

Notes on Watershed Protection Department
Comments to WUI Code 2012

Austin is not in a great threat of Wildfire.

Oak trees constraint the spread or Canopy fires.

Our emergency responders can handle any wildfire problems.

Grasslands have higher risk for Wildfire than the hill country.

The WUI code needs to interconnect with other existing codes. The new WUI Code should be consistent and reference all local codes and ordinances that are already in effect. Such as: Land development code, tree protection code watershed protection code. We need an ordinance to address which code prevails should conflicting requirements arise.

We should not discourage wildfire if it is not threatening lives and property.

We should look at other places that already have WUI Code: 12 communities have adopted regulations, but not model code. Austin does not need a model WUI Code.

WUI Code needs to be more specific to Austin's local needs.

If we adopt the WUI code, it will result in building restrictions that will increase urban sprawl, which will increase building in the wildlands. We should encourage building in Austin City Limits in innovative, sustainable, and high density ways.

High risk areas should have zoning restrictions that prevent these areas from having hospitals, retirement homes, stadiums, and theatres. High risk areas should have building envelopes to explain requirements.

We need maps of risk areas. Who will make these maps?

Oak wilt should be addressed in WUI Code.

WUI Code conflicts with visions and concepts of 2012 Imagine Austin, which lists the tree canopy as our nature resource. WUI Code sees all trees as a fire threat.

The WUI Code should apply only to spaces between wildlands and structures.

Specific concerns:

Tree Protection: Will WUI Code protect mature trees or require certain kinds of trees to be planted adjacent to wildlands?

Environmental protection: Will federal and state laws about vegetation clearance for defensible space be taken into consideration? Riparian buffers in waterways must have

special consideration. Vegetation management plans may need to be developed for certain kinds of environments.

Environmental impact: concerns about which property WUI code would apply to, Water Conservation lands....

Definitions of all terms are needed: tree, unsafe conditions, defensible space, fire protection land....

How will the WUI code be implemented in low income areas?

How will a property fuel load be determined?

How will water supply for defensible space be determined?

Watershed Protection Department Initial Comments to the International Wildland Urban Interface Code and Draft Local Amendments

Submitted: July 10, 2012

General Comments

- The Public Safety Commission appears to be under the misconception that Austin is frequently under a great wildfire threat and fire hazard conditions are often extreme. Commissioners expressed special concern over the wildfire risk in preserve lands such as Balcones Canyonlands Preserve (BCP). We believe the Commission's recommendation to fast-track adoption of the International Wildland Urban Interface Code (IWUIC) seems to be based on some inaccurate information.

The wildfire threat that the Commission is worried about was warranted last summer, while Central Texas experienced extreme and atypical conditions. However, current wildfire threat conditions in most of Austin are moderate, as indicated by the Texas Wildfire Risk Assessment Portal (TxWRAP) and Lower Colorado River Authority's chief meteorologist, Bob Rose.

Regarding the risk posed by our wildland preserves, a study conducted by Baylor University on wildfire fuel characteristics in the BCP came to the following conclusions:

- *"Tree species within the juniper woodlands, such as deciduous oaks, constrain spread of canopy fires in the preserve area.*
- *Active canopy fires are potentially very rare in this fuel matrix.*
- *Ignitions and fire originating in preserve lands have slow rates of spread that could be effectively handled by emergency responders.*
- *Woodland preserve tracts located in the central and western portions of Austin have minimal probability of burn relative to grasslands along the western edge of Travis County and north Hays County."* (White et al. 2009).

While it is important to continue developing public policy to protect life and property from the threat of wildfire, we should not hastily adopt code without appropriate review, consideration, and input from experts and stakeholders.

