictional Water Impoundment Structure

Dear Mr. Mark:

Our office is in receipt of a Notice of Intent (NOI) to Construct a Non-Jurisdictional Water Impoundment Structure for the subject dam. The impoundment is to be located on Jimmy Camp Creek tributary to Fountain Creek, with the filling source to be Stormwater for Temporary Detention.

In accordance with Rule 11.1 of the Colorado Rules and Regulations for Dam Safety and Dam Construction, the hazard of this dam has been assessed as Low based on the construction drawing plans submitted with the NOI. A copy of the signed NOI is attached. An electronic copy will be maintained with the Division of Water Resources.

Please note the following:

- This structure must be designed and constructed to standards outlined in 37-92-602(8) for stormwater detention facilities.
- Because this structure is located on a tributary to Fountain Creek, the structure can only operate pursuant a Colorado Discharge Permit System Municipal, Separate Storm Sewer System Permit issued by the Department of Public Health and Environment Pursuant to Article 8 of Title 25, C.R.S.
- In the event groundwater is encountered during construction of the pond, the pond must be backfilled so as not to expose groundwater until such time as: 1) a well permit has been obtained for the groundwater pond pursuant to CRS §37-90-137, or 2) the pond is lined in accordance with the document, ["State Engineer Guidelines for Lining Criteria for Gravel Pits,"](#) dated August 1999.

The requirements and recommendations provided herein are based on our review of the safety and water administration aspects of the proposed dam and the information provided in the submitted NOI. These requirements and recommendations create no liability for the State of Colorado should the dam fail for any reason. Please be aware that it is in the owner's best interest to construct, operate, and



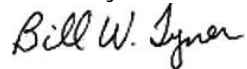
maintain the structure in a safe manner, as he or she may be held liable in civil court for any downstream damages resulting from failure of the dam. A copy of Specifications for Construction of Non-Jurisdictional Dams is provided to assist you in the construction of a sound structure.

Finally, please be aware of any other permitting or regulatory requirements associated with the construction of a water impoundment structure, including but not limited to county and/or municipal regulations, and wetland permitting through the U.S. Army Corps of Engineers (see www.usace.army.mil for regional contact information).

The plans reviewed in this determination are submitted as part of the Developmental Approval process. Prior to operation of this structure, please provide notice of completion of construction and as constructed plans in PDF form including as constructed Stormwater Detention and Infiltration Data Sheet. Additionally, prior to operation of this structure, notice must be provided pursuant to 37-92-602(8)(d) to the substitute water supply plan notification list maintained by the state engineer pursuant to section 37-92-308 (6) for the water division in which the facility is located.

If you have any questions regarding this approval, please contact Water Commissioner, Doug Hollister, at (719) 227-5291 or via email to doug.hollister@state.co.us, or Dam Safety Engineer, John Hunyadi, at (719)-227-5294, or via email to john.hunyadi@state.co.us,

Sincerely,



Bill W. Tyner, P.E.
Division Engineer, Division 2

Enc : Signed Notice of Intent to Construct a Non-Jurisdictional Water Impoundment Structure
Specifications for Construction of Non-Jurisdictional Dams
Completion of Construction Form

ec: John Hunyadi, P.E., Dam Safety Engineer
Doug Hollister, District 10 Water Commissioner
Laserfiche File



COLORADO
Division of Water Resources
Department of Natural Resources

COMPLETION OF CONSTRUCTION

DAM ID. 100524

Upon the completion of the Lorson Ranch Pond CR2 DAM, Subject of the Notice of Intent to Construct a Non-Jurisdictional Dam under the Receipt above, location in Sec. 23 Twp. 15_S Rng. 65_W; UTM NAD83, Northing 4287076, Easting 531034.

Indicate in the blank at the bottom of this form, the date of completion of construction and return to:

Colorado Division of Water Resources
Division 2
310 East Abriendo Ave, Suite B
Pueblo, CO 81004

Date of Completion: _____

Signature of Owner Date





COLORADO

Division of Water Resources

Department of Natural Resources

www.water.state.co.us P 303.866.3581

NON-JURISDICTIONAL WATER IMPOUNDMENT STRUCTURE¹

This notice is required per Section 37-87-125, C.R.S. (1998) and must be submitted to the Division Engineer's Office a minimum of 45 days prior to construction.

