



**Teton  
Conservation  
District  
Est. 1946**

*Conserving our  
Natural resources  
– air, land, water,  
vegetation, and wildlife*

# Subdivision Review Checklist

	<b>Key Points to Look At:</b>	<b>Comments:</b>
<input type="checkbox"/>	Ran <b>GIS analysis</b> using WY Game and Fish data for wildlife ranges and migration routes. Printed out maps.	
<input type="checkbox"/>	Reviewed the <b>documents</b> such as:. EA geotechnical report, proposed development plan, and hydrologic analysis.	
<input type="checkbox"/>	Ran an Electronic <b>soil analysis</b> on property. ( )Ran query on building suitability, soil erodibility (k factor). ( )Is the watertable close to the surface? ( )Is there a chance for septic system contaminating the ground water?	
<input type="checkbox"/>	Assessed <b>chemical storage areas</b> . ( )Will any chemicals be stored on site? ( )Is there a chance for spills or leaks contaminating ground or surface water? ( )How can chemicals be contained? ( )Is a professional Fate-Transport model needed?	
<input type="checkbox"/>	Reviewed <b>Landscaping plans</b> . ( )Will the proposed landscaping attract or deter wildlife? ( )Should a visual barrier be planted to screen the development from the view of wildlife? ( )Are the plantings going to attract bears to residential areas?	
<input type="checkbox"/>	Site evaluated for <b>density</b> . ( )Are the housed clustered in a way that allows for open space? ( )Is lighting restricted? ( )Are domestic animals contained? ( ) Is there a chance of overgrazing? ( )What other restrictions should be placed on the property to allow continued use by wildlife? ( )Does the subdivision need bear-proof trash containers? ( )Do hay storage areas need special fencing to keep wildlife out? ( )Will the development location be a problem for adjacent ag. operations? (ie. manure odor issues, dust issues, crop dusting issues)	



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	<p><b>Conducted site visit</b> Evaluated the site for the following parameters. Findings documented with a photo log and photo locations recorded on the construction drawing site map. (Keep copious notes. Your subdivision review may be scrutinized and must be repeatable with the same results and defensible.)</p> <p><b>Connectivity to entire system</b></p> <ul style="list-style-type: none"><li>( ) How is this parcel important to wildlife movement in the larger picture?</li><li>( ) Will development hinder movement?</li><li>( ) How will wildlife likely be affected by this development?</li><li>( ) If the development is already in place, does it appear that wildlife have adapted to the use?</li></ul> <p><b>Forest health</b></p> <ul style="list-style-type: none"><li>( ) Is there regeneration or general decline?</li><li>( ) Are the trees diseased?</li><li>( ) Are there dead snags that cavity nesting birds are using?</li><li>( ) What birds are present and which species of trees are they utilizing?</li><li>( ) Are there any large raptor nests?</li><li>( ) How can healthy trees, especially aspens, be preserved?</li><li>( ) Are the developers proposing replanting trees that by-pass the natural succession of the area?</li><li>( ) Do bird boxes need to be installed anywhere to mitigate tree removal?</li></ul> <p><b>Wildlife sign</b></p> <ul style="list-style-type: none"><li>( ) What spoor/pellet clusters were present?</li><li>( ) How and where was it concentrated?</li><li>( ) Are there signs of wildlife paths or trails?</li><li>( ) Are there signs of browsing ?</li><li>( ) Are there signs of bedding areas?</li><li>( ) What plants are present that are important to big game?</li><li>( ) What are the likely paths of movement across the property?</li><li>( ) Are there any endangered species on the property or nearby?</li></ul>	
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<p><b>Flood hazard</b></p> <ul style="list-style-type: none"><li>( ) Is the parcel located by a stream?</li><li>( ) What is the stream health?</li><li>( ) Are the banks stable?</li><li>( ) Will streambank erosion effect the development?</li><li>( ) Will flooding affect the development?</li></ul> <p><b>Wetlands</b></p> <ul style="list-style-type: none"><li>( ) Are there any jurisdictional wetland areas?</li><li>( ) Are there any hydric soils, hydrophytic vegetation, or wetland hydrology that may indicate a wetland area?</li><li>( ) Is a 404 permit from US Army Corps. required?</li></ul> <p><b>Erosion</b></p> <ul style="list-style-type: none"><li>( ) Will the development create large disturbed areas?</li><li>( ) Is it on a slope? What percent slope?</li><li>( ) What signs of erosion are present already?</li><li>( ) Does the contractor need an NPDES permit?</li><li>( ) What BMP's can be implemented during construction to keep soil on site?</li></ul> <p><b>Weeds</b></p> <ul style="list-style-type: none"><li>( ) Are noxious weeds present? What species?</li><li>( ) How will weeds be addressed during construction?</li><li>( ) How will weed seeds be kept from off-site tracking by vehicle tires?</li><li>( ) Will soil be stockpiled and weeds grow on the stockpile? It might be a good idea to take a pocket weed handbook on site.</li></ul> <p><b>Overall habitat value</b></p> <ul style="list-style-type: none"><li>( ) What is the habitat ranking?</li></ul> <p><b>Fencing</b></p> <ul style="list-style-type: none"><li>( ) Does fencing exist on the property?</li><li>( ) Is it wildlife friendly fencing? Does it need to be?</li><li>( ) Is the property in the NRO/SRO?</li><li>( ) Is there un-necessary fencing (such as perimeter fencing) on the property that should be removed?</li></ul>	
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## **Hints for subdivision reviews and standard comments**

