

Standard 2-Kaskaskia College Tree Care Plan 2014

1. PURPOSE:

The purpose of the Kaskaskia College campus tree care plan is to identify the procedures and practices that are used in planting, maintaining, and removing trees on the Kaskaskia campus. The goal of the plan is to ensure a safe, attractive tree campus. The objectives of the plan are:

- Encourage community members to respect, value, and enjoy the trees on campus
- Ensure diverse species selection and quality stock acquisition
- Maintaining campus trees
- Protect campus trees during construction and renovation projects
- Replace trees when there is mortality due to weather, pest infestations, injury, or construction displacement

NOTE: Most of these procedures and practices are currently employed by the Grounds department.

Remove and replacement of dead/damage trees

This is ongoing process. After each weather event, damage assessments need to occur, followed by clean up and replacement, if necessary.

2. RESPONSIBLE DEPARTMENT:

Kaskaskia College Grounds Department is part of Physical Plant Department under the direction of the Director of Physical Plant.

3. ADVISORY TREE COMMITTEE:

The tree advisory committee is comprised of faculty and staff from throughout the college and members of the local community. The committee provides important input in to care and improvement of the tree on campus.

Committee members include:

- The Coordinator of Institutional Advancement Programs which duties include coordination of the campus arboretum. (Staff)
- The Director of Physical Plant (Staff)
- Administrative Assistant to Physical Plant (Staff)
- Grounds Technician (Staff)
- Horticulture Program Developer (Faculty)
- Certified Arborist (Faculty)
- Master Gardner (Staff)
- Student (1)
- Members of the community (2)

4. **CAMPUS TREE PLANTING:**

A. **Plant Selection**

A list containing both native and exotic species is used by Kaskaskia College Arboretum for tree donations. The list has been screened for adaptability to campus surrounding and serviceability, also taking into account planting requirements based on area orientation, types of drainage and soil conditions.

Trees to be planted on campus must be carefully selected by and only trees of 2" - 2 ½" minimum calipers and maximum of 4" - 4 ½" caliper will be planted.

B.) **Planting Method**

Trees must be planted following below steps:

- a.) Plant must be set with trunk flare 1" - 2" above the existing grade.
- b.) All visible ropes and burlaps at the top one-third should be cut away, or the top 8" – 16" of the wire basket should be removed (if applied.)
- c.) Once the root ball is stable in the planting hole; backfill the planting hole with the existing soil.
- d.) If the existing soil is of poor quality, addition of soil amendment as recommended by the soil analysis should be used.
- e.) The backfill soil should be tamped firm enough to remove large air pickets, but not too firm as to remove all fine air spaces needed for a well aerated soil for root development.
- f.) Complete the backfill by making sure that the trunk flare is completely exposed. Spread mulch at 2-4" depth but not touching the trunk, water the root ball and the planting area deeply

5. **LANDSCAPING:**

The appropriate plant materials should be chosen based area conditions and need. The objectives are the continuous development of the trees on campus in co-existence with the Kaskaskia College Master Landscape Plan.

6. **PRUNING:**

A.) **Purpose**

- a) To promote the growth of a resilient and strong tree.
- b) Pruning shall not be conducted without a clear objective or outcome.
- c) Prune first for safety, next for health, and finally for appearance.
- d) To properly cut a branch begin just outside the branch bark ridge and angle down away from the stem of the tree to avoid injury to the branch collar.
- e) In storm response and crown restoration, internode (heading) cuts should not be used.

B. Cleaning

- a.) Cleaning will be completed to remove dead, diseased, declining, and defective branches to promote, health, and improves appearance
- b.) Larger branches and limbs should be removed with the aid of ropes and other equipment to minimize the risk of injury from falling debris.

C. Thinning

- a.) Thinning will be performed to reduce the compactness of branches, which improves light saturation, improves visibility, and reduce wind load.
- b.) Evaluate how a tree will be pruned beginning from the top down.
- c.) Save branches with strong, U- shaped angles where they are attached. Remove branches with weaker, V-shaped angles of attachment.
- d.) Remove any branches that rub or cross another branch.
- e.) Never remove more than one-quarter of the living crown of a tree at one time. If it is necessary, do it over successive years.

D. Raising

- a.) Raising will be performed to provide clearance from roadways, traffic and informational signs, street lights, and buildings.
- b.) Always keep live branches on at least two- thirds total height. Eliminating too many lower branches will impede the development of a strong stem.
- c.) Remove basal sprouts and vigorous epicormic sprouts.

E. Reduction

- a.) Reduction shall be performed to decrease the overall height of a tree or to decrease the length of an individual branch
- b.) Use reduction pruning only when necessary. Make sure the pruning cut is at a lateral branch that is a least one-third the diameter of the stem to be removed.

7. MANAGING FOR CATASTROPHIC EVENTS

- a.) In the event of severe weather conditions such as tornadoes or storms, falling trees will be removed as soon as possible. If trees or limbs are a potential hazard to persons or property and cannot be removed immediately due to the safety of the grounds crew. The area will be blocked off by staff, and traffic re-routed. This applies to foot and/or vehicle traffic.
- b.) Defected trees which are potential targets for falling on a building, cars or pedestrians are also removed.
- c.) Replacement of trees lost will take place during the fall season of each year as the budget permits.

