

# University of Nebraska Medical Center Tree Campus USA 2016 Application



 Arbor Day Foundation™

 **UNMC** BREAKTHROUGHS FOR LIFE.®  **TREE  
CAMPUS  
USA®**

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## Standard 1 – Campus Tree Advisory Committee

A Campus Tree Advisory Committee is established and meets regularly. The committee is comprised of members representing the diverse audience with a stake in campus trees. UNMC committee members are responsible for maintaining Tree Campus Certification for the campus.

The Tree Advisory Committee is comprised of the following persons with roles as noted.

Member type	Name	College Position	Committee Role	Email and Phone
Facilities	Tom Payne	UNMC Grounds Supervisor	Tree care plan implementation, Expert advice	<a href="mailto:tpayne@unmc.edu">tpayne@unmc.edu</a> 402-559-4050
Faculty	Paul Fey	Associate Director & Professor, Pathology/Microbiology	Advice, Service Learning Project	<a href="mailto:pfey@unmc.edu">pfey@unmc.edu</a> 402-559-2122
Student	Jannah Obaid	Graduate Student	Service Learning project	<a href="mailto:jannah.obaid@unmc.edu">jannah.obaid@unmc.edu</a>
Student	Li Westman	Graduate Student	Service Learning project	<a href="mailto:li.westman@unmc.edu">li.westman@unmc.edu</a>
Community	Graham Herbst	Community Forestry Specialist – Eastern Nebraska	Tree care plan implementation, Expert advice	<a href="mailto:gherbst2@unl.edu">gherbst2@unl.edu</a> 402-444-7875
UNMC employee	Julie Sommer	Research Resources Manager, Live Green volunteer	Service Learning Project, Arbor Day Observance	<a href="mailto:julie.sommer@unmc.edu">julie.sommer@unmc.edu</a> 402-559-3231
LiveGreen	Melanie Stewart	Live Green Chair, Manager of Sustainability	Documentation, Service Learning Project, Arbor Day Observance	<a href="mailto:mlstewart@unmc.edu">mlstewart@unmc.edu</a> 402-559-8154
Nebraska Medicine employee	Sarah Emanuel	Health Promotions Coordinator	Coordination, Service Learning Project, Connection to Health	<a href="mailto:semanuel@nebraskamed.com">semanuel@nebraskamed.com</a>

## Meeting Minutes

### **UNMC Tree Campus USA Committee Meeting Minutes**

#### **First Meeting**

**DRC atrium 12:00-1:00**

**19February2016**

**Present at the meeting: Tom Payne, Li Westman, Jannah Obaid, Graham Herbst, Julie Sommer, Paul Fey, Sarah Emanuel, and Melanie Stewart**

1. Introductions and established committee members and roles
2. Described the tree campus USA standards for certification
  - a. Standard 1 – New committee member Sarah Emanuel
  - b. Standard 2 – Campus Tree care plan
  - c. Standard 3 – Dedicated annual expenditures for Campus Tree Care program
  - d. Standard 4 – Arbor Day observance (Earth day/Arbor Day celebration documented)
  - e. Standard 5 – Service Learning project idea
3. Standard 2 – Campus Tree care plan
  - a. Unchanged, we will read over as a group and make edits as necessary
4. Standard 3 – Dedicated annual expenditures for Campus Tree Care program
  - a. Tom will work with Facilities accountants to provide this info
5. Standard 4 – Arbor Day observance
  - a. Gather the photos and media coverage of the UNMC Earth day activities and Arbor day celebration
6. Standard 5 – Service Learning project
  - a. TBD

### **Action Items**

<b>Action</b>	<b>Committee member</b>	<b>Due date</b>
Provide Sarah with past application and Tree Care Plan	Melanie	3/14
Evaluate the Campus Tree Care Program Expenditure Worksheet regarding the feasibility of utilizing Tom's information for our application	Tom /Grounds	Next meeting
Get ideas regarding another Service Learning Project	All	Next meeting

## UNMC Tree Campus USA Committee Meeting Minutes

DRC atrium 12:00-1:00

10March2016

**Committee members present: Sarah Emanuel, Meanie Stewart, Tom Payne, and Julie Sommer**

1. Arbor Day Observance
  - a. How do we want to celebrate this year?
  - b. Ways to get more people involved?
  - c. Will still do tree planting.
2. Discuss the possibility of another summer internship
3. Tree inventory
  - a. What do we need?
  - b. When does it have to happen?
  - c. Possible budget?