- The proposed ordinance contains the draft local amendments disconnected from the rest of the IWUIC. We must see the ordinance with the two components integrated together in order to effectively perform our review. The Watershed Protection Department requests an additional opportunity to review and comment on the ordinance after the local amendments are further developed and integrated with the IWUIC.
- In order for Austin to become a fire-adapted community, it is important to understand that we cannot stop wildfire, but we can take action to protect life and structures. The intent of the ordinance should remain on the protection of life and structures; however, it appears to reach further, in an effort to stop fire altogether. Wildfires are a natural component of healthy ecosystems and have historically provided a key role in our ecology. If a wildfire does not pose an imminent threat to life, structures, or infrastructure, then perhaps we should not implement policy to prevent it from happening. The ordinance should clearly define what constitutes a real threat.
- Proper benchmarking with other entities that have adopted the IWUIC needs to be performed and results of the analysis demonstrated.

"From the perspective of fire risk reduction in the WUI, zoning can be used to prevent the establishment of business with potential fire risks (e.g., industry using or storing combustible or hazardous materials, gas stations) in high and extreme fire risk areas. It can also be used to keep sensitive populations (e.g., hospitals, group homes, homes for the elderly) out of those areas. And it can be used to wildfire risk.

The following selections from the Fire Protection Research Foundation study provide additional insight on how zoning regulations could be used to address community high-density alternatives to encroaching on valuable wildlands.

Additionally, this could guide new development towards innovative, sustainable, and effectively reduce potential ignition sources and corresponding wildfire threat. the WUI through zoning regulations. Restricting future development in the WUI would transfer of wildfire to and from urban development, such as development restrictions in wildlands. Perhaps we should consider additional or alternative tools for preventing the result in an urban-sprawl effect as the City limits continue to grow into surrounding WUI. We are concerned that long-term implementation of these requirements may impose requirements to create defensible space around structures in the WUI. The IWUIC imposes requirements to create defensible space around structures in the WUI. We are concerned that long-term implementation of these requirements may result in an urban-sprawl effect as the City limits continue to grow into surrounding wildlands. Perhaps we should consider additional or alternative tools for preventing the transfer of wildfire to and from urban development, such as development restrictions in the WUI through zoning regulations. Restricting future development in the WUI would effectively reduce potential ignition sources and corresponding wildfire threat. Additionally, this could guide new development towards innovative, sustainable, and high-density alternatives to encroaching on valuable wildlands.

The IWUIC imposes requirements to create defensible space around structures in the WUI. We are concerned that long-term implementation of these requirements may result in an urban-sprawl effect as the City limits continue to grow into surrounding wildlands. Perhaps we should consider additional or alternative tools for preventing the transfer of wildfire to and from urban development, such as development restrictions in the WUI through zoning regulations. Restricting future development in the WUI would effectively reduce potential ignition sources and corresponding wildfire threat. Additionally, this could guide new development towards innovative, sustainable, and high-density alternatives to encroaching on valuable wildlands.

"Many communities either adapt model code provisions to their local circumstances or adopt locally-derived WUI provisions, or both, and then include the full text in their ordinances as the primary source of WUI standards." (Duerksen et al. 2011).

"A few communities warned against trying to 'hit a home run' (i.e., aiming for the most stringent and comprehensive regulations) when the first WUI regulations are adopted. It may be better to take a more modest first step that the community can better understand and accept. Once the community is accustomed to and sees the value of the WUI standards in practice, the standards can be strengthened in the future. Prescott, Arizona, failed to adopt WUI regulation on multiple occasions in the 1990s before finally succeeding in 2004, largely through an intensive and well-conceived public education effort that included a local committee created for that purpose."

"Many communities find the models codes to be too complex and comprehensive for their needs. For example, if they need only 20% of the model code's provisions, or that is all the community can politically support, then it is usually easier to draft their own regulations using local terminology and concepts than to adopt portions of model code text and then try to synthesize the model code with the local code terminology. As a common example, Boise, Idaho, studied the ICC WUI code but found it too complex and politically infeasible to adopt and instead borrowed and simplified some of the model code's provisions to fit their local circumstances."

excerpts from the study elaborate on this point.

the IWUIC, in full as the exclusive source of their WUI regulations. The following interface (WUI). None of the interviewed communities adopted a model code, such as adopted and implemented regulations to address wildfire risk in the wildland urban Research Foundation conducted a study that interviewed 12 communities that have We believe that the IWUIC is not intended to be adopted in full. The Fire Protection Draft Local Amendments meet state / federal standards.