OWNER INFORMATION

Name: LRMD No. 1 Telephone/E-Mail: (719) 635-3200 / JMark@landhuisco.com

Address: 212 N. Wahsatch Avenue, Suite 301 Colorado Springs, CO 80903

Street / P.O. Box/ Rural Route City State Zip Code

Responsible Person: Jeff Mark Telephone/E-Mail: (719) 635-3200 / JMark@landhuisco.com

Address: 212 N. Wahsatch Avenue, Suite 301 Colorado Springs, CO 80903

Street / P.O. Box/ Rural Route City State Zip Code

Contractor: to be determined Telephone/E-Mail: () /

STRUCTURE INFORMATION

Name of Dam: Pond CR2 Water Division: 2 Water District: 10

Location: *(Provide Section, Township, Range, and GPS Point taken at crest of dam above streamline/outlet)*

- Section: 23, Township: 15s, Range: 65w, 6th P.M.

- Northing 4287076 meters, Easting 531034 meters *(Datum should be UTM, NAD 83)*

Dam Dimensions:

- Vertical Height²: 6' ft., Length: 140' ft., Crest Width: 15' ft., Slopes: U/S: 4:1 (H:1V), D/S 4:1 (H:1V)

Reservoir:

- Surface Area¹: 0.36 acres, Capacity¹: 0.9 acre-feet, Drainage Area*: 9.5 acres

**(If drainage area is unknown leave blank and a spillway size will be assigned):*

Emergency Spillway: *(See Table 1, Spillway Sizing Guidelines)*

- Bottom Width: 10' ft., Side Slopes: 4:1 H:1V, Freeboard³: 3' ft

Outlet Conduit Type: Reinforced Concrete Pipe, Size: 18" inches, Location: at spillway to East Tributary

Stream Name or Water Source⁴: Runoff from residential lots Proposed Water Use: Stormwater Detention Pond

Water Court Case or WDID : None needed. stormwater runoff only
(Water District Identification Number)

Signature of Owner

Date

Office Use Only

DIVISION ENGINEER'S REQUIREMENTS:

Bill W. Igner

9-17-2018

Dam I.D. 100524

Signature of Division Engineer

Date

¹ A "Non-Jurisdictional Structure" is a dam creating a reservoir with a capacity of 100 acre-feet or less and a surface area of 20 acres or less and a vertical height (footnote 2) of 10 feet or less. Non-jurisdictional size dams are regulated and subject to the authority of the State Engineer consistent with sections 37-87-102 and 37-87-105 C.R.S.

² "Vertical Height" is measured from the elevation of the lowest point of the natural surface of the ground or the invert of the outlet conduit (whichever is lower) where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam.

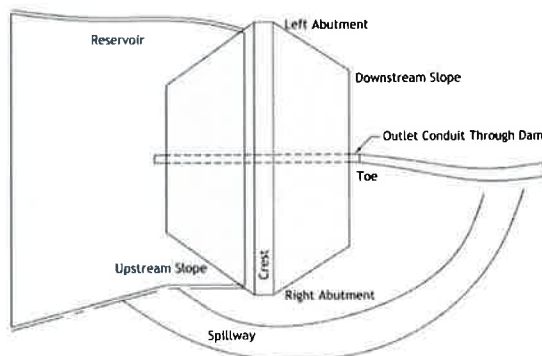
³ "Freeboard" is the vertical distance from the bottom of spillway to the crest of the dam. Minimum Freeboard is 3 feet.

