

Urban Environments

Brief Description

Public support for the conservation of open countryside is growing across the Midwest. However, **many areas have already become urbanized or otherwise highly modified, and these areas may still at least contribute to maintaining the overall diversity of reptiles and amphibians** in a region. Urban environments include residential areas, commercial and industrial zones, and recreational greenspace (public parks, arboretums, and golf courses). Innovative strategies in these areas may minimize the effect of human expansion on the natural environment and include opportunities to enhance urban areas for reptiles and amphibians. **Urban environments also offer a unique forum to promote public information and education about native reptiles and amphibians**, the environment they live in, and why it is important that exotic (non-native) species are not introduced.

Species Persisting in Urban Habitats

The habitats available to amphibians and reptiles in urban settings are varied, both in terms of size and type. For example, metropolitan parks often contain natural habitats in higher quantities and of higher quality than suburban backyards. Larger areas, such as metropolitan parks, may often support species such as Chorus Frogs, Brown Snakes, Snapping Turtles, Painted Turtles, and Tiger Salamanders. While smaller areas, like backyards, may provide habitat for species such as American Toads, Garter Snakes, and Fence Lizards.

Integrative Management Ideas

Reptiles and amphibians can benefit from constructive interaction and cooperation among landowners and managers, urban planners, biologists, and landscape architects within the urban environment. During the planning process, areas with existing high quality habitats or special natural features, such as seasonal wetlands in forests, should be conserved. Where feasible, these areas should be included in planned greenspace or their development set aside until a full assessment of their potential can be determined.

Developers should designate open space systems early in the planning process to ensure that the highest quality habitats are conserved. Encourage developers to design around natural features, using ecological principles to reduce the impact of their plans on quality habitat. Ecological guidelines to consider include (1) minimizing fragmentation of habitat, (2) protecting stream corridors (passageways of



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Eastern Garter Snakes may be encountered in urban backyards.

CRITICAL CONSIDERATIONS FOR URBAN AREAS

- Protect and buffer any remaining natural areas. These are the areas most species will need.
- Maintain/develop corridors between habitat fragments to provide habitat complexes rather than habitat islands.
- Historical water regimes should be maintained through any developmental processes.
- Prevent the introduction and minimize the spread of non-native vegetation.

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suitable habitat) and wetland areas with their associated natural vegetation, (3) conserving other natural vegetation corridors where possible, and (4) disturbing as little natural vegetation as possible.

It is important that pre-development water depths in wetlands and the natural duration and frequency of flooding be maintained. Unnatural drainage or flooding events can have serious ramifications on resident reptile and amphibian populations and should be avoided. It is especially important that amphibian and reptile core breeding areas be identified and protected. Also keep in mind that **many reptile and amphibian species use more than one habitat type during their life cycle, so it is very important to consider all of their habitat requirements during the planning process.** For example, many species of salamanders spend much of their time in forested habitat, but migrate to ephemeral and permanent wetlands to breed. Creating and maintaining existing corridors between these seasonally important habitats will result in additional improvements.

Management plans should minimize habitat fragmentation. In areas where fragmentation has already occurred, efforts should be directed towards creating natural vegetation corridors. **Consider developing roads that go around sensitive areas instead of through them.** Where roads must pass through, try to include crossings for amphibians and reptiles, such as over or underpasses. Minimizing paved areas and maintaining vegetation will help ensure infiltration of runoff down into the soil.

Try to prevent the introduction and spread of non-native plants and animals. Developed landscapes in urban settings can be enhanced for reptiles and amphibians by transplanting or planting native (species that are naturally found there) vegetation. It is best to provide a diversity of species and cover types. **Degraded aquatic settings such as wetlands, ponds, and watercourses can also be improved for reptiles and amphibians by revegetating with native aquatic plant species.** Avoid introducing non-native fish into ponds or water bodies. These species can have devastating affects on native amphibian populations. The addition of woody debris, such as logs and snags, to these areas will also provide additional habitat for many species. Where possible, prevent the introduction or further spread of established aggressively colonizing native and exotic species. The Toolkit module of this guide provides some excellent ideas on management techniques for aggressive species.



A. Reseitar

Snapping Turtles can survive in the ponds and rivers of urban areas as long as they can find places to lay their eggs.

Limit the use of fertilizers, herbicides, and pesticides in all areas. In particular, avoid using chemicals around water bodies. Try using alternative management techniques that have fewer environmental side effects. Once again, consult the Toolkit module of this guide for more ideas.



This is the Forests module of the PARC publication, “**Habitat Management Guidelines for Amphibians and Reptiles of the Midwest**,” ISBN # 0-9667402-1-1. Please visit www.parcplace.org for further information or copies of the complete document, or visit <http://herpcenter.ipfw.edu> for a Web-based version of these materials.