### Action Items

Action	Committee member	Due date
Research other activities for Arbor Day Observance	All	Next meeting
See if money for formal tree inventory exists	Melanie	Next meeting

## UNMC Tree Campus USA Committee Meeting Minutes

DRC atrium 12:00-1:00

30March2016

**Present at the meeting: Tom Payne, Li Westman, Jannah Obaid, Julie Sommer, Paul Fey, Sarah Emanuel, and Melanie Stewart**

1. Arbor Day Observance
  - a. Tree planting at MSC
  - b. Free tree give away from Papio NRD
  - c. People may also help by planting seeds with City Sprouts when done
2. Summer internship
  - a. Not going to happen this year, no money, nobody willing to do it for free
3. Tree inventory
  - a. Have RFP out to see what it would cost to map all trees
    - i. GIS locations
    - ii. USDA condition assessment
    - iii. Completed by certified arborist
    - iv. Easy to update status ongoing
  - b. Needs to be completed when leaves still present
    - i. Will include all of campus, including Nebraska Medicine property

### 4. Action Items



Action	Committee member	Due date
Attend Arbor Day activities	All	
Pick up trees from NRD	Sarah	Prior to 29th
Deliver trees to Melanie on campus	Sarah	4/28
Students to hand out trees at table	Li/Jannah	4/29
Receive RFPs, request budget	Melanie	

## June 6<sup>th</sup> EAB found

### UNMC Tree Campus USA Committee Meeting

DRC atrium 12:00-1:00

8June2016

**Committee members present; Julie Sommer, Melanie Stewart, Tom Payne**

#### 1. Campus response

- a. We are in treatment/test zone
- b. Ash Tree locations known
- c. Need to treat all mature, healthy trees
- d. Trees in front of Lied have damage, need to be removed
- a. Service Learning Project
  - i. Scheduled with graduate student, high school alliance students, and any other students on campus at this time.
  - ii. With finding of EAB in multiple locations, education on this topic is extremely important
  - iii. Will continue to have information available to new and returning students

## Action Items

Action	Committee member	Due date
Get pricing on treatment	Tom	ASAP
Prepare to remove LTC trees	Tom	ASAP
Write internal and online publication, educating people about EAB, campus response, what they need to do at home	Melanie	ASAP
Reach out to student population	Melanie, Li	As soon as students are on campus
Get green ribbon to mark trees	Melanie	ASAP
Produce education material to be handed out at event	Melanie	August
Committee members to be at different locations on campus to help and inform	All	Day of

**UNMC Tree Campus USA Committee Meeting****DRC atrium 12:00-1:30****13July2016****Committee members present; Julie Sommer, Melanie Stewart, Tom Payne**

1. Tree Survey
  - b. Local vendor selected
    - i. Will GIS map all trees and list condition
    - ii. Grounds will be trained on software in order to make timely updates and better track tree status
    - iii. Report to be completed in less than 1 month
2. Service Learning Project
  - a. Educational materials almost complete
  - b. Scheduled for September 28

**UNMC Tree Campus USA Committee Meeting****DRC atrium 12:00-1:30****11Oct2016****Committee members present; Julie Sommer, Melanie Stewart, Tom Payne**

1. Tree Campus USA Application
  - a. Application form completion
  - b. Expenditures report

**Standard 2 – Campus Tree Care Plan**

This Campus Tree Care Plan is a flexible plan which strives to fit the needs and circumstances of the University of Nebraska Medical Center Campus. The Tree Care Plan is goal oriented and provides policies and guidance for planting, maintaining, and removing trees. It also provides education to the campus community, citizens, contractors, and consultants about the importance of the campus forest and the protection and maintenance of trees as part of the growth and land development process.