⁴ If construction in reservoir intercepts groundwater, a well permit is required. (Well permit applications can be found at www.water.state.co.us)

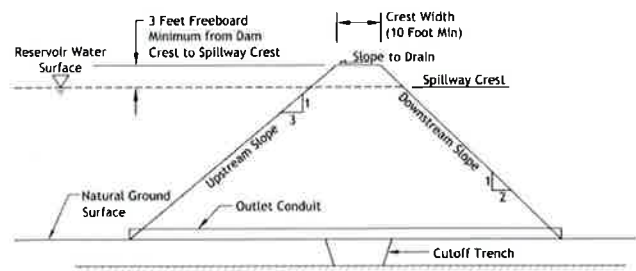


DAM SAFETY BRANCH Specifications for Construction of Non-Jurisdictional Dams

- **Site Selection:**
 - Foundation soils should be firm to provide adequate support for the embankment and should have low permeability to allow for water retention. Site selection should consider potential downstream property damage in the event of a dam failure. Construction of dams in boggy areas, areas with non-uniform fractured rock, or sands/gravels is not recommended and an engineer should be hired to evaluate the site conditions. Any part of the reservoir basin excavated below grade cannot expose groundwater.
- **Embankment Design:**
 - Backfill material to be used for construction of the cutoff trench and embankment should be a suitable clay material and contain no material larger than 6 inches in diameter.
 - The upstream slope should be constructed with a slope no steeper than 3:1, and the downstream slope should be no steeper than 2:1 (see cross section below). The dam crest should have a minimum width of 10 feet and the surface should be graded with positive drainage toward the reservoir basin.
 - It is recommended that rock rip rap or other suitable material be placed on the upstream slope of the embankment to protect it from wave action. A suitable gravel or geosynthetic material should be placed under the rip rap to prevent fine material from washing out from behind the larger rock.
 - The embankment should be fenced to restrict livestock from accessing the dam since they damage the protective vegetation and increase erosion.
- **Embankment Construction**
 - The topsoil and all organic material should be removed from the foundation of the proposed dam site. Organic soil should only be reused for placement on the completed embankment to promote the re-growth of vegetation.
 - A cutoff trench should be excavated under the full length of the centerline of the dam with sloping sides (1:1 min.), a minimum bottom width of 3 feet and a depth of 3 feet.
 - The foundation of the dam should be scarified/ripped to a depth of 6-inches to provide proper contact between the native foundation and embankment. This surface should then be moisture treated before placement of fill.
 - Fill material should be placed in layers not exceeding 12 inches in thickness prior to compaction. Suitable backfill material should have enough clay and moisture content to roll a small ball by hand. If this cannot be done, the soil is likely too dry or does not have adequate clay content.
 - Each lift should be thoroughly compacted using a sheeps foot compactor. Care should be taken not to allow the top layers of the soil to dry out between placement of lifts.
 - Fill should be placed in uniform lifts that cover the entire embankment length and width.
- **Outlet**
 - Unless a waiver is granted in writing by the Division Engineer, all non-jurisdictional dams require an outlet conduit positioned at the natural low point of the reservoir basin. A minimum diameter of 12 inches is recommended and should be controlled at the upstream end by a valve and trash rack.
- **Emergency Spillway**
 - The spillway should have sufficient width to provide capacity to route the runoff from the drainage basin above the dam during rainfall/runoff events.
 - The emergency spillway should be located on natural ground far enough away to prevent erosion of the dam embankment. A spillway over the dam embankment is not acceptable.
 - A minimum of 3 feet of freeboard is required from the bottom of the emergency spillway to the top of the dam.
 - To determine the minimum spillway width, see the attached table for your area and drainage basin size.
- **Example Plan View and Cross Section**



Plan View



Cross Section Through Dam at Outlet



COLORADO
Division of Water Resources
Department of Natural Resources

September 17, 2018

Jeff Mark
LRMD No. 1
212 N. Wahsatch Ave STE 301
Colorado Springs, CO 80903
JMark@landhuisco.com

VIA EMAIL

When replying, please refer to:
**Lorson Ranch Pond CR3 DAM Non-
Jurisdictional
Water Division 2 Water District 10**

SUBJECT: Signed Notice of Intent to Construct a Non-Jurisdictional Water Impoundment Structure

Dear Mr. Mark:

Our office is in receipt of a Notice of Intent (NOI) to Construct a Non-Jurisdictional Water Impoundment Structure for the subject dam. The impoundment is to be located on Jimmy Camp Creek tributary to Fountain Creek, with the filling source to be Stormwater for Temporary Detention.