### **GIS analysis:**

Always run a GIS analysis on wildlife migration routes and locations of Trumpeter Swan nests and Eagle nests. Always print out the maps.

### **Document Review:**

When reviewing documents, always ask yourself if the information agrees with your GIS analysis and what you know about the area. Are the documents well done and consistent with other similar documents you have reviewed in the past? Was the procedure employed to obtain the information in the documents standard and accepted methodology? Do the documents contradict themselves anywhere?

### **Soil analysis:**

When conducting a soil analysis, our information is based on general NRCS soil survey data. We are not digging test pits and often geotechnical reports are much more authoritative than our coarse soil analysis. Pay close attention to soil erodibility factors and how much rain that site will expect to have during construction.

### **Chemical Storage:**

Some sites will require chemical storage during construction and chemicals should always be stored such that a leak or spill will not pose a threat to natural resources. Some good housekeeping suggestions include:

Targeted chemical materials include: paints, solvents, stains, wood preservatives, tar, antifreeze and other vehicle fluids, pesticides and herbicides, and cutting oils

- Keep chemicals in appropriate containers (closed drums or similar) and under cover
- Store non-compatible materials in separate locations (ie. separate acids and bases)
- Use drip pans underneath all vehicles stored inside or outside (plastic kiddie wading pools work well)
- If chemicals are stored inside a structure, make sure the floor drains are covered or else are connected to the sanitary sewer system
- Have spill kits readily available on site, clearly label locations of spill kits
- Follow protocol for spill clean-up: 1) contain or cover the spill 2) Recover materials 3) Clean contaminated area and properly dispose
- Store chemicals in a plastic lined, bermed containment area, if they are not in a covered building
- Require emergency spill absorbent mats to be carried on board equipment performing work
- All hydraulically operated equipment used for cutting, sawing, drilling, and coring concrete should be equipped with biodegradable oil
- Store chemical drums on plastic “egg-carton” pallets in case of spill

### **Landscaping:**

Wildlife are attracted to certain plantings that are more palatable than others. For example, moose and beavers like nursery grown aspen trees that come from out-of-state because those trees have not developed the chemical defenses WY aspens have. WY aspens tend to taste worse because of the chemical defenses they have evolved in response to browsing. (Tom Segerstrom,



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certified Wildlife Biologist, JH Land Trust). Consider whether the landscaping includes berry bushes or shrubs that will attract bears to the subdivision. If songbirds are desired, many grasses provide seeds for songbirds, while bears find them unpalatable. Visual barriers planted around homes or around migration corridors can help shelter migrating wildlife from human activity and excessive noise.