In order to adopt the code in Austin, further modifications are needed so that it applies to local circumstances and values. Please verify that the requirements in the IWUIC and Since this is an international code, general incorporation by reference is not advisable.

prevent the establishment of land uses that include large numbers of people (e.g., hotels, churches, stadiums, theaters) in high and extreme fire risk areas.

Zoning is already used to achieve these goals in areas designated as floodplains. In fact, most cities and counties have special land use controls preventing the creation of avoidable risks in floodplains because the Federal Emergency Management Agency (FEMA) provides maps of various risk areas and penalizes communities that do not participate by making flood insurance less available to their residents. The risks involved in WUI areas are different, but the legal principles are the same – local governments can always prevent risky businesses, sensitive populations, and large assemblages of people from occupying lands with higher risks to public health and safety.

Suggestion:

Draft an overlay district based on high and extreme fire risk mapping to prevent the establishment of risky businesses in the overlay zone, or to require specific construction techniques (e.g. fire retardant roofs, special soffit or vent design) or specific site management practices (e.g. vegetation control) within the overlay zone.

Suggestion:

Add mapped high and extreme fire risk areas as types of sensitive lands where plats may not locate buildable lots. If the area has already been platted without that protection, add a requirement that 'building envelopes' be defined to minimize those risks before building permits are issued."

- If a section of the wildland code is already required by another local ordinance, the local ordinance should be expressly referenced. For example, IWUIC Appendix A (proposed for adoption) includes requirements for vegetation control from roadways and electrical transmission and distribution lines. Vegetation requirements are already in place for these infrastructure areas and vegetation management conducted by entities such as TxDOT, Pedernales Electric, Austin Energy, etc. may be in conflict with sections of the ordinance.
- Fuel modification requirements in the code do not address the potential transmission of oak wilt disease.
- The Austin City Council voted 7-0 on June 15, 2012 to adopt Imagine Austin, a plan for Austin's future. Requirements in the IWUIC to create defensible space and reduce fuel loads fundamentally conflict with concepts and visions in the Conservation and Environment section of Imagine Austin, as illustrated by the following plan excerpts:
 - "As one of the fastest growing regions in the U.S., a major challenge facing Austin and Central Texas is the protection of the region's environmental resources, particularly its ... urban tree canopy. These resources perform essential functions and provide vital benefits to the City and its residents. As development continues in or near environmentally sensitive areas, ongoing mitigation, preservation, and conservation efforts will be required."
 - Key issue / trend: "In 2006, Austin's tree canopy cover was estimated at 30 percent of its total land area." – WUI code adoption would negatively impact this key statistic.

- Key challenges for the future:
 - "Monitoring and increasing Austin's tree canopy as urbanization occurs" – WUI code adoption would make this challenge even more difficult.
 - "Balancing growth and protection of our natural resources to create a future that is sustainable: – If appropriate sections of the WUI code are adopted and the ordinance is completed with well written local amendments, the wildland code can offer protection of our natural resources in addition to human life and property.
 - Conservation and Environment Policies:
 - "CE P4: Maintain and increase Austin's urban forest as a key component of the green infrastructure network."
 - "CE P11: Integrate development with the natural environment through green building and site planning practices such as tree preservation..."
- While the IWUIC might consider the following map to show vegetative fuels that indicate fire hazards, Imagine Austin presents it as valuable environmental resources on a map displaying tree canopy and restoration areas.



Comments to the IWUIC and Draft Local Amendments

Draft Local Amendment Section 101.2.2, Land and Wildlife Preserve Areas:

"The provisions of this code shall apply to wildland areas within preserve lands to the extent necessary to mitigate the potential for wildland fire to develop so as to become an imminent threat to structures or to the City's infrastructure."

The IWUIC is intended for interface areas; however, with the addition of local amendment 101.2.2 the scope is expanded to any wildland area that poses a threat. This goes far beyond the WUI and could potentially be interpreted as any tree in the City of Austin, or within miles of the City. This section effectively makes the code a forestry management plan and is not the way the IWUIC was intended to be used.