In accordance with Rule 11.1 of the Colorado Rules and Regulations for Dam Safety and Dam Construction, the hazard of this dam has been assessed as Low based on the construction drawing plans submitted with the NOI. A copy of the signed NOI is attached. An electronic copy will be maintained with the Division of Water Resources.

Please note the following:

- This structure must be designed and constructed to standards outlined in 37-92-602(8) for stormwater detention facilities.
- Because this structure is located on a tributary to Fountain Creek, the structure can only operate pursuant a Colorado Discharge Permit System Municipal, Separate Storm Sewer System Permit issued by the Department of Public Health and Environment Pursuant to Article 8 of Title 25, C.R.S.
- In the event groundwater is encountered during construction of the pond, the pond must be backfilled so as not to expose groundwater until such time as: 1) a well permit has been obtained for the groundwater pond pursuant to CRS §37-90-137, or 2) the pond is lined in accordance with the document, ["State Engineer Guidelines for Lining Criteria for Gravel Pits,"](#) dated August 1999.

The requirements and recommendations provided herein are based on our review of the safety and water administration aspects of the proposed dam and the information provided in the submitted NOI. These requirements and recommendations create no liability for the State of Colorado should the dam fail for any reason. Please be aware that it is in the owner's best interest to construct, operate, and



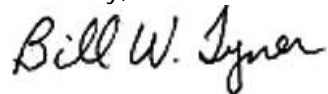
maintain the structure in a safe manner, as he or she may be held liable in civil court for any downstream damages resulting from failure of the dam. A copy of Specifications for Construction of Non-Jurisdictional Dams is provided to assist you in the construction of a sound structure.

Finally, please be aware of any other permitting or regulatory requirements associated with the construction of a water impoundment structure, including but not limited to county and/or municipal regulations, and wetland permitting through the U.S. Army Corps of Engineers (see www.usace.army.mil for regional contact information).

The plans reviewed in this determination are submitted as part of the Developmental Approval process. Prior to operation of this structure, please provide notice of completion of construction and as constructed plans in PDF form including as constructed Stormwater Detention and Infiltration Data Sheet. Additionally, prior to operation of this structure, notice must be provided pursuant to 37-92-602(8)(d) to the substitute water supply plan notification list maintained by the state engineer pursuant to section 37-92-308 (6) for the water division in which the facility is located.

If you have any questions regarding this approval, please contact Water Commissioner, Doug Hollister, at (719) 227-5291 or via email to doug.hollister@state.co.us, or Dam Safety Engineer, John Hunyadi, at (719)-227-5294, or via email to john.hunyadi@state.co.us,

Sincerely,



Bill W. Tyner, P.E.
Division Engineer, Division 2

Enc Signed Notice of Intent to Construct a Non-Jurisdictional Water Impoundment
: Structure
 Specifications for Construction of Non-Jurisdictional Dams
 Completion of Construction Form

ec: John Hunyadi, P.E., Dam Safety Engineer
 Doug Hollister, District 10 Water Commissioner
 Laserfiche File



COLORADO
Division of Water Resources
Department of Natural Resources

COMPLETION OF CONSTRUCTION

DAM ID. 100525

Upon the completion of the Lorson Ranch Pond CR3 DAM, Subject of the Notice of Intent to Construct a Non-Jurisdictional Dam under the Receipt above, location in Sec. 23 Twp. 15_S Rng. 65_W; UTM NAD83 , Northing 4287144, Easting 531429.

Indicate in the blank at the bottom of this form, the date of completion of construction and return to:

Colorado Division of Water Resources
Division 2
310 East Abriendo Ave, Suite B
Pueblo, CO 81004

Date of Completion: _____

Signature of Owner Date





NON-JURISDICTIONAL WATER IMPOUNDMENT STRUCTURE¹

This notice is required per Section 37-87-125, C.R.S. (1998) and must be submitted to the Division Engineer's Office a minimum of 45 days prior to construction.

