


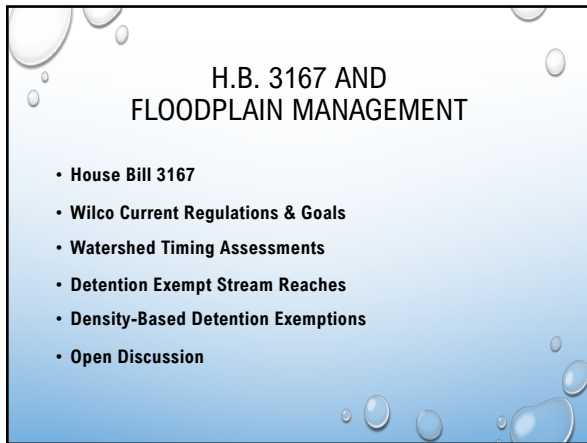


H.B. 3167 AND FLOODPLAIN MANAGEMENT

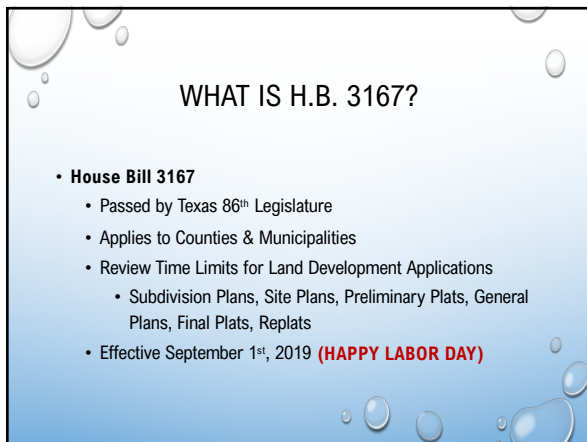
TFMA 2019 Fall Conference – August 29th, 2019
 Terron Evertson, PE, CFM – Williamson County Engineer
 David Zwernemann, PE, CFM – Williams County Floodplain Administrator
 Colin Slagle, PE, CFM – Doucet & Associates, Inc.



H.B. 3167 AND FLOODPLAIN MANAGEMENT

- **House Bill 3167**
- **Wilco Current Regulations & Goals**
- **Watershed Timing Assessments**
- **Detention Exempt Stream Reaches**
- **Density-Based Detention Exemptions**
- **Open Discussion**



WHAT IS H.B. 3167?

- **House Bill 3167**
 - Passed by Texas 86th Legislature
 - Applies to Counties & Municipalities
 - Review Time Limits for Land Development Applications
 - Subdivision Plans, Site Plans, Preliminary Plats, General Plans, Final Plats, Replats
 - Effective September 1st, 2019 (**HAPPY LABOR DAY**)

WHAT IS H.B. 3167?

• Agency Initial Review – 30 days

- Clock starts at Planning Commission approval / receipt by Commissioner's Court
- Must Approve, Approve with Conditions, or Disapprove
- May be extended 30 days upon applicant request



WHAT IS H.B. 3167?

• Initial Applicant Response

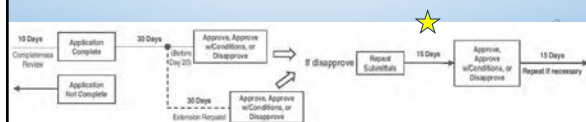
- No deadline can be established by reviewing agency
- Must satisfy specific conditions or disapprovals



WHAT IS H.B. 3167?

• Agency Subsequent Review(s) – 15 days

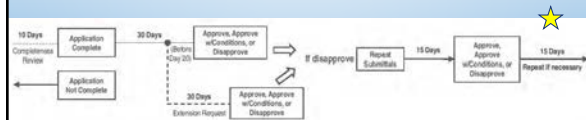
- Clock starts at Applicant Response Submittal
- Must Approve, Approve with Conditions, or Disapprove
- Disapproval for conditions/reasons in Initial Review *only*
- Repeat if necessary



WHAT IS H.B. 3167?

