

**WORK SESSION AGENDA
WYOMING CITY COUNCIL MEETING
CITY COUNCIL CHAMBERS**

Monday, February 10, 2014, 7:00 P.M.

- 1) Call to Order**
- 2) Student Recognition**
- 3) Public Comment on Agenda Items (3 minute limit per person)**
- 4) Bayberry Flooding Evaluation**
- 5) Repeal of Ordinance Regulating Amusement Machines**
- 6) Any Other Matters**
- 7) Acknowledgement of Visitors/Public Comment (3 minute limit per person)**

MEMORANDUM

DATE: February 5, 2014

TO: Curtis L. Holt, City Manager

FROM: William D. Dooley, Director of Public Works

SUBJECT: Bayberry Flooding Evaluation

On Monday, February 10, 2014, representatives of the engineering firm, Fishbeck Thompson Carr & Huber (FTCH), are planning to attend the City Council's study session in order to present the conclusions and recommendations from their report, titled: *Bayberry Flooding Evaluation*. A summary of their conclusions and recommendations is attached to this memo. A copy of the full report was previously provided to the City Council. FTCH is planning to provide a brief presentation then answer any specific questions which the City Council or members of the audience may have. Residents affected by the flooding in September 2013 have been invited to attend the Council's February 10 study session and share their questions as well.

In their report, FTCH recommends that a number of steps be taken, by various parties, in order to reduce the risk of future flooding in the Bayberry Farms area. We recommend that Wyoming pursue the following recommendations involving the public infrastructure and design standards:

1. Pay the Bayberry Market owner to increase the capacity of his detention basin and overflow swale, beyond the required 25-year storm capacity, in order to accommodate additional stormwater runoff from Byron Center Avenue. Estimated cost of \$60,000 to \$100,000.
2. Increase the height of the landscaped berm along the south side of 56th Street in order to reduce the occurrence of overtopping, and further evaluate the need for any associated stormwater detention. Estimated cost of \$30,000 to \$50,000.
3. Install additional inlet capacity in Health Drive in order to capture excess stormwater runoff and direct it into the Metro Health stormwater detention basin. Estimated cost of \$60,000 to \$100,000.
4. Adopt the latest (December 2013) version of the Kent County Drain Commissioner's stormwater design standards, which require that developers design for the safe passage of overland stormwater runoff from a 100-year storm.
5. Adopt the *Atlas 14* rainfall data as the basis for stormwater calculations in Wyoming.
6. Require that developers provide engineer-certified construction as-built drawings for all stormwater management systems, and correct any deficiencies prior to issuing Certificates of Occupancy.
7. Require that builders certify that minimum building opening elevations and lot grading are constructed in accordance with approved site or subdivision plans prior to issuing Certificates of Occupancy.

CONCLUSIONS

The rainfall of September 9, 2013, was an extreme event and can be categorized as a 400-year storm for the most intense 2-hour period using current rainfall frequency references. This event greatly exceeded the rainfall depths and intensities used for design of stormwater systems. City and private stormwater systems in the study area were taxed, but generally performed well when tested with an extreme rainfall event. Where flood damage occurred, it was in low areas without an adequate overland flow route.

Analysis shows the Bayberry Farms and City storm sewer systems function satisfactorily for the 10-year design storm. One exception is Byron Center Avenue, 200 feet south of 56th Street, which begins to discharge water through the Bayberry Market North commercial development.

Although the low area in 56th Street, 600 feet west of Byron Center Avenue, discharged stormwater to the Senior Apartments parking lot during the rainfall event of September 9, 2013, the storm sewer meets City standards for trunk sewers (10-year) and overland flow paths (25-year).

The Bayberry Market detention basin was found to have several deficiencies. The outlet pipe has become buried, which increases the chance of overflow. The basin is undersized for the 25-year design storm. Most importantly, the berm on the west side of the basin is too low and overflows are directed to the Condominiums and Senior Apartments storm sewers, which were not designed for this additional water. Finally, the upper swale downstream of the overflow spillway has only 0.5 foot of depth before cresting and flowing into the lower swale of the Condominiums.