1. **PURPOSE:** To facilitate tree care on the University of Nebraska Medical Center Campus.
2. **RESPONSIBLE AUTHORITY OR DEPARTMENT:** Facilities, Management & Planning, Unit of Business & Finance
3. **ADVISORY COMMITTEE:**  
Julie Sommer, MS, UNMC Project Coordinator and LiveGreen volunteer  
Melanie Stewart, MPA, UNMC LiveGreen Chair and Manager of Sustainability  
Paul Fey, PhD, UNMC Faculty  
Li Westman, UNMC student  
Jannah Obaid, UNMC student

Tom Payne, UNMC Grounds Supervisor and certified arborist  
Sarah Emanuel, Nebraska Medicine Health Promotions Coordinator  
Graham Herbst, Nebraska Forest Service, Community Forestry Specialist and  
certified arborist

#### **4. CAMPUS TREE CARE POLICIES:**

Campus tree care policies include planting, landscaping, maintenance and removal including a list of recommended and prohibited species, and managing catastrophic events.

##### Planting

UNMC follows American National Standards Institute ANSI A300.

A300 covers the following topics:

- Part 1 – Pruning
- Part 2 – Soil Management
- Part 3 – Supplemental Support Systems
- Part 4 – Lightning Protection Systems
- Part 5 – Management
- Part 6 – Transplanting
- Part 7 – Integrated Vegetation Management
- Part 8 – N/A
- Part 9 - Tree Risk Management
- Part 10 - Integrated Pest Management

##### Tree Planting Guidelines:

#### **Part 1 General**

##### *1.1 Description*

- A. In event of conflict between quantities of plants indicated on drawings and in plant list, plant list will govern.

##### *1.2 Quality Assurance*

- A. Nursery stock standard: “American Standard for Nursery Stock,” ANSI-Z60.1.
- B. Work performed by qualified nurseryman or landscape contractor.
- C. Qualifications of pruners: Experienced plantsmen.

##### *1.3 Submittals*

- A. Product Data:
  - 1. Manufacturer’s specifications
- B. Samples:
  - 1. Organic Mulch: 1/2 lb of each type.



- C. Project Information:
  - 1. Notify Architect of plant material delivery schedule in advance so that it may be inspected on-site prior to installation.
- D. Contract Closeout Information:
  - 1. Warranty
  - 2. Maintenance data.

#### *1.4 Product delivery, Storage, and Handling*

- A. Handle plants at all times so that roots or balls are adequately protected from breakage of balls and drying winds.
- B. Plants with dried out tops or roots will be rejected.

#### *1.5 Job Conditions*

- A. Protect existing improvements and trees.
  - 1. Repair or replace damaged items.
- B. Protect completed work.
- C. Verify location and existence of underground utilities.
  - 1. Protect existing utilities from damage due to construction activity.
  - 2. Repair damage to utility items.
  - 3. Coordinate work with installation of irrigation system.
- D. If plant locations conflict with existing improvements, Landscape Architect will select other locations.
  - 1. Make changes at no extra cost.
  - 2. Do not change location of plants without permission of Architect.
  - 3. Where tree locations fall under existing overhead wires, or crowd existing trees, adjust locations as directed by Landscape Architect.
- E. Planting times.
  - 1. Do not plant when ground is frozen or temperature is below 32<sup>0</sup> F

#### *1.6 Warranty*

- A. Remove and replace new plants supplied, which are impaired, dead or dying during 1 year from initial acceptance.
- B. Replacement materials and methods identical to original.
- C. Plants replaced under warranty will not have a second warranty, except as stated in paragraph D below.
- D. If fall-planted material is dead or dying in the spring, replace material during that spring season. If said plants fail again during growing season, replace again in the fall. Every plant must leaf out and be in a healthy condition at beginning of growing season.