Section 101.2 and its subsections are intended to define the scope of the entire ordinance. Not all portions of the code can be applied to wildlands (i.e. defensible space should be contingent on distance from a structure; ignition resistant construction cannot be applied to wildlands without structures). If the intent is for all wildlands to have a fire protection plan, that should be expressly stated. Identify sections of code that specifically apply to the preserve areas (i.e. requirement for Section 405, Fire Protection Plan). Each chapter has a scope. Perhaps moving the requirements for preserve lands and urban forests to the scope of Chapter 4 only would be a simple solution. Otherwise, Section 101.2.2 should specifically mention Section 405 and any other sections that apply to the wildlands.

The word "land" in the title of this section seems awkward. We suggest revising the title of this section to something like, "Preserve Lands and Urban Forestlands."

Draft Local Amendment Section 102.4, Referenced Codes and Standards:

"...In the event of a conflict between referenced provisions of the International Mechanical Code and the Mechanical Code, the Mechanical Code prevails. In the event of a conflict between referenced provisions of the International Plumbing Code, the International Fuel Gas Code and the Plumbing Code, the Plumbing Code prevails. Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall apply."

This section discusses which codes and ordinances prevail in the event of a conflict. How will this ordinance interact with other codes, ordinances, criteria manuals, and laws with potential conflict, such as the: Land Development Code, Tree Protection Ordinance, Environmental Criteria Manual, Watershed Protection Ordinance (pending adoption, please see comment to Draft Local Amendment Section 603.1.1), and federal / state Threatened and Endangered Species laws? This ordinance should address how these regulations will interface, and which requirements will prevail in the event of a conflict.

The following extracts from the Fire Protection Research Foundation study discuss some of the issues they identified regarding consistency with other codes. How do we plan to handle these types of issues?

Fire protection regulations exist alongside many other regulations designed to protect public health, safety, and welfare, and maintaining consistency between WUI regulations and other related code standards can be difficult. Some of the areas of potential conflict are listed below:

Tree protection ordinances

An increasing number of cities and counties have adopted regulations limiting the cutting of mature or valuable trees. Defensible space standards may require cutting of tree protected by tree ordinance, or there may be conflicting permit or timing requirements. For example, the fire code may require that vegetation (including mature trees) be removed at the time site grading occurs, while a landscaping and tree protection ordinance is only applied when a building permit is applied (by which time the mature trees have been removed). To help address this possible conflict, some counties and city codes state that tree protection requirements do not apply to tree cutting to comply with WUI standards. Similarly, a landscaping ordinance may require the planting of species that do not meet WUI standards. Again, where communities have recognized this conflict they generally provide an exemption or alternative planting list for properties subject to WUI controls.

Federal or state environmental protection laws

These regulations may also conflict with WUI regulations by prohibiting vegetation clearance in certain areas, or by prohibiting the construction of a primary structure in the only portion of the site that meets defensible space requirements. Examples include areas protected under the federal Endangered Species Act, wetlands and nearby areas protected by the federal Clean Water Act, and areas designated under state law for species of special concern (e.g. salmon). Some communities require that in case of a conflict between federal or state designations and WUI requirements, the WUI requirements will be adjusted or overridden (Josephine County, OR).

Local sensitive land ordinances

Many rural and suburban jurisdictions have adopted regulations to protect sensitive lands such as steep slopes, rock outcroppings, wetlands, and stream edges. Others have prohibited development or vegetation removal in areas necessary to protect important views. These types of regulations may also prohibit removal of vegetation needed to create defensible space, or may prohibit construction of a house in the only feasible portion of the lot available for development while preserving defensible space.

Draft Local Amendment Section 104.1.2, Environmental Impact Controls:

"The Fire Chief shall collaborate with appropriate environmental and forestry professionals to ensure that fuel modifications {**suggest adding "and creation of defensible space"**} are compatible with the regulations and program goals of the City of Austin as described in section 603.1.1 of this Code and with environmental statutes and regulations as established by the laws of the State of Texas and of the United States."

Please see comment to Draft Local Amendment Section 603.1.1 regarding the Watershed Protection Ordinance.