The walk-out basements of the Condominiums are in a topographically low area without an available overland flow route. If the capacity of storm sewer inlets is exceeded and water ponds more than 3.5 feet, the walk-out basements will flood. A minimum of 1 foot of freeboard is provided between the 25-year design high water level in the swale and the lowest opening by City design standards. However, it appears the swale may have filled somewhat over time (noted during the as-built survey), which reduces storage capacity and can increase the risk of flooding. Analysis indicates overtopping of the Bayberry Market detention basin was the primary factor in flooding of the Condominiums.

The Senior Apartments are located on a flat plateau with higher ground to the north and east. Storm sewer inlets encircle the apartment building and are all very close in elevation with drainage divides in between. The drainage divides are 1 foot lower than the finished floor of the Senior Apartments and act as overflows for ponded water around catch basin inlets. The elevation of these drainage divides is an important factor that prevented the flooding of the apartment units. Analysis indicates the majority of runoff during the rainfall event of September 9, 2013, came from the directly contributing area and overflows from the Bayberry Market detention basin.

Analysis shows the runoff contribution from Health Drive that crossed Byron Center Avenue and flowed into the Bayberry Market parking lot would not impact the design of the Bayberry Market detention basin since it occurs for events greater than the design storm event. However, this additional stormwater does take up capacity in the Bayberry Market and Condominium storm sewer during extreme events when the Condominiums have been shown to be flood prone. Drainage of the lower swale in front of the walk-out basements cannot occur when water is backed up in the 30-inch storm sewer downstream.

RECOMMENDATIONS

Recommendations are provided to address identified stormwater system deficiencies and present feasible options to the City and private landowners to further minimize flood hazard risk. Recommendations are categorized by maintenance, capital improvements, and design standards.

MAINTENANCE

The following maintenance activities should be completed by the owners of the private stormwater facilities:

1. *Clean and restore the low flow outlet of the Bayberry Market detention basin.*

This outlet was found to be buried during the as-built survey. Consideration should also be given to design improvements to prevent the inlet from becoming buried. At a minimum, the developer/property owner should establish an annual maintenance plan that includes a dedicated budget, regular inspections, and a timeframe for required actions and provide a copy to the City. If such a plan already exists, the developer should review the plan for needed updates and proceed to implement regular maintenance.

2. *Regrade the lower swale in back of the Condominiums to restore design depth.*

Although modeling showed sufficient freeboard greater than 1 foot is present for the 25-year design storm, any additional storage volume regained in the drainage swale will increase the factor-of-safety against flooding of walk-out basements. At a minimum, the developer/property owner should ensure the swale is regraded to design depth and slopes.

CAPITAL IMPROVEMENTS

The following capital improvements are recommended:

1. *Berm the Bayberry Market detention basin and overflow route to comply with the City design standards.*

The developer/land owner should bring the Bayberry Market detention basin into compliance with the City design standards for a 25-year storm. Safe passage for overflows from the emergency spillway for the design discharge with a minimum of 1 foot of freeboard should also be provided along the overflow route in the upper swale. This is important since any overflow from the upper swale will spill over to the lower swale in back of the Condominiums.