• Subsequent Applicant Response(s)

- No deadline can be established by reviewing agency
- Must satisfy specific conditions or disapprovals
- Repeat if necessary

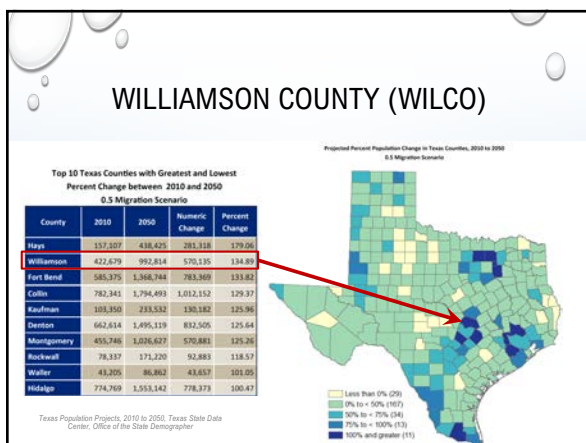


WHAT IS H.B. 3167?

• Other “Nuggets”

- Deadlines cannot be waived or extended upon agency request
- Legal burden of proof for disapproval is on agency
- Conditions/disapprovals
 - must cite specific law, statute, or order
 - must not be “arbitrary”
- Applicant may elect for *expedited* review process if adopted by reviewing agency

WILLIAMSON COUNTY (WILCO)



WILCO CURRENT REGULATIONS

- **Development Review/Regulation Issues**
 - Large quantity of submittals
 - Variable quality
 - Policy vs. Practice
 - Perceived fairness/consistency between developments
 - House Bill 3167 **(NEXT WEEK)**

WILCO CURRENT REGULATIONS

- **Subdivision Regulations - Drainage**
 - Storm water management controls, when needed, shall be designed, constructed and maintained to restrict the rate of drainage from the platted area to the rate of drainage of the land in its natural state...
 - Storm water management controls are to be designed by a Registered Professional Engineer using a basis of a 2, 10, and 100-year storm. Exceptions may be allowed when the Owner can demonstrate that downstream property shall not be adversely affected...
 - Drainage calculations shall be made using the edition of the City of Austin's Drainage Criteria Manual in effect as of the date of these Regulations or other methods satisfactory to the County Engineer.

WILCO REGULATION GOALS

Purpose and Goal

To establish necessary subdivision regulation changes that are in keeping with the goals of all stakeholders:

Williamson County

1. Health and safety - floodplain management, traffic control, etc.
2. General welfare- effective transportation system
3. Reasonable future maintenance costs – pavements, drainage, etc.

Development Community

1. Clear and predictable regulations
2. Consistency
3. Fairness
4. Attainable housing

WILCO REGULATION GOALS

- **Plan of Action**
 - Detention Policy Guidance – Doucet & Scheibe Team
 - Other updates – Atlas 14, submittal requirements, completeness check, review checklists, internal tracking...
 - Stakeholder Input
 - Subdivision Committee Meetings
 - Subdivision Committee Technical Advisor Meetings
 - Local Floodplain Administrator Meeting
 - Public Meeting

OTHER REGULATIONS

- **Community Questionnaire**
 - Focus on detention applicability determinations
 - Focus on similar conditions to Williamson County
 - Counties: Travis, Bexar, Hays, Travis, Denton, Bastrop, Harris, McLennan, Wharton, Colorado, Jackson...
 - Cities: Georgetown, Round Rock, Leander, Liberty Hill, Cedar Park, Hutto, Pflugerville, Taylor, Austin, College Station, San Marcos...