Draft Local Amendment Section 105.1, Modifications:

"If the Fire Chief determines that difficult terrain, danger of erosion or other unusual circumstances make strict compliance with the vegetation control provisions of the code detrimental to safety or impractical, enforcement thereof may be suspended, provided that reasonable alternative measures are taken."

There should be a defined review process to accomplish this determination.

The Fire Chief may want to consider input from outside departments with expertise when evaluating site conditions. For example, the Watershed Protection Department and Austin Water Utility Wildland Conservation Division could provide site-specific environmental expertise for a property.

When determining if circumstances make compliance detrimental to safety or impractical on City-managed property, we suggest that the Fire Chief be required to collaborate with the Director of the department managing that property.

Draft Local Amendment Section 107.1, General:

"Permits shall be governed by 25-12-171 (Fire Code) and 25-12-1 (Building Code)."

Will permits be required for the land referenced in Draft Local Amendment Section 101.2.2? Do the fire and building codes already have provisions for the permit referenced throughout the IWUIC, or will new permit(s) be added to these codes? Do the existing fire and building codes contain language that is compatible with the IWUIC permit references? Is it clear when a fire permit would be needed vs. a building permit for compliance with the wildland code? The numerous sections of the IWUIC that reference a permit may need to be revised. As the code adoption process continues, citizens will want to know specific details about the types of permits that will be required.

IWUIC Section 108.5, Fire Protection Plans:

Draft Local Amendment Section 405.1 includes the requirement for a Fire Protection Plan for wildland preserves and City of Austin owned urban forestlands. The fire protection plan referenced in Section 108.5 is intended as a component of a site development permit application, and does not apply to fire protection plans for preserve and forestland management. Draft Local Amendment Section 107.1 states that permits shall be governed by the Fire Code and Building Code. Revisions to the IWUIC and local amendments are needed to resolve conflicting language with regards to the intent of fire protection plans and permits.

IWUIC Section 109.4.5, Unsafe Conditions:

"Buildings, structures or premises that constitute a fire hazard or are otherwise dangerous to human life, or which in relation to existing use constitute a hazard to safety or health or public welfare, by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster damage or abandonment as specified in this code or any other ordinance, are unsafe conditions. Unsafe buildings or structures shall not be used. Unsafe buildings are hereby declared to be public nuisances and shall be abated by repair, rehabilitation, demolition or removal, pursuant to applicable state and local laws and codes."

Unsafe conditions should be limited to conditions that threaten life, structures, and infrastructure. Section 101.2.2 expands the scope of the ordinance to apply to preserve land, and Section 109.4.5 states that unsafe conditions include "premises that constitute a fire hazard." What is a "fire hazard"? A tree? While vegetation located in preserve land may constitute a "fire hazard," it should not be considered an unsafe condition unless it poses an imminent threat to life, structures, or infrastructure. If wildlands are not occupied, and reasonable distances are maintained, they will not pose a threat to safety. We suggest modifying this section to limit areas that are subject to the "unsafe

the purpose of a fuel break.

Suggest deleting "the native." Whether the vegetation is native or not does not change

"Fuel Break - An area, strategically located for fighting anticipated fires, where the native vegetation has been permanently modified or replaced so that fires burning into it can be more easily controlled. Fuel breaks divide fire-prone areas into smaller areas for easier fire control and to provide access for fire fighting."

Fire-resistance-rated construction cannot "safeguard against the spread of fire," it reduces the likelihood of the spread of fire. This definition should be revised.

"Fire-Resistance-Rated Construction - The use of materials and systems in the design and construction of a building or structure to safeguard against the spread of fire within a building or structure and the spread of fire to or from buildings or structures to the wildland-urban interface area."

The Fire Protection Plan definition needs to be modified to resolve conflicts with Draft Local Amendment Sections 101.2.2, 405.1, and 405.1.1. It is our understanding that the ordinance will require a fire protection plan for wildlands, including those where new projects or development are not proposed. The current definition applies to a plan component for new development in the WUI.