### **Site Density:**

Try to determine if the wildlife use of the property can reasonably continue given the proposed density. Sometimes, with certain mitigation efforts it can, other times the density is simply too great. There are several planning strategies that help mitigate density effects. Clustering homes can help maintain open space. Suggest permeable concrete for driveways and parking lots to reduce impervious surface and maintain groundwater recharge. Stormsewer systems can help catch excessive runoff. Suggest restricting lighting because wildlife use the sanctity of night for travel. If lighting is close to the ground (no more than 4' tall) or turned off at night, then wildlife feel safer to move. Domestic dogs and cats should be fenced, leashed, or otherwise contained. Dogs will bark at and chase big game and cats will kill songbirds. Sometimes facilities come up for permit renewal and the C.D. is asked to review the application. Consider if the use of the property should be limited to certain hours of operation to allow animal movement at night. Should noise be limited to certain decibels levels? Overgrazing can easily occur on property. The carrying capacity of a certain property depends on many factors and if there is a question about whether or not an area will be overgrazed, then the NRCS District Conservationist should be brought in for consultation. Pasture rotation, water gaps, troughs, re-seeding or other efforts may be necessary to maintain integrity of the pasture.

### **Connectivity:**

When evaluating a site, bear in mind that it is connected to an overall system. If wildlife move across the property, what resources are they going to and from and why? Are they moving across the property to get from the north facing slope to the south facing slope? Are they moving across the property from a forested area to a river area? If wildlife stay on the property, why do they? What resource are they attracted to? How long do they need that resource, 6 months, 3 months, year round? How will the development force a change in behavior of the wildlife? Is it reasonable, given surrounding property conditions, to expect wildlife to adapt or is the change just too disruptive?

### **Forest Health:**

When evaluating a forest take into account what successional stage it is in. Are the developers proposing replanting trees that by-pass the natural succession of the area? How can healthy trees be preserved? Can some thinning take place that would help stimulate new tree growth? Should nest boxes or bat boxes be installed if trees are to be removed? Should construction activity be restricted to certain times of the year? For example, don't allow const. from Mar 20 – June 15<sup>th</sup> to allow birds to establish nests in the area. Another example is recommending restricting construction activity to 8-5pm so wildlife can still use the property without disturbance at night.



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### **Wildlife signs:**

Generally you will know what sort of wildlife use the property because of the GIS analysis. However, look the property over to determine the areas of highest concentration of use. Usually wildlife like to travel along edge habitat. Stripped bark, broken twigs and short bushes that should be trees, are signs of browsing. Always look for tracks. Moose tracks/spoor and elk tracks/spoor are fairly distinctive. Sometimes, if you can't tell what animal made a track, you can look around in the very close vicinity of the tracks and find spoor that is easily distinguished. In deep snow, look in the tracks for spoor. Spoor will vary depending on time of year and moisture content of the forage the animal is consuming. In winter, the spoor looks like pellets, while in spring it looks much more like cow pies. Mule deer and whitetail deer tracks and spoor are almost impossible to tell apart, unless you are a cervid spoor morphologist.

### **Flood Hazard:**

Structures constructed by streams can be in danger of flooding. Check to make sure the structure will not be in the 100 year floodplain as designated by FEMA. Look at the stability of the streambank. Will it erode in the direction of the structure and threaten the building? Is the streambank well vegetated? Should the stream buffer be wider than proposed? In Teton County, the following setbacks apply: Rivers 150', Streams 50', Lakes and Ponds 50'.

### **Wetlands:**

The best idea is to stay out of wetland areas altogether. Teton County recommends a 30 foot setback from wetlands. If wetland are to be unavoidably altered then mitigation is usually necessary. Teton County requires that on-site mitigation occur whenever possible at a ratio of one and a half acres of new wetland for every one acre of wetland filled or altered. All off site mitigation is two and one half acres of new wetland for every one acre filled.