## **Part 2 – Products**

### *2.1 Materials*

- A. Plant materials:
  - 1. Species and size indicated.
    - a. No substitutions without written approval of Architect

2. Sound, healthy, vigorous, with normal top and root systems.
3. Free from diseases, insect pests or their eggs.
4. Nursery grown stock, freshly dug.
5. No heeled-in, cold storage or collected stock,
6. Grown in same or colder climatic zone as project B. Trees:
  1. Single leader, straight trunk (unless otherwise indicated in plant list).
  2. Well branched, free of branches up to 5 ft. high (unless otherwise indicated in plant list).
  3. Symmetrical growth.
- C. Balled and burlapped plants (B & B): Firm, natural balls of soil wrapped with burlap or strong cloth and tied.
- D. Container grown plants (CG):
  1. Roots well established in soil, but not root bound.
  2. Grown in container for at least one growing season.
- E. Planting soil:
  1. Use soil excavated from planting pit.
  2. Modify soil, if needed, with sand and/or peat moss.
- F. Organic Mulch: Double shredded hardwood of approved commercial grade.
- G. Inert Mulch:
  1. Rock: Round, washed river rock; 1-1/2 to 2 inches in size.
- H. Peat moss: Finely shredded sphagnum or fibrous peat moss of an approved commercial grade; free from woody substances.
- I. Sand: Clean and free of toxic materials, ASTM-C33.
- J. Compost: humus rich type derived from the decomposition of leaves and yard wastes. Animal or poultry manure, at any stage of decomposition is not acceptable. Texture should be similar to shredded peat.
- K. Need barrier: Non-woven, geotextile fabric.
- L. Metal edging: Steel edging: 1/8 x 4 in., 16 in tapered steel stakes, painted black.
- M. Tree stakes: 2 x 4 x 30 in. wood stakes;
- N. Tree staking straps.
- O. Water for planting purposes:
  1. Supplied by Owner.
  2. Provide equipment necessary to transport water from source to required locations.
  3. Do not waste water.
- P. Anti-desiccant: emulsion that will provide a film over plant surfaces permeable enough to permit transpiration.
- Q. Flagging: White surveyor's tape.

## 2.2 Plant List

See list of Non-Recommended Species on page 12-13.

## Part 3 – Execution

### 3.1 Preparation

- A. Immediately heel-in or plant bare root material.

### 3.2 Planting Procedure

- A. Layout: Stake all plant material locations and layout bed lines prior to beginning installation. Landscape Architect may approve layout or make adjustments to plant material locations to meet field conditions.
- B. Excavate materials without additional cost.
- C. Loosen bottom of pits prior to planting.
- D. Tree and shrub pits:
  - 1. Circular, with vertical sides.
  - 2. At least 12 in. greater in diameter than ball diameter.
  - 3. Sufficient depth to provide 6 inches of planting soil under ball when set to natural grade.
- E. Set plants straight or plumb, at such level that after settlement they bear same relationship to finished grade as they did in their former setting.
  - 1. Remove burlap, rope, wires, etc., from entire ball.
- F. Backfill plants with planting soil.
  - 1. Tamp under and around balls to eliminate voids.
  - 2. Tamp to one-half depth of pit and thoroughly water and puddle before backfilling to proper grade.
  - 3. After planting has been completed, flood pit again so that backfill is thoroughly saturated and settled.
- G. After planting is complete, form saucer 3 inches high around each plant extending to limit of plant pit using existing soil.
- H. Mulching:
  - 1. Mulch tree planting pit after saucer has been shaped to depth of 3 in. with organic mulch.
  - 2. In massed plantings, mulch entire area uniformly to depth of 2 in. with organic mulch.
  - 3. Mulch uniformly over groundcover beds to depth of 2 in. with organic mulch.
  - 4. If mulching is delayed and soil has dried out, water plants thoroughly before spreading mulch.
- I. Staking:
  - 1. Stake trees immediately after planting.
  - 2. Set stakes securely at an angle.
  - 3. Install flagging on each wire.
  - 4. For deciduous trees 3 inches and larger: Three stakes spaced equilaterally around tree.
  - 5. For deciduous trees 3 inches and smaller and evergreen trees: Two stakes spaced opposite sides of tree.
  - 6. Provide rubber hose around trunk; one for each wire.
  - 7. Attach wire from stake to hose and secure.

- J. Pruning:
  - 1. Remove only dead or damaged branches.
- K. Metal edging: Install edging in accordance with manufacturer's recommendations and as indicated on drawings. Keep top of edging flush with grass, walks, or curbs.

