Staff requests that the City Council determine whether to study and develop an invasive plant species policy and/or ordinance.

### Budget Impact:

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Previous Ordinance or Resolution #:  
Original Contract Number:  
Approval Date:  
Comments:
MEETING OF MAY 5, 2015

TO: Mayor and City Council

THRU: Don Marr, Chief of Staff
       Peter Nierengarten, Sustainability and Resilience Department Director

FROM: Leif Olson, Associate Planner

DATE: April 14, 2015

SUBJECT: Resolution in Support of Developing an Invasive Plant Species Policy and/or Ordinance

RECOMMENDATION:
Staff requests that the City Council determine whether to study and develop an invasive plant species policy and/or ordinance.

BACKGROUND:
The Urban Forestry Advisory Board (UFAB) has been actively discussing the subject of invasive plant species with the Urban Forestry Division and the Parks and Recreation Department staff for several years. The Urban Forestry Advisory Board has also made two (2) annual presentations to the City Council at agenda session requesting that the City Council consider the development of an Invasive Plant Species Policy and/or Ordinance. In January of 2015, the UFAB board approved a motion to have the Urban Forestry Advisory Board Chair to discuss the development of an invasive plant species ordinance with City Council Members and the City Attorney’s Office.

Invasive Species Policy has also been discussed between the City Attorney and City staff of the Sustainability and Resilience Department, who at the advice of the Mayor are bringing forward a resolution to the City Council to express whether or not there is consensus and agreement to work with other City Departments and Divisions to develop an invasive plant species policy and/or ordinance.

Invasive plant species ordinances from peer cities have typically contain the following components:
- Public education plans or campaigns centered on the identification and eradication of invasive plants on public and private property,
- Development of programs and/or materials explaining effective methods for eradicating a variety of different invasive plants,
- Development of an integrated pest management component related to the control and/or eradication of invasive species,
- Adoption of policies that ban the local sale and/or installation of identified invasive plant species, and
- The creation of a list of appropriate non-invasive and native plants that are appropriate alternatives for the identified and banned invasive plants.
**BUDGET/STAFF IMPACT:**
Staff anticipates the process of developing an invasive species policy to take several months. This process will include a robust stakeholder input process including City Staff, horticulturists, commercial nurseries and community organizations. Before this work is conducted, the Mayor wants to determine if a majority of the City Council supports studying and developing an invasive plant species policy and/or ordinance before resources are allocated for this work.

If the City Council supports this resolution then the budget/staff impact of invasive species policy implementation will be fully evaluated as part of the policy/ordinance development process.
Non-Native Plants Should Be Removed

Shrubs and Small Trees

There are four types of shrubs and small trees that should be removed. Control for all is similar. When small, they are easily removed in spring by pulling them up. Larger specimens should be cut back, pulled out with a winch or vehicle, or dug out with a garden fork and shovel and treated with herbicide when possible (following label instructions).

Bush Honeysuckles (*Lonicera spp.*)
These bushes have almost completely taken over Fayetteville. Vast areas are covered by these shrubs, especially along fence rows. There are several species.
- They are native to Asia.
- They grow to be 6-20 feet high, have white or pink flowers that bloom in April and later produce soft red watery fruits.
- They provide poor food for native birds, caterpillars, or pollinators.

Multiflora Rose (*Rosa multiflora*)
Multiflora rose was brought to the United States from Asia in the late 1800s and promoted by the government as a “living fence.” It grows up to 13 feet and forms bushes or sometimes vine-like stems. It has attractive white to pinkish flowers and produces up to one million seeds per year. It spreads when birds eat the seeds, which can remain alive in the soil for up to 20 years. It also spreads when branches touch the soil and develop roots. Multiflora roses have extremely sharp recurved thorns.

Chinese and European Privet (*Ligustrum vulgare, and L. sinense*)
Privets have been widely planted for hedges and are originally from Europe and China.
- They are semievergreen to evergreen and can form shrubs up to 30 feet high.
- They form fruits that become almost black in winter and are spread by birds.

Bradford or Callery Pears (*Pyrus calleryana*)
These trees are native to China. The flowers are generally distasteful to pollinators. The fruits are dispersed by birds. They form dense thickets that crowd out native plants.

Invasive Vines

There are three invasive non-native vines in Northwest Arkansas causing damage to native trees and shrubs. All of these vines should be removed by cutting them at the base and if possible treating the vine stumps with herbicide (following label instructions). The three vines are:

English Ivy (*Hedera helix*)
This widely planted evergreen vine is native to Europe. It can cover trees with such a dense mass that the trees fall from the heavy weight. It is non-flowering when young, but when it reaches the crowns of trees it produces flowers and seeds that are spread by birds.