### **Erosion:**

A small construction NPDES permit from WYDEQ is required for construction projects that disturb 1-5 acres. A WYDEQ large Construction General NPDES permit is required for projects that disturb 5+ acres. Make sure that the contractor is aware of the permit requirements. Is there any sign of rill, gully, or channel erosion on site currently? Where does the water enter the site and how does it leave the site? How is it likely to travel over the site? What areas will be the most prone to erode? How can the possible erosion be prevented? Feel free to design a SWPPP on the construction plans because usually the contractor's plans are insufficient. Run a RUSLE II analysis, if you know how.

### **Weeds:**

Look for noxious weeds and take pictures of them if you see any. Recommend that the County Weed and Pest folks come out and prepare a weed management plan for how to handle and eradicate the weeds during and after construction. Carry a Weed Pocket Guide if you are not 100% familiar with all the noxious weeds.

### **Overall habitat value:**





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Teton County has categorized many different habitat types and assigned a numerical value to them based on their importance to wildlife, diversity, and gross primary productivity. 1 is the lowest ranking habitat value and 10 is the highest. High ranking habitats are more important to preserve and may require mitigation efforts if they are compromised. The following chart will help you determine the value of the habitat on your site:

### **Fencing:**

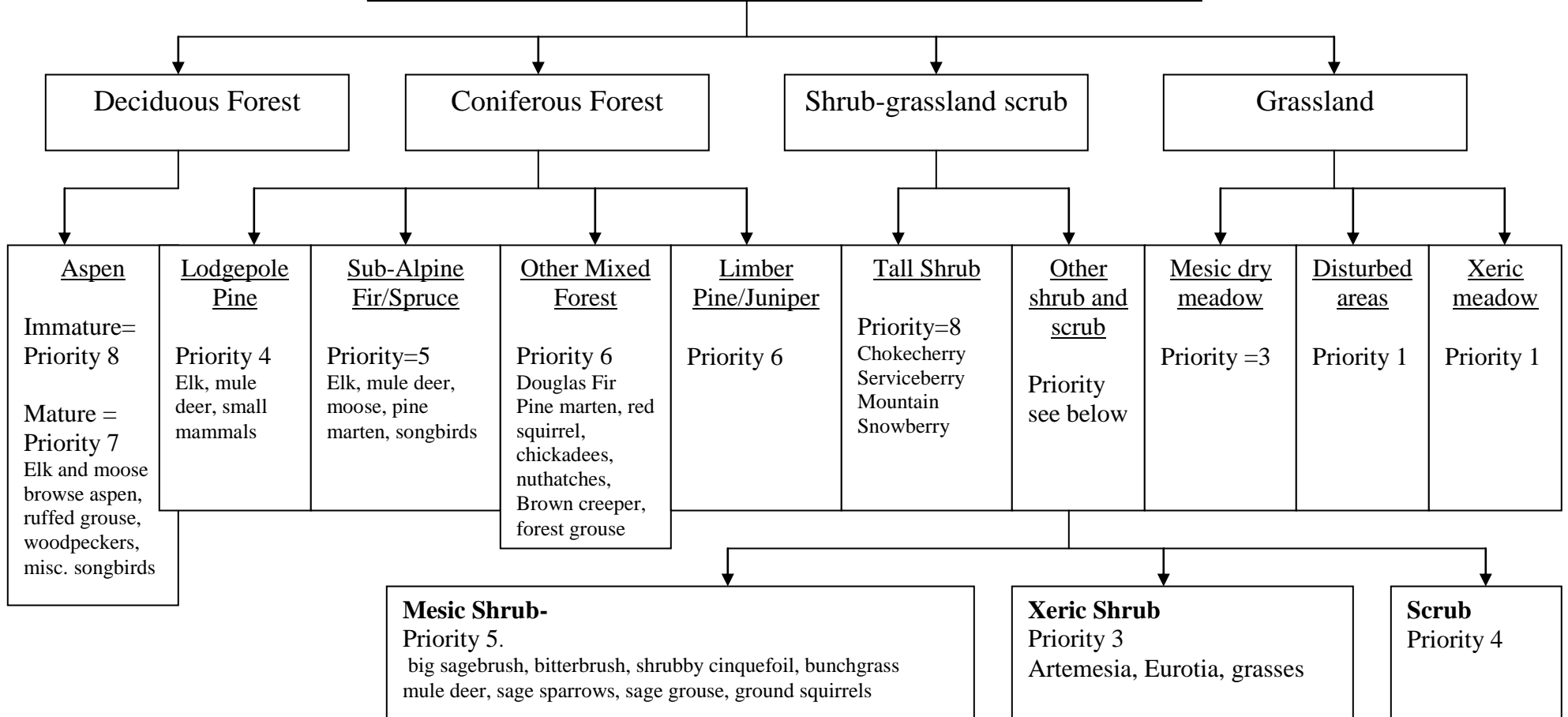
Fencing is considered wildlife friendly if it is constructed of smooth wire and meets the following criteria or is electric and meets the following criteria found below the habitat ranking charts:



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**NON-MESIC** -upland, higher elevations, lower productivity, colder



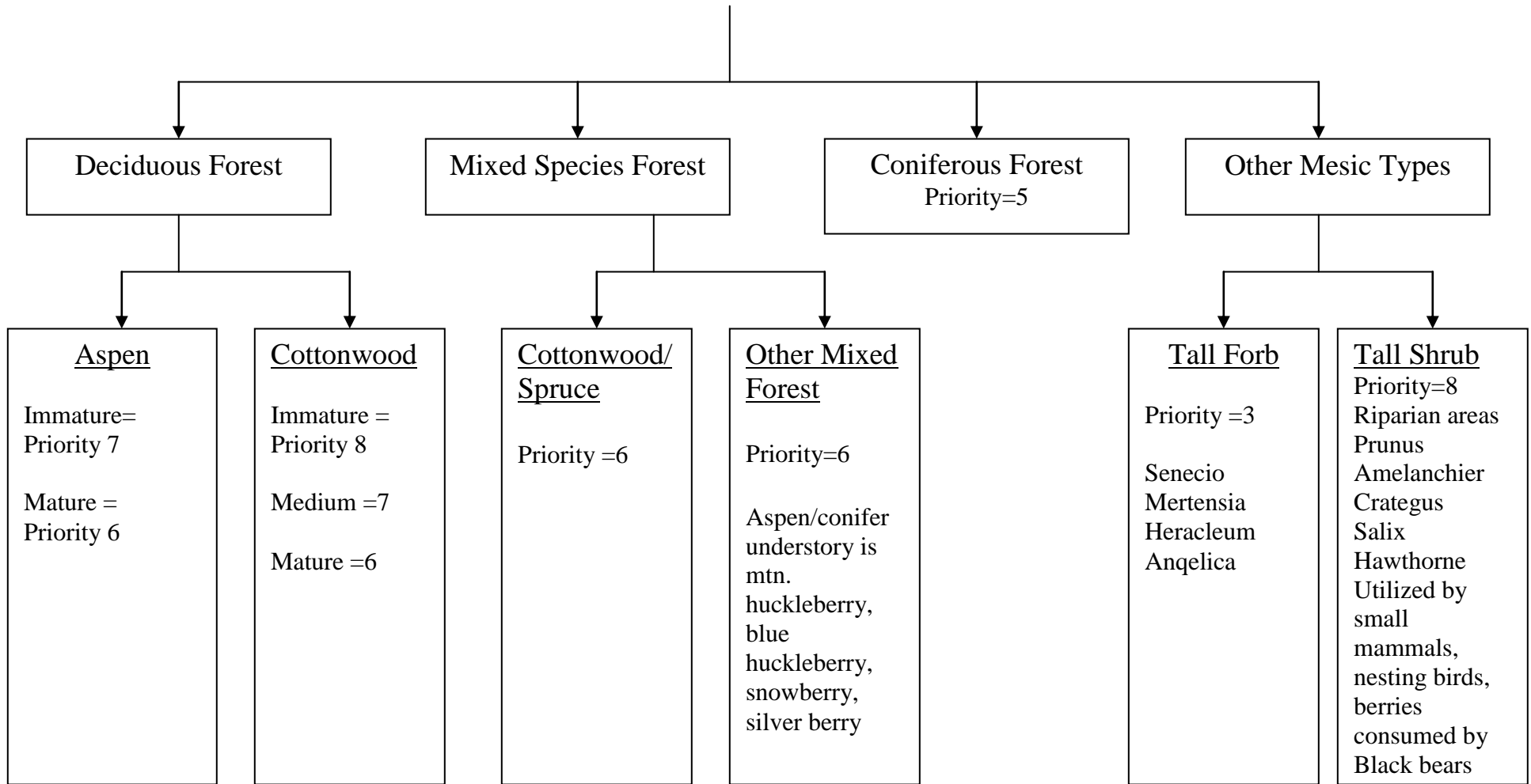




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**MESIC** moist, productive sites usually at lower elevations

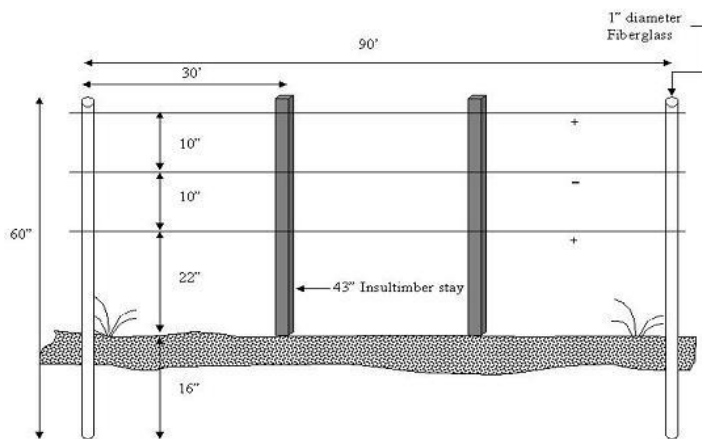