8. PLANTING AND TREE DIVERSITY

The diversity of species is important to the campus' arboretum. The arboretum is available for both college level students and community school students as a lab for learning.

Lists of trees are given to the Kaskaskia College Foundation and Arboretum committee members prior to the campus arboretum tree donation drive annually by the campus Lead Grounds Technician. This list includes the recommended species to plant based upon need, availability, and diversity.

9. CULTURAL PRACTICES:

- **Fertilizing**
 - a) Newly planted trees should not receive fertilization during the first growing season.
 - b) In a situation where soils test recommends fertilization. A slow release type of fertilizer should be used around the tree basin.
 - c) When necessary, a fertilizer of 10-20-10 for evergreen trees and 25-10-10 for general application
- **Mulching and Irrigation**
 - a) Regular Tree mulching: every two years
 - b) New Plantings Tree mulching: as needed
 - c) Water: trees are watered whenever extensive dry condition occurs during summer.

10. PROTECTION AND PRESERVATION PROCEDURES

- Identify all trees who are likely to be impacted by construction equipment, proposed walks and roads, and potential construction staging areas, new utility install, and where branches may be damaged by equipment.
- Avoid locating the general construction site around low and high priority trees where possible. Pre-plan construction activities including new utility installs, staging areas, new sidewalks and new roads for a minimum clearance of 15 feet away from the base of trees. If possible allow for a greater distance.
- Orange plastic fencing will be installed as a barrier for every inch diameter of that tree's diameter breast height.
- The grounds department will be responsible for monitoring each tree within these areas and will report any trees that appear to be damaged during the construction phase to the Lead Grounds Technician or the Director of Physical Plant.

11. GOALS AND TARGETS:

- Campus arboretum trees are cataloged on the Kaskaskia College website. Other trees within the campus areas [Zones 1-6] will be identified and cataloged independently. The

Grounds Department will be responsible for this project with the assistance of the Certified Arborists.

12. TREE DAMAGE ASSESSMENT:

- All damaged or hazardous trees on the Kaskaskia College campus will be assessed the Lead Grounds Technician using the current tree assessment form. Findings from the assessment determines whether the tree should be removed, pruned or receive fertilization, insect, and disease control.
- Maintenance of trees will be provided by Grounds staff, under the direction of the Lead Ground Technician and the Director of Physical Plant.
- The assessment is done by zone. (See Attachment 1)
- Trees that are removed are updated on the arboretum data bases.
- If a violation of this procedure has occurred, the Director of Physical Plant or designee will issue a notice to the person, company or department in violation, the type and location of the violation will be recorded for further review. Corrective action will be discussed with campus administration.

13. PROHIBITED PRACTICES:

- All planting of trees will be done by the Grounds Department exclusively with the authority of the Director of Physical Plant. Arboretum trees will be planted with the authority of the Coordinator of Institutional Advancement Programs which duties include coordination of the campus arboretum.
- Under no circumstances will anyone cut, trim, or remove trees without authorization by the Director of Physical Plant.

14. DEFINITIONS

- **Arboriculture** -the study of trees and other plants.
- **Acidic** -soil with a pH less than 7.0. The lower the pH the more acidic or sour the soil. Sulfur is typically added to make the soil more acidic. Acidity can also occur naturally in treed areas or as a result of leached soils.
- **Arboretum**- a place where an extensive variety of woody plants (trees), are cultivated for scientific, educational, and ornamental purposes.
- **Borers** -any insects or larva that drills into plants.
- **Caliper** - the diameter or thickness of the main stem of a young tree or sapling as measured at six (6") inches above ground level. This measurement is used for nursery-grown trees having a diameter of four inches or less.
- **Canopy trees** - a tree that will grow to a mature height of at least 40 feet with a spread of at least 30 feet.
- **Clearing** - the removal of trees or other vegetation of two inches DBH or greater.
- **Coniferous** –cone bearing
- **Crown**-the sum of the leaf-bearing branches of a tree. The term is also used by some arborists for the junction of the trunk and the root system.
- **Deciduous**- a tree that loses all of its leaves for part of the year. Sometimes called a broad-leaf tree or a hardwood tree. Example Maple, Beech, Birch and Oak