"Fire Protection Plan - A document prepared for a specific project or development proposed for the wildland-urban interface area. It describes ways to minimize and mitigate the fire problems created by the project or development, with the purpose of reducing impact on the community's fire protection delivery system."

After the scope of the ordinance is expanded to preserve areas and urban forestlands by Draft Local Amendment Section 101.2.2, this definition is no longer accurate because it is not relative to distance from a structure. A place where "material is capable of allowing a fire to spread unchecked" could be in the middle of a preserve, many miles from a structure. Treating, clearing, or modifying such an area would not meet the intention of defensible space. A clear distinction should be made between the definitions of defensible space and fuel break. The defensible space definition needs to be modified to reflect that it is a buffer located around structures or infrastructure. (In the fire protection requirements of IWUIC Section 603.1, creating defensible space is correctly described as modifying the fuel load in areas adjacent to structures).

The defensible space definition does not match the definition provided in local Ready, Set, Go! information. Ready, Set, Go! explains defensible space as, "the required space between a structure and the wildland area that, under normal conditions, creates a sufficient buffer to slow or halt the spread of wildfire to a structure."

"Defensible Space - An area either natural or man-made, where material capable of allowing a fire to spread unchecked has been treated, cleared or modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur."

IWUIC Section 202, Definitions:

conditions" status to areas that are a specified distance from structures or infrastructure. Otherwise, all wildlands could be deemed as unsafe conditions.

This definition only addresses the space that fire breaks provide for fire suppression and control. It seems that it should also mention that fire breaks are used to reduce the spread of fire (even when fire fighters are not present).

- Fuel Load Definitions:

"Fuel, Heavy - Vegetation consisting of round wood 3 to 8 inches (76 to 203 mm) in diameter. See Fuel Models G, I, J, K and U described in Appendix D."

"Fuel, Light - Vegetation consisting of herbaceous plants and round wood less than 1/4 inch (6.4 mm) in diameter. See Fuel Models A, C, E, L, N, P, R and S described in Appendix D."

"Fuel, Medium - Vegetation consisting of round wood 1/4 to 3 inches (6.4 mm to 76 mm) in diameter. See Fuel Models B, D, F, H, O, Q and T described in Appendix D."

As the ordinance is currently written, how will a property's fuel load be determined? The fuel load definitions reference fuel models in Appendix D. Appendix D is not proposed for adoption, according to Draft Local Amendment 101.2.1.

The above-listed fuel load classifications partially determine fire hazard severity (see Appendix C, Fire Hazard Severity Form, proposed for adoption in Draft Local Amendment 101.2.1). Fire hazard severity governs the requirements for defensible space fuel modification distances and ignition-resistant construction class. This methodology seems questionable.

Currently, larger-stemmed vegetation is considered a more severe fire hazard. Large heritage trees in Central Texas are often several hundred years old, some of which have likely already been exposed to fire. In our opinion, a healthy heritage oak tree is more fire resistant in terms of ignitability and rate of spread than a plot of dormant grassland, but the code favors the grassland as a less severe fire hazard.

A scientific standard that assesses more than just stem diameters should be used to determine fuel load designations and corresponding fire hazard severity.

- *"Fuel Modification - A method of modifying fuel load by reducing the amount of nonfire-resistive vegetation or altering the type of vegetation to reduce the fuel load."*

This definition should be revised to not imply that altering vegetation is necessary. We suggest the following language: "A method of modifying fuel load by reducing the amount of nonfire-resistive vegetation or properly planning the type and location of vegetation to reduce fuel load and prescriptive code requirements."

- *"Green Belt - A fuel break designated for a use other than fire protection."*

This definition needs clarification. It references the term "fuel break," which is previously-defined as an area used for fighting fires.

- *"Wildfire - An uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures."*

This definition implies that a wildfire must expose structures. Suggest rewording to "...possibly exposing and consuming structures."

