

RESOLUTION NO. 2018-11

**A RESOLUTION OF THE BLAINE COUNTY BOARD OF COUNTY COMMISSIONERS APPROVING
WATER CONSERVATION GUIDELINES AS BEST PRACTICES FOR THE WOOD RIVER VALLEY AND
UNINCORPORATED BLAINE COUNTY**

WHEREAS, the cities, communities, residents, businesses, non-profit organizations, and industry experts of the Wood River Valley agree that water conservation is critical to the sustainability of Wood River Valley communities;

WHEREAS, a working group of representatives from Blaine County, City of Bellevue, the City of Hailey, the City of Ketchum, the City of Sun Valley, Wood River Land Trust, industry representatives, local non-profits, and citizens from the community have collaborated resources and efforts to produce a list of best practices and guidelines, attached hereto as Exhibit A, for establishing and maintaining landscaping while conserving water resources;

WHEREAS, Exhibit A to this resolution incorporates the most current and up-to-date best practices for promoting water conservation techniques and efficiency standards for the unique and complicated Wood River Valley ecosystem;

WHEREAS, all residents, businesses, and industry professionals designing or maintaining outdoor landscaping in the Wood River Valley are advised to consult the best practices contained in Exhibit A to maximize water conservation and landscape productivity while minimizing detrimental impacts on the Wood River Valley's water resources;

WHEREAS, Exhibit B to this resolution is a list of drought tolerant cultivated and native trees, shrubs, and grasses for the Wood River Valley;

WHEREAS, Exhibits A and B, which may be updated from time to time, shall be utilized as guiding documents for residents, businesses, and industry professionals when planning, designing, and maintaining outdoor landscaping.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Blaine County, Idaho, that Blaine County approves and endorses the best practices and guidelines contained in Exhibit A and the list of drought tolerant trees, shrubs, and grasses contained in Exhibit B.

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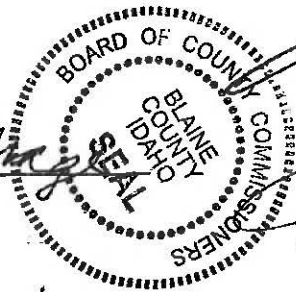
DATED this 24th day of April, 2018.

**BLAINE COUNTY BOARD OF COUNTY
COMMISSIONERS**


Angenie McCleary, Chairman

ATTEST:


Jolynn Drage, Clerk




Lawrence Schoen, Vice Chairman


Jacob Greenberg, Commissioner

EXHIBIT A

Water Conservation Landscaping *guidelines*

These standards of practices have been drafted by industry experts, local municipalities and nonprofit organizations to promote water saving techniques and efficiency standards. The Wood River Valley is a dry ecosystem averaging 10-18 inches of precipitation a year. Using proper design, watering efficiently, and implementing sustainable practices can reduce the strain on this valuable resource and save water users money.

Soil and Compost. Soils with 25% compost can hold four times more water than soils without composted matter. Compost is an excellent way to amend existing soils or build better soil. By adding compost you improve water infiltration and decrease runoff and erosion. Compost improves the water holding capacity of the soil and improves the microorganism life in the soil which allows plants to utilize necessary soil nutrients and minerals. Healthier plants are able to better withstand drought.

A minimum of 25% compost needs to be added to existing soils because the soil types in the Wood River Valley do not have adequate organic material for water holding capacity.

- € All new turf areas require a soil depth of 6": ONE PART COMPOST TO 3 PARTS SOIL.
- € All new shrub and flower beds require a soil depth of 12": ONE PART COMPOST TO 3 PARTS SOIL.
- € During excavation, existing soil is to remain on site and temporarily fenced to protect from compaction.
- € Protect and minimize disturbance of existing trees and vegetation when excavating.

Mulch. Organic mulch is composed of materials such as bark, wood chips, soil pep, and wood compost. Mulch works to keep plants cool, prevent soil crusting, minimizes evaporation and controls weed growth.

- € All shrub beds, tree rings, exposed soil and beds should have 4-6" of mulch to minimize evaporation.
- € Mulch in tree rings should go from the trunk to the outer drip line of the trees.
- € It is best to let the grass clippings stay on the lawn as mulch instead of collecting the grass when mowing.
- € When thatching lawns, if compost is spread on the lawn and watered in, more top soil will be formed to hold water in the root zone.