2. *Consider expanding the Bayberry Market detention basin to accommodate the additional contribution of stormwater runoff from Byron Center Avenue.*

With the detention basin brought up to design standards, it will still be undersized for the additional contribution of stormwater runoff from Byron Center Avenue, causing the overflow spillway to be used more frequently and taking up more capacity in the Condominium storm sewer. The City should consider taking ownership of the detention basin and expanding it to accommodate the additional offsite stormwater and reduce a major source of the flooding at the Condominiums and Senior Apartments. The estimated project cost for this alternative is \$60,000. This is 5 times less than the cost of the alternative to upsize the storm sewer in Byron Center Avenue and 56th Street, and could be completed in lieu of the storm sewer improvement project

3. *Floodproof high-risk Condominium units to achieve a greater level of flood protection.*

The Condominiums would have a 25-year level of flood protection with the Bayberry Market detention basin brought up to design standards, although the overflow spillway would be expected to engage more frequently as described above. The Condominiums would have a 100-year level of flood protection with the Bayberry Market detention basin brought up to design standards, expanded to account for additional offsite stormwater, and with the upper swale redesigned to store the water discharged from the spillway during the 100-year storm in excess of the downstream storm sewer capacity. In either case, floodproofing could be pursued by individual property owners if a greater level of flood protection is desired.

4. *Further evaluate the need for a City stormwater detention area on the north side of 56th Street.*

Water from 56th Street overtopped the south side of the roadway and flowed into the parking lot of the Senior Apartments during the rainfall event of September 9, 2013. The stormwater conveyance system meets the City standards for this reach of storm sewer and roadway. The City has also added another catch basin inlet on the south side of the road (Figure 6). While berming will reduce the occurrence of water overtopping the south side of the road, it will increase the depth and extent of roadway flooding and/or flooding to the north. Before the City agrees to berming, further evaluation of the impacts to the north side of 56th Street is needed. Establishment of a stormwater detention area with associated easements or land acquisition is the most reliable way to provide for a higher level of flood protection if the City determines it is warranted. The estimated project cost, not including land or easement acquisition, is \$100,000 or less depending upon the final size. At a minimum, an emergency action plan should be put in place for anticipated road closures in this location during large storm events.

5. *Regrade Health Drive and add additional inlets to route excess flood flows to the existing Metro Health detention ponds.*

The City does not require developers to detain stormwater runoff onsite for the 100-year or larger storms, particularly when the runoff historically flowed to a given outlet. However, it appears excess stormwater flows from Health Drive can be intercepted and directed to existing onsite detention ponds to reduce the impacts to Byron Center Avenue and the Bayberry Market storm sewer system. Storm drainage improvements in Health Drive are estimated at a project cost of \$60,000.

6. *Floodproof individual basements and lowest openings.*

Analysis shows the Bayberry storm sewer system is adequately sized for the 25-year design storm as specified in City standards when no available overland flow path exists. The isolated basement flooding that occurred on September 9, 2013, was due to the extreme nature of the rainfall event. Private property owners who experienced basement flooding may choose to floodproof through the use of footing drains and sump pumps, waterproofing, and/or elevation of low openings.

DESIGN STANDARDS

The following recommendations are provided to the City for future development activities:

1. *During design review, re-emphasize the requirement to provide safe passage of overland flow routes for extreme flood events and require the same for storm sewers, open channels, and detention/retention basins.*

City (and County) stormwater design standards require checking that safe passage is available by overland flow routes for extreme events up to the 100-year flood. If overland flow routes do not exist, the design standard is raised from a 10-year to a 25-year for open channels. More recent Kent County standards require a 100-year design for both storm sewers and open channels. Checking for safe passage and setting critical overflow elevations is an important design consideration. The locations where flood damage occurred (or did not occur) in the study area during the rainfall event of September 9, 2013, was due in great part to whether or not an overland flow route was available at an acceptable elevation and to an adequate outlet. Flooding will always occur and flood prone areas will always exist, but identification of these areas is important to minimize flood damage. The storm used for the overland flow path design standard should be clearly specified for storm sewers, open channels, and detention/retention basins, including

freeboard requirements. The City should decide whether or not to raise the standard from the 25-year to the 100-year storm.

