

Text of e-mail correspondence with Austin Heritage Tree Foundation

On September 15, 2019, 7:16pm, Zoila Vega-Marchena, Ph.D. wrote:

Mark,

I have the following additional comments after reviewing the IWUI and the proposed COA wui code in detail. I'm also consolidating my previous comments below.

PROCESS:

- Within 6 months from council approval, develop best management practices for WUI code that shall be added to the City's technical manual with the rule process. Include the public in several working group meetings prior to the standard rules meeting.
- Establish a proactive process. AFD WUI should assess site, whether new development or remodel by homeowner, prior to any tree or vegetation work. Don't allow tree removal or creation of shaded fuel breaks without prior AFD Firewise assessment. Don't rely only on inspection after defensible space work.
- Emphasis should be on hardening the home, not defensible space because embers can travel long distances above shady fuel break.
- Make sure review of access roads and defensible space is proactive to minimize encroachment in ½ crz, damage to tree roots or unnecessary tree removal.
- Protect preserves and public land from unnecessary removal of trees and vegetation.
- Establish grants, rebates and/or tax incentives to help homeowners with the additional expense for ignition-resistant construction and/or landscape and tree work in the defensible space.

CODE:

- Include some brief introduction that emphasizes that hardening the home is more effective than defensive space.
- Define vegetation management plan, defensible space, hazard, 30 ft. moderate hazard, 50 ft. high hazard, 100 ft. extreme hazard, undeveloped land, fuel reduction treatment, shaded fuel breaks, ladder fuels. Be consistent with using these terms.
- Page 3, 102.4.2: Clarify that this code doesn't override protected trees and HTO ordinances.
- Defensible space in the wui should be consistent with the restriction on the requirements for ignition resistant construction in the wui. Require defensible space only in wui 50 ft or closer to a 40 acres or greater continuous area of light, medium and/or heavy fuels.
- Page 4, 107.2, change from "regulated by this code" to "regulated by this code for new and remodeled buildings and structures in wui within 50 ft. or closer to a 40 acres or greater continuous area of light, medium and/or heavy fuels. Or, change definition of wui in page 6 to limit it to wui 50 ft. or closer to a 40 acres continuous area of light, medium and/or heavy fuels.
- Page 7, 402.2.1 Access and 402.2.2 Water Supply, and page 8, 501.1 Scope: Change to "wui within 50 ft. or closer to a 40 acres or greater continuous area of light, medium and/or heavy fuels".

- Page 6, WUI definition, use original WUI definition that is simple and in line with Firewise: "That geographical area where structures and other human development meets or intermingles with wildland or vegetative fuel". But add "in 50 ft. or closer to a 40 acres or greater of continuous area of light, medium and/or heavy fuels."
- This code changes it to: "Any developed area where conditions affecting combustibility of both wildlands and built fuels allow for the ignition and spread of fire through the combined fuel complex". This is EXTREMELY hard to understand.
  - What are "built fuels"? "Combined fuel complex"?
  - What are the conditions that affect combustibility?
  - Why include ignition if what matters is the spread of fire? Without ignition there is no fire spread, but an ignited fire could be put out and thus there will be no fire spread.
- Page 5, 108.3 Site plan: Are overhead utilities and water supply systems included in site plans and residential and commercial building permit applications? If not, isn't important to have this information in the site plans?
- Page 5, 108.7 Vicinity Plan: What will be included in the "details for vegetation within 300 ft. " of the lot line? Will a tree survey of any tree larger than 8 inches be required? How will it be handled if portions of, or all of, the 300 ft are in public or another homeowner property?
- Clarify where are these distances being measured from: From the farther edge of home? Or from the farther edge of attached structures like decks?
- Page 6, "distinct hazard": Is that different from "hazard"?
- Page 6, "findings of fact": What are the components of the "findings of fact"? Is that the map? Or, is it based on the map plus other items? (referring to comment in this page)
- Page 8, 501.1 Scope: To be clear that this applies to remodels not just "construction," change from "buildings and structures located in the wui shall be constructed in accordance to" to "buildings and structures located in the wui within 50 ft. or closer to a 40 acres or greater continuous area of light, medium and/or heavy fuels shall be constructed or remodeled in accordance to."
- Page 10, Table 502.1, Fire Hazard Severity: To be consistent with Firewise, change from 150 ft. to 100 ft. Why was the 150 ft. distance used in the model when Firewise stipulates 30 ft., 50 ft. and 100 ft. defensible space?
  - I speculate that the 150 ft. is the "1.5x conforming" distance that allows exceptions to having to have Ignition Resistant Construction (hardening the home) as shown in table 503.1.
- Page 11, Table 503.1 Ignition Resistant Construction: Remove all of the "NR not required" exemptions (for 1.5x Conforming Defensible Space for Moderate Hazard With and Without Water Supply, 1.5x Conforming Defensible Space for High Hazards with Water Supply, and for Conforming Defensible Space with Water Supply and Moderate Hazard).