OTHER REGULATIONS

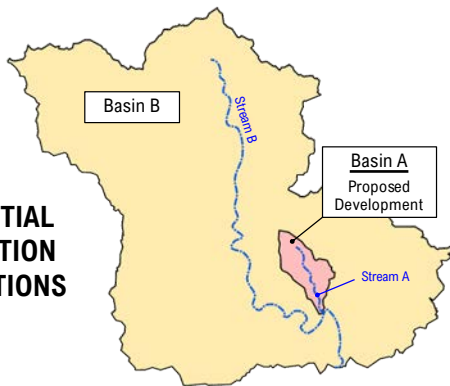
- **Community Questionnaire**
 1. Management of submittal quantity & quality
 2. Detention waivers based on watershed timing/modeling, development or lot size, or other basis
 3. Specific engineering methods/software requirements
 4. Design storms and watershed development conditions
 5. Extended detention of frequent events for stream protection
 6. Regional Stormwater Management Program (RSMP)
 7. Interagency coordination

OTHER REGULATIONS

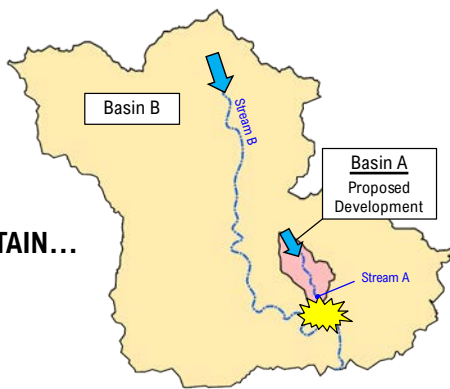
• Community Questionnaire

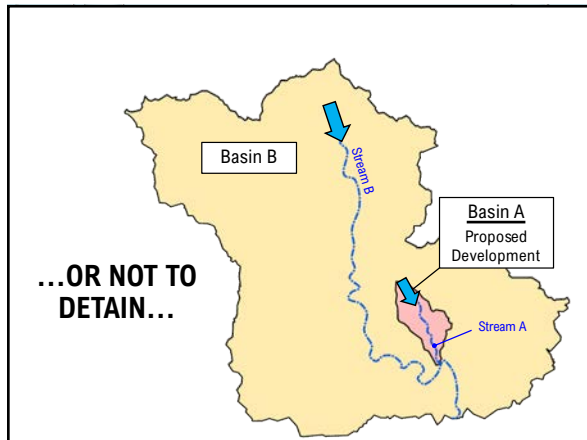
- Most allow detention exemptions based on lot size/density
- Most require pre-development peak flow rate match only
- Some allow detention waiver if no adverse impact demonstrated
- Few require extended detention of frequent events
- Few have regional watershed timing assessments
- Few have Regional Stormwater Management Programs

POTENTIAL DETENTION EXEMPTIONS



TO DETAIN...





CAN YOU "BEAT THE PEAK"?

- **Floodplain Mgmt Challenges**
 - Conveyance Impacts (Stream A)
 - Detention controls peak discharges, but not excess volume
 - Cumulative effects of many detention ponds throughout watershed
 - Real-world storms: spatial and temporal variability

Basin B

Stream B

Basin A
Proposed Development

Stream A

WATERSHED TIMING ASSESSMENT

- WATERSHED TIMING ASSESSMENT, COLLEGE STATION, TX (Watearth, 2012)

Required

Evaluate

Mouth/Outlet

Hydrologic Analysis (Type for simplified method in Appendix C)

May use simplified method in attachment 1 for residential projects up to 25 acres or commercial high-density, or street use up to 10 acres. For larger projects, use alternative modeling method.

- Detention Requirement Zones
 - Based on comparison of Site vs. Watershed "Time to Peak"
 - Requires study of each watershed
- Low Impact Development Techniques
 - Stream protection / water quality
 - Retention or Extended Detention of smaller rainfall events (2-yr or 1-2")

WATERSHED TIMING ASSESSMENT

- FULL SPECTRUM DETENTION STUDY, DENVER, CO
(Muller Engineering, 2015)

- Find the "Sweet Spot"
 - Upper 80% - "Full Spectrum" Detention
 - Lower 20% - Extended Detention of "Water Quality Control Volume"
 - Based on synthetic watershed
 - Validated with actual watershed study