2. *Incorporate Atlas 14 rainfall data into the City design standards.*

Atlas 14 includes the larger magnitude rainfalls experienced with increasing frequency during the last 20 years or so. As a result, rainfall amounts have increased for the standard design storms (10-, 25-, and 100-year). It is important to make use of the latest data for new and redevelopments as weather patterns change and the City is continually challenged to manage flood risks.

3. *Require as-built certifications from developers.*

City ordinance language should be modified if it does not currently require engineer-certified construction record drawings (as-builts) be submitted for the stormwater management systems for all private developments. The KCDC currently requires as-builts for final plats and developments established as county drainage districts under Section 433 of the Michigan Drain Code. As-builts should be required prior to issuance of a Certificate of Occupancy and return of surety. The ordinance language should include a list of the minimum as-built information required and any GIS digital submission requirements. A procedure should also be determined for the receipt, approval, and filing of construction record drawings with all costs incurred clearly identified to the responsibility of the developer, including a final site inspection as the City deems necessary.

4. *During design review, pay special attention to minimum building openings.*

Block grading plans including minimum allowable building opening elevations are required by the KCDC for developments under their review and included in the standards used by the City. Reviewing engineers should closely evaluate proposed minimum building openings to ensure sufficient freeboard is provided above design high water levels and along overland flow routes. When individual lots are developed, the City building inspector should require an elevation certificate and certification of lot grading from the builder prior to issuing an occupancy permit.

Staff Report

Date: February 4, 2014
Subject: Ordinance Sections 14-231 through 14-246 Amusement Machines
From: Heidi A. Isakson, City Clerk
Meeting Date: February 10, 2014 Work Session

Recommendation:

Staff recommends repeal of Ordinance Sections 14-231 through 14-246, Amusement Machines, as obsolete.

Sustainability Criteria:

Environmental Quality – No impact.

Social Equity – The regulation of amusement machines was once considered necessary by the City of Wyoming to prevent illegal gambling, to regulate and control the size and location of amusement machines, regulate the concentration of amusement machines at any one location, and protect the public welfare and peace. The way amusement machines are designed, marketed and used no longer represent a significant risk to the public welfare and peace.

Economic Strength – Revenue from amusement machine license fees has averaged about \$,1500 per year over the past three years. Individual companies have paid license fees ranging from \$50 to nearly \$300 per year. These fees would not be replaced.

Discussion:

The City of Wyoming no longer identifies significant risk to public health, safety and welfare from the ownership and operation of amusement machines which would warrant specific machine regulations.

Any amusement machines or use of amusement machines that constitutes gambling under state law would still be prohibited under state law. Repeal of this ordinance would not legalize any amusement machines currently not legal; it would allow the value of noncash prizes for ticket redemption games to rise from \$150 (the current ordinance) to \$500 (state law).

Budget Impact: Business license fee revenue would be reduced by approximately \$1,500 per year.

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Sec. 14-231. Definitions.

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Amusement machine means any coin or token operated device of a mechanical, electrical or similar nature, which may be operated by one or more persons as a game, entertainment, amusement or test of skill. It shall include, but not be limited to, video games, pinball machines, merchandising machines, crane games, electronic darts, shuffleboard or other similar devices.

Amusement parlor means an establishment having six or more amusement machines, whether located in a single structure or place of business or as a separate portion of any location, including a shopping center or a shopping mall.

Gambling means any person who directly or indirectly takes, receives, accepts or transfers from any person or any other source any money or thing of value, where such payment, transfer or delivery is alleged to be or will be or is contingent upon the play, use or score of any amusement machine.

Location owner means that person who has the legal right of possession of the premises.

Machine owner means the owner of any amusement machine.

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Manager means that person who has charge, care or supervision of the premises.

Person means any individual, firm, corporation, association or partnership.

Play means the manipulation of an amusement machine by a person to achieve the result for which the machine is designed.

Player means any person who plays an amusement machine.

Premises means that lot, parcel of land, building or any part thereof on which an amusement machine is located.

Private dwelling means any building used for residential purposes, no part of which is open to the public.