Draft Local Amendment Section 202.1, Supplemental and Replacement Definitions:
"City/Austin/City Of Austin - These terms mean the City of Austin, in the Hays, Travis and Williamson Counties the State of Texas. Geographically these terms indicate all territory within the corporate limits of the City of Austin and that territory annexed for limited purpose by the City of Austin in accordance with Article I, Section 7 of the Charter of the City of Austin."
This definition does not include City-owned, -managed, or -operated property that is located outside of the City Limits and limited-purpose jurisdiction. Is this intentional?
Note the use of the term "City" in Draft Local Amendment Section 101.2.2. As "City" is defined, this amendment is limited to land that threatens infrastructure inside the city limits and limited-purpose jurisdiction, and structures.

IWUIC Section 302.1, Declaration:
"The legislative body shall declare the wildland-urban interface areas within the jurisdiction. The wildland-urban interface areas shall be based on the findings of fact."

Chapter 3 does not appear to function without supplemental amendment. There are currently no local amendments to declare wildland-urban interface areas. How will these areas be determined? Section 302.1 references the findings of fact. Appendix E is titled Findings of Fact, but is not intended or proposed for adoption.

Chapter 3 should also include a detailed declaration and corresponding maps of the land and wildlife preserve areas referenced by Draft Local Amendment Section 101.2.2. The scope of the ordinance is not clear until the WUI and additional areas captured under Draft Local Amendment Section 101.2.2 are distinctly declared.

How will the ordinance be implemented in low-income housing areas? A lot of citizens can't afford to retrofit their home or even modify the vegetation on their property. The study performed by the Fire Protection Research Foundation found that community-wide WUI regulations are usually drafted to apply only in high or extreme hazard areas, and only to new development. Moderate or low danger areas and existing development are often exempted. Community scale WUI regulations generally contain a list of types of development that do not have to comply, and that list commonly includes environmentally sensitive areas, such as riparian areas (e.g. Josephine County, OR) (Duerksen et al. 2011).

IWUIC Section 302.2, Mapping:
"The wildland-urban interface areas shall be recorded on maps available for inspection by the public."

How will the map be created and by whom? WUI areas must be clearly defined on a map prior to code adoption to clarify the scope of the ordinance and facilitate review. Will a separate map be created for Draft Local Amendment Section 101.2.2, to identify the "wildland areas within preserve lands to the extent necessary to mitigate the potential for wildland fire to develop so as to become an imminent threat to structures or to the City's infrastructure"?

IWUIC Section 404.5, Adequate Water Supply:
Who is responsible for providing adequate water supply? The ordinance should expressly state the responsible party for requirements such as adequate water supply.

For example, the responsible party for creating and maintaining defensible space is clearly stated in IWUIC Section 603.2.1 as, “Persons owning, leasing, controlling, operating or maintaining buildings or structures”.

Will properties in the WUI that utilize well water be held to these standards? Requiring property owners to supply their own water at a certain rate will be difficult due to limited water resources in Austin.

Draft Local Amendment Section **405.1**, General:

This section states that the requirement for a Fire Protection Plan will apply to wildland preserves and City of Austin owned urban forestlands when required by the Fire Chief. IWUIC Chapter 4, currently titled, “Wildland-Urban Interface Area Requirements,” should be revised to include the expanded scope to preserve areas and urban forestlands.

IWUIC Section **405.2**, Content:

This section states that a fire protection plan shall address defensible space. How will fire protection plans that are dedicated for preserves and urban forestlands address defensible space? Note that relative distances from structures is currently not part of the defensible space definition. How will the defensible spaces shown in IWUIC Table 603.2 be determined if there are no nearby structures in the preserve / forestland? Revisions should be made to address this conflict.

The fire protection plan for wildland areas should be in accordance with a specific standard.

IWUIC Section **502**, Fire Hazard Severity:

Draft Local Amendment Section 101.2.1 adopts Appendix C, which replaces Table 502.1 as written. IWUIC Sections 502.1 and 502.1 should be revised to refer to Appendix C, rather than table 502.1.

IWUIC Section **601.1**, Scope:

This section should explicitly state that this chapter does not apply to the wildlife preserve areas and City of Austin owned urban forestlands referenced in Draft Local Amendment Section 101.2.2. The requirement for minimum tree crown spacing of 10 feet unless otherwise established by the Fire Chief in IWUIC Section 603.2.2 must not apply to preserves and urban forestlands.