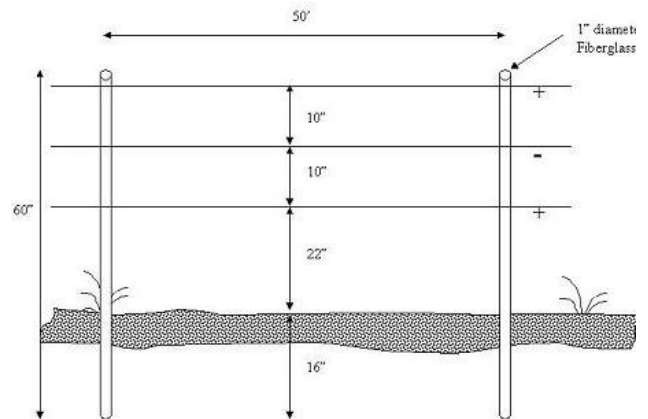
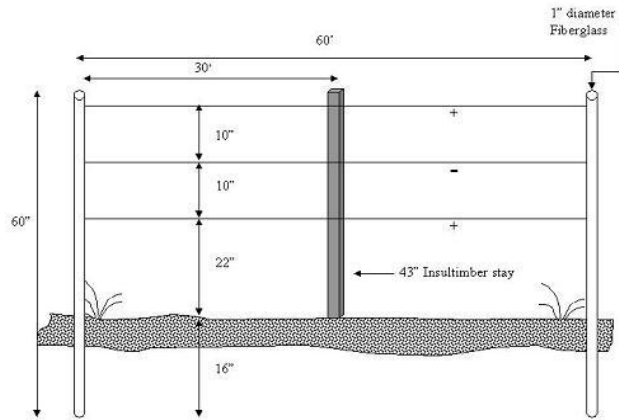




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### Wildlife Friendly Electric Fencing (WYDOT specs)





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## Wildlife Friendly Fencing Specs for Standard wire

