AGENDA ITEM HISTORY SHEET

ITEM TITLE	AGENDA NO. 2026-
Amending Ord 2019-31 Section 1000.7 Safety	AGENDA DATE: 7/28/2026

FUNDING CERTIFICATION (Finance Director) (Signature, if applicable)

MANAGEMENT STAFF REVIEW (Signature)

MAYOR (Signature)

ITEM HISTORY (Previous Council reviews, action related to this item, and other pertinent history)

Previous ordinance passed in 2019. Not further reviews or actions have occurred.

ITEM COMMENTARY (Background discussion, key points, recommendations, etc.) Please identify any or all impacts this proposed action would have on the City budget, personnel resources, and/or residents.

Amending 2019-31 Section 1000.7 Safety to mandate more stringent safety requirements to protect the citizens of the City of Bryant from hazards that could be involved with detention or retention ponds. Review was triggered by recent event within the City of Bryant.

(This section to be completed by the Mayor)

ACTION PROPOSED (Motion for Consideration)

Propose to call for a motion to approve by Bryant City Council.

ORDINANCE NO. 2026- ___
AN ORDINANCE AMENDING THE CITY OF BRYANT STORMWATER MANAGEMENT MANUAL 2019-31 SECTION 1000.7. AMEDNING SAID ORDINACE AND SECTION FOR THE PURPOSE OF PROTECTING CITY BRYANT CITIZEN, CHILDREN AND PUBLIC SAFETY AND MANDATING FURTHER SAFETY REQUIREMENTS.

WHEREAS, the City of Bryant must protect all citizens within the Corporate City Limits of the City of Bryant; and

WHEREAS, the City of Bryant finds it necessary to ensure public safety and increase safety regulations; and

WHEREAS, The City of Bryant finds it necessary to imposed more stringent safety requirements when pertaining to retention or detention basins.

1000.7 SAFETY

When considering safety as it relates to stormwater detention storage facilities, there are far too many possible variations to name them all. However, there are two distinct areas of concern that should always be addressed in addition to the many other possibilities.

1. Protection of the public, particularly children.
2. Protection against catastrophic failure.

Detention basins shall be designed to protect the safety of any children or adults coming in contact with the system during runoff events. Safety of storm water drainage system components is always a principal design criteria. Following are some safety measures that should be considered:

The use of fencing around detention and retention basins will be required around the full perimeter of all new basins. A minimum of a 6' tall chain length PVC-coated fence, with a minimum 16' access gate shall be installed along the full perimeter of the basin.

a. If fencing is used, at a minimum, it will be constructed five (5) feet offset from the bottom slope of the basin to allow for the movement of equipment and personnel for maintenance and inspection purposes.
b. The shorelines of all detention basins at 100-year capacity shall be as level as practicable to prevent accidental falls into the basin and for stability and ease of maintenance.
c. The sideslopes of the banks of detention basins shall not be steeper than 3H:1V.
d. All detention basins shall have a level safety ledge extending three (3) feet into the basin from the shoreline and two (2) feet below the normal water depth.
e. Velocities throughout the drainage system shall be controlled to safe levels taking into consideration rates and depths of flow.

There are obviously many other considerations concerning safety issues such as safety measures implemented during construction and maintenance. The primary focus of this section is to draw attention to the general subject, and prompt the designer to consider all possibilities that may be of consequence or unique to his/her particular project.

With regard to children, it is necessary to assume that they will attempt to play in the area while unattended. This can become an even greater concern when detention is located in a residential area or near a school. Some safety considerations that relate more specifically to children are as follows:

a. Maintain minimum depths to deter the possibility of accidental drowning.
b. Flatten slopes to avoid steep embankments that can trap a person in the pond in the event they lose their footing. Flattened slopes will also allow safer maneuvering of lawn tractors and other maintenance equipment.
c. Rough surfaces on the slopes allow stable a foothold to avoid falling in, and to afford traction for an easy escape. This is the purpose for not allowing synthetic liners that become very slippery when wet.
d. Fencing will help deter access to the pond and structures.
e. "No Trespassing" signs will be required to notify public of potential risks. Signs shall be placed on all four side of the basin.

Velocities, along with inlet and outlet works is another safety risk that merits consideration. If a person becomes trapped in a pond, minimal velocities will provide a better opportunity for the person to escape from the pond, as well as provide an improved function of the system. Inlet openings should be sized small enough to not allow a person to pass through, or they should otherwise be protected with a screen or grate. Manhole lids and other removable fixtures should be secured to deter tampering or removal.

With regard to catastrophic failure, properly designed embankments and structures are far less prone to failure. Failures can often be attributed to oversights, calculation errors and improper construction. A good understanding of existing and imported soils, in combination with placement and compaction is necessary. Construction of keyways, clay cores and anti-seep collars are critical to deter seepage and undermining. A properly designed outlet structure and spillway with adequate freeboard should avoid overtopping, un-controlled runoff and downstream flooding problems. Proper surface protection such as rip rap, armor and solid sodding will avoid failures caused by erosion. Routine maintenance will assure an efficient working system that will deter possible future problems.

Each project is unique and requires its own individual consideration concerning safety. The issues that were mentioned are certainly critical considerations, but many others can exist. Safety becomes an even more crucial factor when attempting to incorporate recreational facilities into the design. It is the responsibility of the design engineer, contractor and owner to determine and incorporate safety measures throughout the design, construction and maintenance of all stormwater and detention facilities whether publicly or privately owned.

Outlet safety considerations include safety to the general public and to the facility itself. The outlet works create a potential hazard when in operation due to the possibility of a

person being carried into the opening. Grating or trash racks are often used; however a person can be forced against the grate or trash rack with substantial pressure, preventing escape. Low entrance velocities at the trash racks are recommended.

Outlet works can be designed to reduce the hazard to the public where heavy recreational use is anticipated. For instance, a vertical riser of concrete, timber, or steel can have a series of openings of 12 inches or less from top to bottom with sufficient total area to cause low velocity at the entrances, if compatible with hydraulic requirements. The top of such risers can be grated, or even closed. In some instances the outlet works can be fenced. Appropriate signing is sometimes used to warn the public of the safety hazards involved at the outlet works.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BRYANT, AS FOLLOWS:

SECTION I: The City of Bryant deems it necessary to mandate more stringent safety requirements to protect the citizens of the City of Bryant from hazards that could be involved with detention or retention ponds.

SECTION II: This ordinance does not affect any detention or retention pond that is currently in place or has prior approval before the passage of this ordinance.

SECTION III: Failure to comply with this ordinance will result in a citation from the City of Bryant Stormwater Department.

SECTION IV : If any section, subsection, sentence, clause, or phrase of this ordinance is for any reason held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance.

PASSED AND APPROVED this _____day of July, 2026.

APPROVED: ATTEST:

_____ _____

Chris Treat, Mayor Mark Smith, City Clerk