### 3.3 *Inert Mulch Areas*

- A. In areas to receive inert mulch, apply herbicide in accord with manufacturer's recommendations.
- B. Cover areas with weed barrier.
- C. Overlap edges minimum 6 inches.
- D. Install 2-1/2 inch uniform layer of inert mulch. Recess area so that top of rock is flush with grass, walks or curbs.

### 3.4 *Clean Up*

- A. Remove debris and waste materials, and excess earth materials.
- B. Re-sod any damaged turf areas.

### 3.5 *Review for Initial Acceptance*

- A. At end of each planting season, Landscape Architect will review and record acceptability of plant material.
- B. Payment for completed work will be based only on acceptable plant materials and workmanship.

### 3.6 *Maintenance*

- A. Maintain new and transplanted materials for one year from initial acceptance.
  - 1. Water when necessary.
  - 2. Remove dead or dying branches, and sprouts.
  - 3. Tighten, repair or replace tree stakes and wrapping.
  - 4. Maintain mulch depth.
  - 5. Weed plant beds and pits.

#### **List of Recommended Tree Species:**

We accept all species of trees, except those noted on the non-recommended species list below.

#### **List of Non-Recommended Species:**

The following list of prohibited species includes trees with: thorns, fruit and seeds, weak-wood, profuse suckering, and trees with a high amount of diseases and pests. This list is written with the acknowledgement that the designer will consider site-specific conditions.

*Acer negundo* Box-Elder

*Acer saccharinum* Silver Maple

*Ailanthus altissima* Tree-of-Heaven

*Carya L.* Hickory  
*Eleagnus Angustifolia* Russian olive  
*Fraxinus*, ssp Ash species  
*Ginkgo biloba* Female Ginkgo  
*Maclura pomifera* Osage-Orange  
*Morus L.* Mulberry  
*Pinus L.* Pine  
*x. Pinus sylvestris* Scotch Pine  
*x. Pinus nigra* Austrian Pine  
*Populus L.* Poplar  
*Prunus L.* Cherry  
*Rhamnus cathartica* Buckthorn  
*Salix L.* Willow

### **Management for Catastrophic Events**

In the event of severe weather conditions such as tornadoes, thunderstorms, or ice, falling trees will be removed by UNMC Facilities grounds crew or an outside tree removal company. Roads and streets shall be cleared first, then access to patient areas, research and education areas. In the advance of severe weather conditions, all necessary equipment shall be checked for readiness and safety by staff.



## **5. PROTECTION**

### **Preservation Policies and Procedures**

Protection and Preservation policies and procedures as follow shall apply to all UNMC projects.

#### **Soil Management**

##### **SITE EXCAVATION AND ROUGH GRADING**

- A. Furnish all labor, materials, tools, equipment, and services for Site Excavation and Rough Grading, as indicated, in accordance with provisions of contract documents
- B. Definitions
  1. Unsuitable material: Debris and/or soil material judged unsuitable by Engineer for support of slabs or other site improvements.
  2. Engineer: Soils Engineer employed by owner, empowered to conduct inspections and make approvals.

C. Completely coordinate with work of other trades.

#### EXTRA WORK

- A. Removal and replacement of unsuitable material below existing foundations will be paid for as extra work.
  - 1. Notify owner's agent in time to have Engineer measure and record quantity removed.
  - 2. Recorded quantity will be basis for payment.
  - 3. Include unit price per cubic yard on Bid Form.

#### QUALITY ASSURANCE

- A. Compaction density test:
  - 1. Standard Proctor, ATSM-D698.
- B. Layout work by Surveyor or Civil Engineer registered in the State of Nebraska.
- C. Owner will hire an independent soils laboratory to conduct in place moisture and density tests. Contractor to pay for retests of material not passing initial tests.
- D. Tolerances of sub-grade:
  - 1. Unsurfaced areas: Plus/minus 0.10 ft. from required elevations.
  - 2. Paved areas: Plus/minus 0.08 ft. from required elevations.

#### JOB CONDITIONS

- A. Protect existing facilities, utilities (overhead and underground), sidewalks, and pavement.
  - 1. Repair damaged items.
  - 2. Cost of repair to items not indicated paid by owner.
  - 3. Notify owner and make emergency repair as directed.
- B. Protect graded areas against erosion.
  - 1. Re-establish grade where settlement or washing occurs at no extra cost.