Use means the operation of the machine in the manner for which it was designed or to refer to any outcome as a basis of any form of calculation.

(Code 1983, § 10.61; Ord. No. 14-02, § 1, 8-19-02)

Cross reference— Definitions generally, § 1-2.

Sec. 14-232. Machine owner to obtain amusement machine license.

No machine owner shall have any amusement machine owned by him in any place in the city, other than a private dwelling, places of employment, private clubs, recreational areas not open to the general public, or in a place not open to the public where repairs are to be made on the amusement machine, without having first obtained an amusement machine license for each such machine.

(Code 1983, § 10.62)

Sec. 14-233. Required information for amusement machine license.

Prior to being issued a license each year or part thereof for an amusement machine, all machine owners shall furnish to the city clerk the following information:

- (1) The name, address and telephone number of the owner.
- (2) The number of licenses needed.
- (3) Such machines are incapable of returning or giving to the player thereof anything of value, excluding free games or any part thereof.

If any part of such statement is incorrect, the license shall be revoked.

(Code 1983, § 10.63)

Sec. 14-234. Prohibited machine features.

No person shall own, keep or have in his possession in any place other than a private dwelling, nor shall any license be issued for, an amusement machine, which is in any manner capable of returning or giving to the player thereof anything of value. However, free games or any part thereof are allowed. Machines designated for ticket redemption games for noncash prizes not to exceed a retail value of \$150.00 are excluded.

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(Code 1983, § 10.64; Ord. No. 14-02, § 2, 8-19-02)

Sec. 14-235. Location license.

No location owner shall keep or have located on the premises any unlicensed amusement machines without having first obtained a license from the city clerk. Such license shall be obtained by the following procedure:

- (1) The location owner shall file with the city clerk an application, which shall include the information required in [section 14-233](#)
- (2) The name and location where the machines are to be located, the number of machines to be located in the location and the owner of such machines shall be furnished.
- (3) The fire inspector shall determine if the premises and the machines comply with all fire codes.
- (4) The building inspector shall determine if the location is in compliance with all provisions of this division and of other applicable electrical and building codes.
- (5) The police chief shall determine if the location has been guilty of any violations of any code or statute and whether the location has been the subject of frequent public complaints.
- (6) The license application shall then be reviewed for approval by the city manager, and, if approved, the license shall be issued by the city clerk after payment of the fee as established by resolution of the city council from time to time and on file in city hall.
- (7) In addition to the grounds provided for license revocation under [section 14-52](#), a location license may be revoked for violations of this division in or for repeated instances of disturbances or violations of the public welfare and peace at or immediately outside the location by those persons who are attending or planning to attend the location where the amusement devices are located.

(Code 1983, § 10.65)

Sec. 14-236. Amusement parlor license.

Any location having six or more amusement machines shall obtain an amusement parlor license in accordance with the following procedure and requirements:

- (1) The license shall be obtained by the procedure as provided in [section 14-235](#)
- (2) An amusement parlor must meet the qualifications as provided in [chapter 90](#)
- (3) No more than 20 amusement machines shall be allowed in any amusement parlor, except where the site on which the property is located exceeds five acres in size and the site is primarily developed for recreation or amusement purposes, subject to special use approval by the planning commission as provided in [chapter 90](#). All amusement machines shall be currently licensed.
- (4) In addition to the grounds provided for license revocation under [section 14-52](#), an amusement parlor license may be revoked for violations of any of the provisions of this division or for repeated instances of disturbances or violations of the public welfare and peace at or immediately outside the location by those persons who are attending or planning to attend the location where the amusement devices are located.

(Code 1983, § 10.66; Ord. No. 14-02, § 3, 8-19-02)

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Sec. 14-237. Denial of location or amusement parlor license.