OWNER INFORMATION

Name: LRMD No. 1 Telephone/E-Mail: (719) 635-3200 / JMark@landhuisco.com
Address: 212 N. Wahsatch Avenue, Suite 301 Colorado Springs, CO 80903
Street / P.O. Box/ Rural Route City State Zip Code
Responsible Person: Jeff Mark Telephone/E-Mail: (719) 635-3200 / JMark@landhuisco.com
Address: 212 N. Wahsatch Avenue, Suite 301 Colorado Springs, CO 80903
Street / P.O. Box/ Rural Route City State Zip Code
Contractor: to be determined Telephone/E-Mail: () /

STRUCTURE INFORMATION

Name of Dam: Pond CR3 Water Division: 2 Water District: 10

Location: (Provide Section, Township, Range, **and** GPS Point taken at crest of dam above streamline/outlet)

- Section: 23, Township: 15s, Range: 65w, 6th P.M.

- Northing 4287144 meters, Easting 531429 meters (Datum should be UTM, NAD 83)

Dam Dimensions:

- Vertical Height²: 4.5' ft., Length: 70' ft., Crest Width: 5' ft., Slopes: U/S: 4:1 (H:1V), D/S 4:1 (H:1V)

Reservoir:

- Surface Area¹: 0.07 acres, Capacity¹: 0.15 acre-feet, Drainage Area*: 1.6 acres

*(If drainage area is unknown leave blank and a spillway size will be assigned):

Emergency Spillway: (See Table 1, Spillway Sizing Guidelines)

- Bottom Width: 6' ft., Side Slopes: 4:1 H:1V, Freeboard³: 1' ft

Outlet Conduit Type: Reinforced Concrete Pipe, Size: 18" inches, Location: at spillway into East Tributary

Stream Name or Water Source⁴: Runoff from residential lots Proposed Water Use: Stormwater Detention Pond

Water Court Case **or** WDID : None needed. stormwater runoff only
(Water District Identification Number)

Signature of Owner

Date

Office Use Only

DIVISION ENGINEER'S REQUIREMENTS:

Dam I.D. 100525

Signature of Division Engineer

Date

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² "Vertical Height" is measured from the elevation of the lowest point of the natural surface of the ground or the invert of the outlet conduit (whichever is lower) where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam.

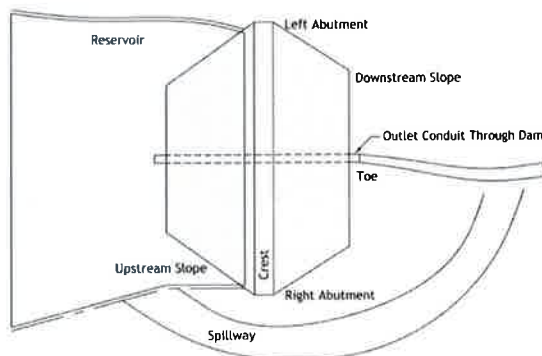
³ "Freeboard" is the vertical distance from the bottom of spillway to the crest of the dam. Minimum Freeboard is 3 feet.

⁴ If construction in reservoir intercepts groundwater, a well permit is required. (Well permit applications can be found at www.water.state.co.us)

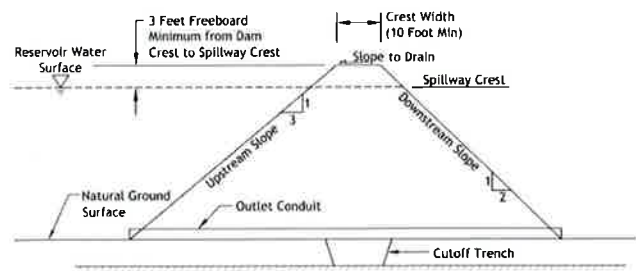


DAM SAFETY BRANCH Specifications for Construction of Non-Jurisdictional Dams

- **Site Selection:**
 - Foundation soils should be firm to provide adequate support for the embankment and should have low permeability to allow for water retention. Site selection should consider potential downstream property damage in the event of a dam failure. Construction of dams in boggy areas, areas with non-uniform fractured rock, or sands/gravels is not recommended and an engineer should be hired to evaluate the site conditions. Any part of the reservoir basin excavated below grade cannot expose groundwater.
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- **Outlet**
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 - To determine the minimum spillway width, see the attached table for your area and drainage basin size.
- **Example Plan View and Cross Section**



Plan View



Cross Section Through Dam at Outlet