Sustainable Landscaping Practices

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Stormwater Management

- On-site control strategies that stress peak flow reduction, increased infiltration, and pollutant reduction.
- Best Management Practice's and are designed to store and/or filter runoff before it leaves a development site. Maintain groundwater recharge and quality
- Each BMP removes different pollutants
- Limit stormwater runoff quantity
- Reduce stormwater pollutant loads
- Protect critical habitats

The pollutants of concern in the Joint Planning Area are varied and include:

- Total Suspended Solids (Construction Sites, Erosion)
- Nutrients (Lawn fertilizer, Agricultural fertilizers)
- Heavy Metals (Streets, Buildings, Parking Infrastructure)
- uses)

Figure 1. Swede Hollow Rain Garden, St. Paul, MN. (Green Institute 2004).

Rain Gardens

•Shallow, vegetated depressions

•Promotes absorption and infiltration of stormwater runoff.

•Combine shrubs, grasses, and flowering perennials

•Detain and trap pollutants.

•Residential front and back yards

•Islands in parking lots or cul de sacs

•Under roof downspouts

•Commercial planting beds

Figure 2. Rain Gardens in Seattle, WA. (Low Impact Development Center, Inc. 2004).

Green Roofs

•Innovative stormwater management technique

•Control the amount of pollutants in rooftop runoff

•Reduce the overall volume of runoff from rooftops

Figure 3. Green Roof. (Heath 2004).

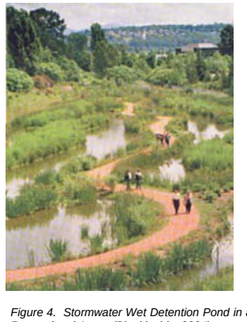


Figure 4. Stormwater Wet Detention Pond in a Recreational Area. (Blankinship 2004).

Wet Detention Ponds

•Permanent pools that collect and detain stormwater runoff.

•Improves water quality by using the natural physical, biological, and chemical processes available in the pond to remove pollutants

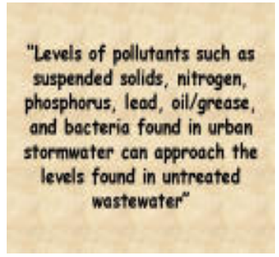
Treatment Trains

•Series of BMP's designed to handle stormwater flows

•Better removal of a variety of pollutants due to each BMP's unique capabilities

•BMP's utilized in succession

•Effective for increased sedimentation



(University of Tennessee 2003.)

Community Gardens

•Embodies the ideas of sustainability, conservation, and community

•Open spaces managed and operated by members of the local community for various purposes

•Aesthetically pleasing

•Creating a sense of neighborhood.

•Strengthen residents' connection with the natural surroundings

•Unique urban amenities

•Highly desirable in neighborhoods

•Serve as the source for local farmers' markets

•Serve several environmental functions including natural infiltration, buffering areas, and ground water recharge.

Starting a Community Garden in the Joint Planning Area

•Buffer against active agricultural lands

•Select suitable soil types and locations

•Protect the gardens with permanent conservation easements

•Partner with local gardening professionals for assistance

Figure 5. Community Garden in Tuscon, AZ. (Community Gardens, 2004)

Figure 6. Eagle Heights Community Garden, Madison, WI (UW-Madison, 2004)

Environmentally Friendly Urban Landscaping

Native plant advantages

•Adapted to local climate and soil conditions

•Hardier than conventional landscaping plants.

•Reduce extensive maintenance such as watering or fertilizer, pesticide, and herbicide application.

•Produce an aesthetically pleasing yard.

•Flower throughout the summer months

•Improve local air and water qualities as fossil fuels

•Resistant to native pests such insects and fungi

•Provide food and habitat for native fauna

Due to their aggressive competitive nature, exotic and invasive species are highly discouraged for ornamental use. These plants typically form monotypical stands that provide little value to native fauna.

Table 1. Recommend Species for Native Landscaping.

Common Name	Scientific Name	Wildlife Attracted
Black Cherry	*Prunus serotina*	Various birds (47 species)
American Mountain Ash	*Sorbus americana*	Various birds (14 species)
Showy Mountain Ash	*Sorbus decora*	Various birds (14 species)
Eastern Red Cedar	*Juniperus virginiana*	Various birds (54 species)
White Cedar	*Thuja occidentalis*	Various birds (54 species)
Chokecherry	*Prunus virginiana*	Various birds (43 species)
Cardinal Flower	*Lobelia cardinalis*	Ruby Throated Hummingbird
Wild Bergamot	*Monarda fistulosa*	Dragonflies and other insects
Lupine	*Lupinus perennis*	Karner Blue Butterfly
Bluestems	*Andropogon spp*	Various birds (seed eaters)
Dogwoods	*Cornus spp.*	Various birds (34 species)
Columbine	*Aquilegia canadensis*	Ruby Throated Hummingbird
Butterfly Weed	*Asclepias tuberosa*	Various butterflies
Spotted Jewelweed	*Impatiens capensis*	

Table 2. Invasive Species Not Recommended for Urban Landscaping.

Common Name	Scientific Name
Purple Loosestrife	*Lythrum salicaria*
Tartarian Honeysuckle	*Lonicera tatarica*
Black Locust	*Robinia pseudo-acacia*
Garlic Mustard	*Alliaria petiolata*
Russian Olive	*Elaeagnus angustifolia*
Dame's Rocket	*Hesperis matronalis*
Reed Canary Grass	*Phalaris arundinacea*
Crown Vetch	*Coronilla varia*
Common Buckthorn	*Rhamnus cathartica*
Pale Yellow Iris	*Iris pseudacorus*
White Sweet Clover	*Melilotus spp.*
Canada Thistle	*Cirsium arvense*
Wild Parsnip	*Pastinaca sativa*
Musk or Nodding Thistle	*Carduus nutans*

Figure 7. Monarch Butterfly (Danaus plexippus) on a Native Wildflower, (Heath 2004)

Figure 8. Wild Bergamot, Monarda fistulosa,(Heath 2004)

Figure 8. Milkweed, Asclepias ssp. (Heath 2004)

Figure 9. Purple Coneflower, Echinacea purpurea (Heath 2004)

Figure 10. Red-Osier Dogwood, Cornus stolonifera (Fewless 2002)

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