Vegetation. Choosing the right vegetation can significantly reduce water use. Native or Drought Tolerant species require 1" or less of water per week.

- € All turf species should be native or drought tolerant
- € 30% of trees and shrubs should be low-water use plants

Irrigation. Current irrigation system installations have no regulation for efficiency. Without using industry best practices, irrigation systems can waste 40-60% more water than they should. Following the best practices guideline, the user can rest assured that they will have a system that saves water and protects the water resources.

- € All landscapes are limited to irrigating .5 acre or less unless there is an additional water right.
- € Sprinkler system should have an approved backflow preventer if tied to a potable water source. Backflow should be installed so during winterization no air will be blown through backflow preventer.
- € Sprinklers should be laid so that the area is getting hit with a minimum of two sprinklers. This provides for 100% coverage. Recommended overlap would be 5-10%.
- € Limit of .60" per hour for sprinkler application rates. ½" bubblers are not recommended due to their high application rate and poor distribution uniformity (coverage).
- € All sprinkler types should be pressure regulated to either 40 or 45 pounds of pressure at the sprinkler head to assure uniform sprinkler nozzle distribution rates. 15 psi is recommended for delivery to the far end of any drip zone for proper operation. Recommended spray height: 4" pop up for mowed grass and 12" pop up for natural areas.
- € Sprinkler nozzles should have matched precipitation rate so the same amount of water covers each zone.
- € Drip should be laid out in a grid pattern so water is uniform in distribution and it is staked to the ground a minimum of every 24" to assure the drip tube stays in contact with the soil.
- € Drip pipe should be ½" pressure compensating and also have a check valve to prevent drain out.
- € Pots, barrels, or hanging baskets are recommended to have a dedicated irrigation zone. Irrigated with ¼" pressure compensating drip tube no longer than 15' in length. ¼" drip tube shall not be more than .6 gallons per hour water pressure.
- € Plant materials with similar water needs should be planted in the same irrigation zone.
- € Sun areas and shade areas should each have a separate irrigation zone.
- € Sprinkler controller should be able to adjust irrigation automatically via weather station or soil moisture sensor (Time Domain Transmission recommended). Irrigation and Smart Technologies should be installed to industry/manufacturers standards (including 2-wire systems).
- € If property has more than 5 feet of elevation change - all sprinkler heads should incorporate check valves to prevent all of the water from draining out of the low heads.
- € For larger sprinkler systems with a water supply that is larger than 1-1/2" a flow meter and master valve that is controlled from the sprinkler controller is recommended. Mainlines 3" and larger should use HDPE or Ductile Iron fittings. PVC mainline fittings are not recommended on 3" and larger mainlines.

EXHIBIT B

Cultivated and Native Drought Tolerant Trees, Shrubs, and Grasses For The Wood River Valley

Watering levels are for plants that have been established for a minimum of one year. These watering levels are above and beyond any natural precipitation that may fall during the growing season. Low = 0.2-0.5 in/week, Medium = >0.5-1 in/week, High = >1 in/week. S = sun, DS = dappled shade, s = shade

Conifer Trees

Common Name	Botanical Name	Water Needs	Aspect	Zone
Arborvitae	<i>Thuja occidentalis</i>	Medium	S	3
Fir	<i>Abies spp</i>	Medium	S/DS	3,4
Fir, Douglas	<i>Pseudotsuga menziesii</i>	Medium	S/DS	3
Juniper	<i>Juniperus spp</i>	Low	S	2
Larch (all)	<i>Larix spp</i>	Medium	S	2
Pine	<i>Pinus spp</i>	Low	S	2
Spruce	<i>Picea spp</i>	Medium	S	2