The city manager may deny the issuance of a license to a location owner or an amusement parlor license for any of the following reasons:

- (1) Failure to receive approval by the fire inspector, building inspector or police chief for the reasons applicable to each one in [section 14-235](#)
- (2) Misrepresentation of any material fact on the application for obtaining the license.
- (3) Prior violations of any provisions of this division relating to the location.
- (4) Where it appears that the granting of the license will be harmful or detrimental to the operation of any adjoining or nearby business; harmful or disruptive to the normal functioning of any public or private school; harmful to the quiet enjoyment of any residence, church, school or other adjoining or nearby structure; or result in an extraordinary demand for police, fire or other municipal services by nature of its operation.
- (5) If a license is denied, the city manager shall make findings of fact as to why the license was denied, based upon the prior subsections of this section.
- (6) If the city manager has denied a license, the applicant or licensee may appeal such denial to the city council, who shall hold a public hearing on the denial and shall have the power to reverse, approve or modify the decision of the city manager. The city council shall, in its determination, make findings of fact as to the reasons for its decision, and such reasons shall be based upon the terms and conditions of this division.

(Code 1983, § 10.67)

Sec. 14-238. Location of machine.

As a condition to receiving a license, a location owner shall furnish to the city clerk the location of the amusement machines at the location and shall sign a statement that he is the location owner of such premises. Within the location, each amusement machine shall be located in such a way that it is being supervised by the owner or one or more of the employees of the owner.

(Code 1983, § 10.68)

Sec. 14-239. Number of machines allowed.

No location shall be allowed more than five amusement machines without having obtained a license for an amusement parlor and be in compliance with the provisions of this division regarding such establishments.

(Code 1983, § 10.69)

Sec. 14-240. Display of licenses.

A license, with the number of machines permitted, shall be prominently displayed in the premises.

(Code 1983, § 10.70)

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Sec. 14-241. Nonlicensed machines.

If any amusement machine required to be licensed under this division is not so licensed or, though licensed, is capable of returning or giving to the player thereof anything of value, excluding free games or any part thereof, or machines designated for ticket redemption games for noncash prizes not to exceed a retail value of \$150.00, such amusement machine may be immediately seized by the police or authorized official designated by the city manager as evidence pending a hearing to revoke the license of the machine owner thereof or disposition of such charges as may be brought against the machine owner. After such final disposition of the hearing, which shall include any appeal therefrom, the machine shall be released to the machine owner or his authorized representative. The city may charge reasonable storage charges for the duration of any storage of any amusement machines.

(Code 1983, § 10.71; Ord. No. 6-96, § 3, 4-1-96; Ord. No. 14-02, § 4, 8-19-02)

Sec. 14-242. Use for gambling.

No person shall use any amusement machine for any type of gambling.

(Code 1983, § 10.72)

Sec. 14-243. Operation of business premises without amusement parlor license.

No location owner shall allow persons on the premises solely for the purposes of operating the amusement machines located in the premises, without having obtained an amusement parlor license.

(Code 1983, § 10.74)

Sec. 14-244. Licenses and fees required.

Licenses required by this division shall be obtained from the city clerk pursuant to this division and this chapter, and the fee provided for by resolution of the city council from time to time and on file in city hall shall be paid.

(Code 1983, § 10.75)

Sec. 14-245. Lost licenses.

If any license required by this division becomes lost, the licensee, upon signing and presenting an affidavit to the city clerk that the license is lost, shall receive a duplicate license from the city clerk for an additional fee as set by resolution of the city council from time to time, which license shall expire on the date the lost license would have expired. If there has been a duplicate license issued and the lost license is found, such lost license shall be destroyed and shall not be displayed after the duplicate license has been issued.

(Code 1983, § 10.76)

Sec. 14-246. License to pertain to premises.

No location owner shall display, cause to be displayed or permit to be displayed a license issued pursuant to this division which does not pertain to the premises for which the license was issued.

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(Code 1983, § 10.77)

Secs. 14-247—14-275. Reserved.