Draft Local Amendment Section **603.1.1**, Environmental Objectives:

*“The fire chief shall coordinate {**suggest adding “fuel modifications and”**} the creation of defensible space with other affected City Departments to help ensure compatibility with the environmental and forestry goals of the City of Austin, including but not limited to the Austin Water Utility Preserve Lands {~~Program~~**-Division**} (AWU), the Austin Energy Climate Protection Program and Forestry Program (AE), the Watershed Protection Department Environmental Resource Management Program (WPD), the Parks and Recreation Department Urban Forestry Program (PARD), and the Planning and Development Review Department Environmental Program and Trees and Landscaping Program (PDRD).”*

The Watershed Protection Department is in the process of developing the Watershed Protection Ordinance, which will require natural riparian buffers adjacent to waterways (including intermittent streams). In order to function properly for watershed protection purposes (e.g., water quality, bank stabilization, flood mitigation, etc.), these must be maintained with relatively dense vegetation native and natural to healthy riparian

environments. This special combination of soils, vegetation, and hydrology tends to create a wetter, more fire-resistant area. Therefore, riparian buffers should be given special consideration in the WUI Code to make sure that clearing of fuel loads do not impair the natural function of riparian zones and flood protection.

Perhaps provisions for compliance with state and federal threatened and endangered species laws should also be included in this section.

IWUC and Draft Local Amendment Section 603.2.2, Trees:

"Trees" are not included in definitions section. How will property owners distinguish between trees and shrubs?

The section does not address potential conflict with existing regulations for Protected and Heritage Trees.

Tree crown separation requirements do not address methods for protecting against the potential transmission of oak wilt disease.

Closed tree canopies offers many benefits including shade, windbreak, energy savings, wildlife habitat, erosion control, property value, soil conservation, water quality protection, and a sense of place. Removing canopy to accomplish minimum separation distances of 10 feet may result in extreme sun exposure, reducing moisture content and survivability rates of vegetation in the underlying herbaceous and shrub layers and thereby potentially increasing vegetative fire hazards.

The code should address how property owners should handle trees on neighboring properties with limbs that extend over property lines and violate crown distance requirements.

IWUC Section 604.3, Maintenance of Defensible Space - Responsibility

According to the study commissioned by the Fire Protection Research Foundation, "By far the most common WUI enforcement problem was the lack of ongoing maintenance of defensible space due either to lack of political will or financial resources. While obtaining initial establishment of the defensible space requirements was relatively straightforward, keeping vegetative fuels properly maintained over time was a major challenge. Because thinning vegetation properly can be expensive and requires basic technical knowledge, nearly all communities stressed that financial or advisory aid or incentives to establish or maintain defensible spaces, such as free consultations, free "chipper" days, or regular debris pick up days during fire season are critical to the overall effectiveness of WUI regulations." (Duerksen et al. 2011).

IWUC Section 604.4, Trees:

This section does not provide the same exception to minimum crown separation requirements as IWUC Section 603.2.2.

Our above-listed comments to IWUC and Draft Local Amendment Section 603.2.2 also apply to IWUC Section 604.4.

IWUC Section A101.1, Scope:

Is the scope of Appendix A intended to apply to preserve lands referenced in Draft Local Amendment Section 101.2.2?

IWUIC Section B101.1, Scope:

This section refers to vegetation management plans as a component of a permit application. Draft Local Amendment Section 107.1 states that permits shall be governed by fire code and building code. It is not clear when vegetation management plans are required. Is the scope of Appendix B intended to apply to preserves and urban forestlands referenced in Draft Local Amendment Section 101.2.2? Will these lands require a vegetation management plan in addition to a fire protection plan?

IWUIC Appendix C, Fire Hazard Severity Form

The form indicates that heavier fuels constitute an increased fire hazard. A scientific standard that assesses more than just stem diameters should be used to determine fuel load designations and corresponding fire hazard severity. Please see additional comments regarding fuel load definitions in Section 202 above.

References

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