- No exemptions should be allowed for hardening the home because embers can fly above defensive space and shaded fuel breaks, and ignite a roof and home that has not been hardened.
  - Exemptions to hardening the home are particularly concerning when in addition water supply is not required if a “1.5x conforming defensible space” is provided. This means a defensible space 1.5 times the length required by Firewise. But, if embers land on the non-hardened roof and ignite it, how will the fire be put out to avoid spread if there is **no water supply**?
  - Additionally, there are two types of structures exempted from having Ignition Resistance construction regardless of the site and weather (wind) conditions: agricultural buildings or accessory structures not exceeding an allowed square footage, both cases when those are located at least 50 ft. from buildings with habitable spaces (page 8, 501.1). This assumes that embers from the agricultural or small building won’t fly and ignite the roof of the habitable space if a defensible space is provided.
  - Firewise teaches that defensible space doesn’t address embers flying above shaded fuel breaks. Defensible space is to reduce the spread of fire through vegetative fuels and to prevent the home from igniting from radiant heat from the nearby fire.
  - Firewise specifies defensible space to be 30 ft. long for Moderate Hazard, 50 ft. for High Hazard, and 100 ft. for Extreme Hazard.
  - Note that this table is still needed because of the NP condition.
- Page 12, 504.7 Appendages and structures: Extend requirement for 1 hr. fire resistance rated construction (such as fire retardant wood) of unenclosed structures attached to buildings (decks and fences) to include up to 30 ft. (better if use “defensible space” instead of a length) from attachment point, instead of just 10 ft. Otherwise trees will have to be removed or pruned when close to fences, and trees are typically close to fences and decks.
  - Page 14, 603.2.3 Groundcover: Allow 1-2 inches of vegetative debris (leaves, mulch, fallen deadwood) in defensible space.
  - Page 14, 603.2.3 Groundcover: Add that requirement for removal of vegetative debris and maintenance is only for defensible space in wui 50 ft or closer to a 40 acres or greater continuous area of light, medium and/or heavy fuels.
  - Page 14, 603.2.3 Groundcover: Add to rake, when possible, chipped vegetation to provide a 1-2 inch deep layer under tree canopies. Otherwise, remove vegetation waste from site. Don’t pile debris within critical root zones of trees. Don’t leave piles of chipped debris on site (high fuel load).
  - Page 14, 604.4 Trees: Add that this is only for defensible space in wui 50 ft or closer to a 40 acres or greater continuous area of light, medium and/or heavy fuels.
  - Page 14, 604.4 Trees: Change “with industry standards for tree care” to “with ANSI 300 tree pruning standards and COA Oak Wilt standards (including no pruning period, proper cuts, tool cleaning).”

- Page 14, 604.4 Trees: Add that "any tree work for the purpose of creating a defensible space shall be performed only by a certified arborist trained by the Texas Forest Service in Firewise tree management".

- Page 14, 604.4 Trees: Allow some healthy young trees to be retained in the defensible space. Don't remove every tree less than 8 inches in diameter in the defensible space.

Format

- Page 2, correct the missing last digit "zero" in the list of sections deleted or modified: 107.1, 108.1, 404.1, 504.1. These should be 107.10, 108.10, 404.10, 504.10.
- Page2, correct "403.3.2" to "403.2.3"
- Page 2, add 501.2, 604.4, 606.1, 606.2 to the list. These are modified by the proposed wui code.
- Page 2, add 604.4.2 to remove IWUI section of "deadwood removed from trees" since that is included in 604.4 of the proposed wui code.
- Page 8, 404.1, change "...in order to qualify..." to "...in order to qualify..."

Best,  
Zoila

Zoila Vega-Marchena, Ph.D.  
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From: zoila vega

Sent: Monday, September 09, 2019 7:23 PM

To: 'Baker, Mark' <[Mark.Baker@austintexas.gov](mailto:Mark.Baker@austintexas.gov)>

Cc: 'Jones, Justice' <[Justice.Jones@austintexas.gov](mailto:Justice.Jones@austintexas.gov)>; 'mfossum@austin.rr.com'

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Subject: RE: WUI code meeting today

Mark,

Thank you for meeting with Michael and I today.

Additional items we discussed:

- Include some brief introduction that emphasizes that hardening the home is more effective than defensive space.
- In table 502.1 change 150 ft to 100 ft.
- In table 503.1 remove NR for "1.5x conforming" from "moderate" to "extreme" hazard.

Not included in ordinance but we discussed:

- Emphasis should be on hardening the home, not defensible space because embers can travel long distances above shady fuel break.
- Process should be proactive: Don't allow developer or homeowner to remove/thin trees and vegetation, submit application, and then get an inspection. AFD WUI should assess site, whether new development or remodel by homeowner, prior to any tree or vegetation work.

Best,  
Zoila

Zoila Vega-Marchena, Ph.D.  
Austin Heritage Tree Foundation

**From:** Baker, Mark  
**Sent:** Monday, September 09, 2019 5:16 PM  
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**Subject:** WUI code meeting today

Zoila,

The 2015 International Wildland-Urban Interface can be viewed on-line here: <https://codes.iccsafe.org/content/IWUIC2015>

All other documents are in an on-line folder here:  
<https://austintexas.box.com/s/v11b6irl1q2jq3nltu023jusmgty8ff6>

Thanks for taking time to meet with me today. I was taking notes but I'm not sure if I got everything. I think the most important thing I came away with was to make sure to include you in development of rules and to make it a condition of adoption of the code to complete it within 6 months.

Other items were:

- Make the title for the Ignition Resistant Construction table easier to read
- Consider language to associate trees in defensible space with proximity to 40 acre wildland areas **every time defensible space is mentioned (i.e., clarify that any defensible space regulation is only when defensible space is adjacent to 40 acres or more)**
- Copy sections of the model code into the draft for easier review **(definition of defensible space, 30 ft, 50 ft, 100 ft).**
- Extend dimension for ignition resistance of decks and fences to 30'
- Make sure review of access roads and defensible space is proactive to minimize environmental impact
- Make sure Oak Wilt standards are included in all recommendations **(Pruning period, proper cuts, tool cleaning)**
- When clearing ground vegetation leave 1" of mulch
- Make section 102.4.2 regarding precedence of **protected trees and HTO** other standards is clear
- Reference ANSI A300 Pruning standards

Thank you,  
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