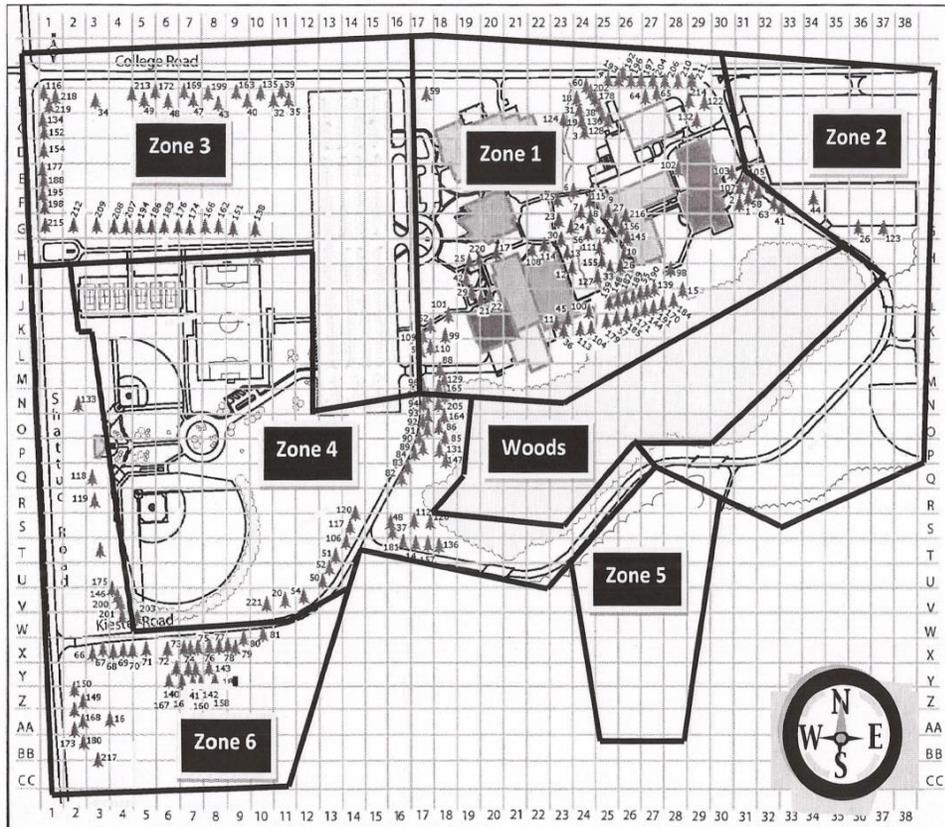
- **Decomposing** -the process of breaking down into the elements or parts that make up the whole. Rotting is an example of decomposing.
- **Development** - the act, process or state of erecting buildings or structures, or making improvements to a parcel or tract of land.
- **Diameter, breast height (DBH)** -the diameter or width of the main stem of a tree as measured 4.5 feet above the natural grade at its base. Whenever a branch, limb, defect or abnormal swelling of the trunk occurs at this height, the DBH shall be measured at the nearest point above or below 4.5 feet at which a normal diameter occurs.
- **Dormant**-state of reduced physiological activity in the organs of a plant.
- **Evaporation**-a physical change where a liquid turns into a vapor or gas.
- **Evergreen**- a plant having foliage that persists and remains green throughout the year.
- **Genus**- a group of related species, as the genus *Ulmus* (elm), the genus *Syringa* (lilac), embracing respectively all kinds of elms and all kinds of lilacs.
- **Hardwood**- a term used in reference to the relative hardness of wood in a tree. Examples of hardwoods include the oaks, hickories, and ashes.
- **Impervious surface** - a solid base underlying a container that is nonporous, unable to absorb hazardous material, free of cracks or gaps and is sufficient to contain leaks, spills and accumulated precipitation until collected material is detected and removed.
- **Native tree** - any tree species which occurs naturally and is indigenous within the region.
- **Non-native species**-a non-native species, or exotic, is a species introduced to a location outside its natural geographic range.
- **Ornamental**-something that serves as ornamentation, a plant grown for its beauty.
- **PH**- A measure of acidity or alkalinity of a medium.
- **Sap** -sap is the watery fluid (sugars) produced by the leaves to supply food for the tree. It circulates through a tree, carrying food and other substances to the tissues.
- **Shrub**-a woody plant with many first-order stems. Usually 15 feet or shorter at maturity.
- **Softwood**-softwoods are conifers, evergreen and cone-bearing trees. Softwoods include cedar, fir, hemlock, pine, redwood and spruce. They are usually used as structural lumber such as 2x4s and 2x6s, with limited decorative applications.
- **Soil type**-usually refers to the different sizes of mineral particles in a sample of soil. Soil is made up of three soil particles, grouped according to size as sand, silt, and clay.
- **Sucker** -shoot arising from the roots.
- **Tree**-a woody plant with one, or at most a few, first-order stems (trunks). Usually more than 15 feet tall at maturity.
- **Woody** -it contains wood or wood fibers in the bark.

15. COMMUNICATION STRATEGY

The Tree Care Plan will be posted on the College's website and updated annually. Additionally a press release will be sent out by the Marketing Department.

Staff involved in the maintenance of the campus Arboretum will be trained on the policies and procedures in the plan.

ATTACHMENT 1



**Kaskaskia College Grounds
Department Zone Map
(Arboretum detail)**

- Zone 1:** Main campus building areas.
- Zone 2:** East lot and old softball field areas.
- Zone 3:** Northwest campus areas and boardwalk.
- Zone 4:** Field east of baseball, areas south of west lot, and tennis courts.
- Zone 5:** Barn area and pond.
- Zone 6:** Areas along Shattuc road and power station.

**Ball fields, soccer field, and tennis courts are the responsibility of Athletic Departments.
Areas outside of each area of play are the responsibility of the Grounds Department.**