Japanese Honeysuckle (*Lonicera japonica*)
This twining vine can climb 30 or more feet in trees.
- It is native to Asia.
- The flowers are sweet scented and it spreads by its fruit seeds. It is considered a noxious weed in much of the United States.

Climbing Euonymus (*Euonymus fortunei*)
These are woody evergreen vines growing up to 20 feet tall. It is native to Asia. Like English ivy, it reproduces when it reaches the crowns of trees where it has more light.
How do Non-Native Plants Harm our Birds, Butterflies, and Bees?

Most songbirds depend upon butterfly and moth caterpillars for feeding their hungry nestlings. Our native insects have evolved to feed on native plants, but often cannot feed on non-native plants, even if naturalized.

Therefore, non-native plants are like uninhabited deserts for birds searching for caterpillars to feed their young. While some non-native shrubs such as bush honeysuckle produce berries that birds can eat, our native dogwoods and hollies produce far better food for birds. Non-native plants such as bush honeysuckle and Bradford (Callery) pears are not very attractive to bees and other pollinators compared to our native plants.

What are our Alternatives?
The Ozarks have a large number of attractive native plants that can be planted in place of invasive non-native plants. These include the dogwoods, hollies, redbuds, spicebush, sassafras, pawpaw, serviceberry, hawthorne, native sweet crabapple, milkweeds, Echinacea, black-eyed Susans, and bluestem grasses.

Recommended Technique for Removing Non-Natives from Riparian Areas

When removing non-native plants from sensitive riparian areas like stream or river banks it is critical to take some consideration of the best method to remove the targeted plants without jeopardizing the stability of the bank. In some cases, it is absolutely best not to remove non-native plants because their roots may be the only thing that is holding the stream bank together and preventing bank erosion. Do not jeopardize stream bank stability for the removal of invasive plants. If non-native plants are holding a stream bank together and they are all removed at once, then you will increase the chances of accelerating stream bank erosion and degrading wildlife habitat and water quality. Removing non-natives should be viewed as a long war and not a short battle. In other words don’t try to win the battle in one day by removing all of the non-natives only to lose the war by losing a stream bank. Non-natives are very hard to get rid of in some cases and a vigilant perennial effort is needed to keep them at bay regardless. If you only have a few non-natives that you wish to remove and it will not jeopardize bank stability then go for all of them at once, but be certain before acting. The further away from the stream bank you go the more appropriate other methods of invasive plant control become. If there is any doubt, contact a soil and water conservation specialist before acting.

Recommended techniques for removing non-native species from riparian areas are:

- Selectively prune, cut, remove seed heads from, or pull non-natives, and replace them immediately with native plants suitable for the site. Do not pull or spray plants located on stream banks.
- Repeat pruning of non-natives as necessary throughout the growing season to favor the newly planted native replacements.
- Repeat as necessary for a period of years.

Written by
Dr. Don Steinkraus, Cindi Cope, John Pennington
Photos © D. Steinkraus
for additional information, contact
Washington County Extension Service
479-444-1755

Invasive Non-Native Plants of Northwest Arkansas

Fayetteville and Northwest Arkansas are being taken over by invasive non-native plants. The plants were released in North America either on purpose by early settlers or accidentally from Asia or Europe. While these plants can be attractive, they out compete our native plants killing and smothering them, and they provide inferior food for birds, butterflies, and pollinators.

Why Be Concerned?

Our woods and hedgerows were once filled with attractive native shrubs, such as dogwoods, redbuds, sassafras, spicebush, and wildflowers such as trillium, bloodroot, trout lilies, and others. In Fayetteville, invasive plants have almost eliminated our native understory plants. These noxious plants are spreading rapidly in the countryside as well and the time to remove these plants from our ecosystem is now.

How Do Non-Native Plants Harm Our Native Plants?

Many of these invasive plants either are semi-evergreen (such as Japanese honeysuckle, English ivy, or Euonymus), or they leaf out earlier than our native wildflowers and shrubs, smothering them by stealing sunlight needed for photosynthesis. In addition, many of them are vines, climbing over trees and shrubs, literally choking trees to death, robbing them of sunlight and breaking trees by their sheer weight.

In the major ice storm of January 2009, trees covered with vines suffered much greater damage due to the weight of the vines on the trees. Often many of these invasive species act together and large areas are covered with bush honeysuckle, privet, multiflora rose, Euonymus and Japanese honeysuckle vines, forming nearly impenetrable jungles.