Deciduous Trees

Common Name	Botanical Name	Water Needs	Aspect	Zone
Apple	<i>Malas spp.</i>	low	S	VARIABLES
Apricot	<i>Prunus spp.</i>	low	S	3
Ash, Black	<i>Fraxinus nigra</i>	low	S	2
Ash, Green	<i>F pennsylvanica</i>	low	S	3,4
Ash, Mancana	<i>F mandschurica</i>	low	S	3
Ash, White	<i>Fraxinus americana</i>	medium	S	3
Aspen, Quaking	<i>Populus tremuloides</i>	medium	S	1
Buckeye	<i>Aesculus spp</i>	low	S/DS	3
Cherry	<i>Prunus spp.</i>	low	S	3
Chokecherry	<i>P virginiana</i>	low	S	2
Crabapple	<i>Malas spp.</i>	medium	S	VARIABLES
Elm	<i>Ulmus spp</i>	low-medium	S	4
Hackberry	<i>Celtis occidentalis</i>	low	S	3
Hawthorn	<i>Cratageagus spp</i>	low	S	4
Honeylocust	<i>Gleditsia triacanthos spp</i>	low	S	4
Horsechestnut	<i>Aesculus hippocastanum</i>	low	S	3
Lilac	<i>Syringa spp</i>	low	S	3,4
Linden	<i>Tilia spp</i>	medium	S/DS	2,3
Maakia, Amur	<i>Mackia amurensis</i>	low	S	4
Maple	<i>Acer spp</i>	low-medium	varies	2,3,4
Mountainash	<i>Sorbus spp</i>	medium	S	2
Mtn Mahogany	<i>Cercocarpus spp</i>	low-med	S	2

Oak, Bur	<i>Quercus macrocarpa</i>	low	S	2
Oak, Chestnut	<i>Quercus prinus</i>	low	S	4
Oak, Shingle	<i>Quercus imbricaria</i>	low	S	4
Oak, Swamp White	<i>Quercus bicolor</i>	low	S	3
Oak, White	<i>Quercus alba</i>	low	S	3
Pear	<i>Pyrus spp</i>	low	S	3
Plums	<i>Prunus spp.</i>	low	S	3

Evergreen Shrubs and Small Trees

Common Name	Botanical Name	Water Needs	Aspect	Zone
Juniper	<i>Juniperus spp</i>	low	varies	varies
Larch	<i>Larix spp.</i>	low	S	3
Pine	<i>Pinus spp</i>	medium	S	2
Rabbitbrush	<i>Chrysothamnus spp</i>	low	S	2
Soapweed	<i>Yucca glauca</i>	low	S	4
Spruce	<i>Picea spp</i>	medium	S	2

Deciduous Shrubs and Small Trees

Common Name	Botanical Name	Water Needs	Aspect	Zone
Alder	<i>Alnus tenuifolia</i>	medium	S/DS	1,2
Almond, Flowering	<i>Prunus glandulosa</i>	medium	S	3
Barberry	<i>Berberis spp</i>	medium	S/DS	3
Buckthorn	<i>Rhamnus spp</i>	medium	S	3
Buckthorn, Sea	<i>hyppophae rhamnoides</i>	low	S	4
Buffaloberry	<i>Shepherdia spp</i>	low	S	3
Burningbush	<i>Euonymus alata</i>	medium	S	4
Chokeberry	<i>Aronia spp</i>	medium	S/DS	4
Chokecherry	<i>Prunus spp.</i>	low	S	3
Cliffrose, Mexican	<i>Purshia mexicana</i>	low	S/DS	4
Coralberry	<i>Symphoricarpos spp</i>	low	S	2
Cotoneaster	<i>Cotoneaster spp</i>	low	S/DS	3
Cranberry, American	<i>V trilobum</i>	medium	S/DS	3
Cranberry, European	<i>V opulus</i>	medium	S/DS	3
Currant	<i>Ribes spp</i>	low	DS/s	4
Deutzia	<i>Deutzia spp</i>	medium	S	3
Dogwood	<i>Cornus spp</i>	medium	S/DS	1,2
Elderberry	<i>Sambucus spp</i>	low	S	2
Fernbush	<i>Chamaebatiaria millefolium</i>	low	S	4,5
Filbert	<i>Corylus spp</i>	medium	S/DS	3
Forsythia	<i>Forsythia spp</i>	medium	S	4
Gooseberry	<i>Ribes spp</i>	low	S	2
Honeysuckle	<i>Lonicera spp</i>	low	S	4
Hydrangea	<i>Hyrangea spp</i>	medium	DS/s	3
Kinnikinnick	<i>Arctostaphylos uva-ursi</i>	low	S/DS	2