WATERSHED TIMING ASSESSMENT

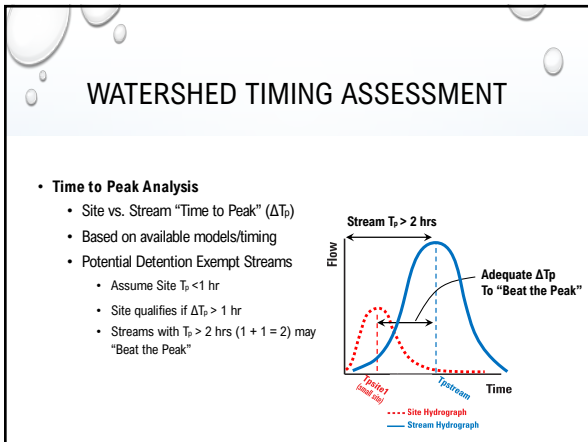
- WILCO PILOT STUDY – SAN GABRIEL RIVER WATERSHED

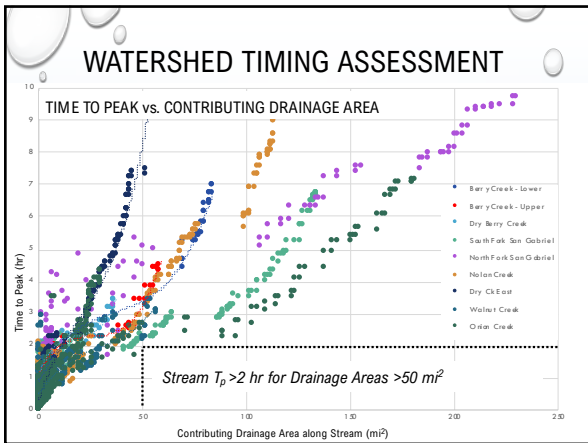
- Assume "Ultimate" Watershed
- Evaluate Critical Detention Zones
- Evaluate Time to Peak Differences
- Find the "Sweet Spot" with lowest discharges in watershed

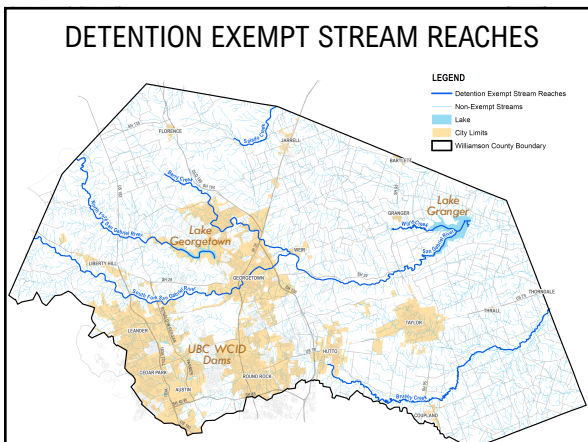
WATERSHED TIMING ASSESSMENT

- Critical Detention Zones
 - Dry Berry Creek
 - Berry Creek
 - Other Central Texas Streams

The graph plots discharge over time for three scenarios: Existing Conditions (blue), Ultimate (No Detention) (red), and Ultimate (With Detention) (green). The 'With Detention' scenario shows a lower peak and a later time to peak compared to the 'Without Detention' scenario.







DETENTION EXEMPT STREAM REACHES

- **Exemption Requirements**

- All land connecting the development to a Detention Exempt Stream Reach is owned by development parties, allowing discharge directly to a Detention Exempt Stream Reach,
OR
- Property easements are obtained and sufficient drainage improvements are constructed to safely convey flows through adjacent properties to a Detention Exempt Stream Reach.

DENSITY-BASED DETENTION EXEMPTIONS

- **Exemption Requirements**

- Plats with less than 3 residential lots
- Plats with all lots larger than 2 acres and less than 20% impervious cover
- Maintain sheet flow rather than unnecessarily channelize runoff

NEXT STEPS

- **Stakeholder Meetings**

- **Public Meeting**

- **Adoption of Recommendations**

- Detention Exempt Stream Reaches
- Density-Based Detention Exemptions
- Other Updates – Atlas 14, Submittal Requirements, etc...

QUESTIONS / DISCUSSION

- What are your community's development review challenges?
- What are your community's development review successes?
- How will HB3167 impact in your community?
- What is your community doing to prepare for HB3167?
- How might HB3167 affect flooding in your community?

THANK YOU!

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