Lilac	Syringa spp	low	S	3
Maple	Acer spp	medium	S/DS	varies
Mockorange	Philadelphus spp	low	S	4
Mormon Tea	Ephedra viridis	low	S	3
Mtn Mahogany	Cercocarpus spp	low	S	3
Ninebark	Physocarpus spp	low	S	3
Peashrub	Caragana spp	low	S	2
Plum	Prunus spp.	low	S	3
Potentilla	Potentilla spp	low	S	varies
Quince	Chaenomeles spp	medium	S/DS	4
Raspberry	Rubus spp.	low	S	varies
Rose	Rosa spp	low-medium	S	varies
Sagebrush	Artemisia spp	low	S	2
Saltbush, Four Wing	Atriplex canescens	low	S	4
Sandcherry	Prunus besseyi	low	S	4
Serviceberry	Amelanchier spp	low	S/DS	4
Snowberry	Symphoricarpos spp	low	S	3
Spiraea	Spiraea spp	medium	S	3
Spiraea, Ashleaf	Sorbaria sorbifolia	low	S	4
Spiraea, Rock	Holodiscus dumosus	low	S	4
Sumac	Rhus spp	low	S	4,3
Summersweet	Clethra alnifolia	medium	DS/s	2,3
Thimbleberry	Rubus deliciosus	low	S	4
Viburnum	Viburnum spp	medium	DS/s	4
Waxflower	Jamesia americana	low	S	4
Winter Fat	Cerotoides lanata	low	S	4

Ornamental Grasses

Common Name	Botanical Name	Water Needs	height	zone
crested wheat grass	Agropyron cristatum	low	12-18"	3
sideoats grama	Bouteloua certipendula	low	1-2'	3
blue grama	B gracilis	low	1-2'	3
blue fescue	Festuca ovina gluca	low	4-10"	4 to 9
blue acenea grass	helictotrichon sempervirens	low	4'	4 to 9
ribbon grass	Phalaris arundinacea 'Picata'	low	1-3'	4 to 8
karl foerster feather reed	C arundinacea 'Karl Foerster'	medium	2-4'	4
norhern sea oats	Chasmanthim latifolium	medium	3-4'	4
hardy plume grass	Erianthus (Saccharum) ravennae	medium	9-12'	4 to 9
tall fescue	Festuca arundinacea	medium	1-2'	2

Grasses for Xeriscape

Common Name	Botanical Name	Water Needs	height	zone
western wheat grass	Agropyron smithii	low	2-4'	3 to 9
sideoats grama	Bouteloua curtipendula	low	1-2'	3

blue grama grass	<i>B gracilis</i>	low	1-2'	3
hairy grama grass	<i>B hirsuta</i>	low	6-24"	3 to 9
kalm's chess	<i>Bromus kalmii</i>	low	2-4'	3 to 8
bluejoint	<i>Calamagrostis canadensis</i>	low	2-5'	3
prairie sand reed	<i>Calamovilfa longifolia</i>	low	2-6'	3 to 6
Canada wild rye	<i>Elymus canadensis</i>	low	2-5'	3 to 8
virginia wild rye	<i>E virginicus</i>	low	2-4'	3 to 9
sheep fescue	<i>Festuca ovina</i>	low	1-2'	3 to 9
squirreltail grass	<i>Hordeum jubatum</i>	low	1-2'	4 to 9
June grass	<i>Koeleria cristata</i>	low	1-2'	3 to 9
reed canary grass	<i>Phalaris arundinacea</i>	low	2-5'	4 to 8
glaucous bluegrass	<i>Poa glaucifolia</i>	low	1-2'	3 to 9
inland bluegrass	<i>P interior</i>	low	1-2'	3 to 9
needle and thread	<i>Stipa comata</i>	low	1-3'	4 to 9
porcupine grass	<i>S spartea</i>	low	2-3'	3 to 6
purple top	<i>Tridens flavus</i>	low	3-5'	4
bottlebrush grass	<i>Hystrix patula</i>	medium	2-4'	4 to 9