#### MATERIALS

- A. Fill materials:
  - 1. Reasonably free of roots, organic material, trash, frozen matter, and stones larger than 4 in.
  - 2. Add water to dry material, as required.
  - 3. Allow wet material to dry, as required.

### **Construction and Trenching Process**

Temporary construction fencing: used for all trees to be preserved in a construction site out to drip line of tree. This will help to protect the trunk and root systems and reduce the potential for damage from heavy equipment and trucks. Wood or chain link 4' fencing is suitable.

Root raking: shall not be used within the drip line of trees that are to be saved.



Parked vehicles, equipment, and materials: No equipment or vehicle shall be parked or construction material stored, or substances poured or disposed of or placed within any tree drip line.

Site work: shall be planned and conducted in a manner that will minimize damage to protected trees from environmental changes such as altered site drainage or any other land disturbance within or immediately adjacent to the critical root zone of the tree.

Trenching/tunneling: when digging a trench near a tree, tunnel whenever possible. Drilling single holes as opposed to cutting deep trenches saves many critical roots. For all digging operations, exposed roots will be cut cleanly to promote quick wound closure. Vibratory plows, chain trenchers, and hand tools do a better job at this than bulldozers and backhoes. Minimize damage by avoiding excavation during hot, dry weather. Cover exposed roots with soil, mulch, or damp burlap as soon as possible. Consolidate utilities into a common trench where possible. Often it is possible to run several utilities in a common trench, minimizing the number of trenches and root cuts.

Tree staking: should only be performed when necessary and never done in a way that rigidly limits tree's ability to sway in the wind and develop taper or with materials that could girdle the tree if left unaddressed. Staking of trees is meant to prevent rotation of root ball in ground, not to prevent canopy from moving.

Fertilization and Pest Management: Trees are treated for pest problems as needed. There is no regular tree fertilization beyond treatment received as a result of fall lawn fertilization. Specimen or high-value trees may receive prescription fertilization when severe nutrient deficiencies are diagnosed.

## **6. GOALS AND TARGETS**

The primary goal for the Campus Tree Plan is to ensure the campus-wide tree inventory is adequately maintained. This includes updating all new plantings, moves, and any removal, as well as allowing for notes to be made about tree health and history. This database will be converted to an electronic format so that it can be shared with the Grounds department, landscape architects, new construction managers, LiveGreen (the campus sustainability initiative), and the general public. Maintaining this list will enable UNMC to better assess the trees on campus, which will lead to the accomplishment of other goals, the most paramount of which is to maintain an appropriate amount of green space on campus. UNMC's mission is to improve the health of Nebraska, and having adequate green space with healthy trees is part of that mission. Not only do trees help to purify the air, they help to create spaces that are beautiful, relaxing, restorative, and ultimately healing for employees, students, visitors, and patients.

The campus tree plan will also allow UNMC to maintain and enhance the campus image, keep sufficient records of tree history for maintenance and planning

purposes, maintain and improve visibility under and around trees to reduce risk to pedestrians, vehicles and the trees themselves, and preservation of mature, healthy, trees.

Goals will be measured by:

- Completion of the campus tree inventory
- Increasing the amount of information on campus trees available to employees, students, and visitors through LiveGreen
- Staying vigilant about the threat the Emerald Ash Borer represents and monitoring trees closely
- Maintaining or increasing the amount of tree canopy on campus
- Maintaining or increasing access to green space with trees

## **7. TREE DAMAGE ASSESSMENT**

### Enforcement, penalties, and appeals

Damaged trees on UNMC campus shall be assessed by a certified arborist. Results from the evaluation will determine whether the tree should be removed, pruned or receive treatment such as fertilization, and insect/disease control. Removed trees will be updated on the proposed tree inventory list.

If it is determined that violation of this procedure has occurred, the Facilities representative or designee will issue notice to the person, company, or department in violation, identifying the nature and location of the violation and specifying that remedial action is necessary to bring the violation into compliance.

The person, company, or department in violation will, conditions permitting, begin remedial action and shall have seven (7) working days after the receipt of the notice or such longer times as may be specified in the notice, to complete the remedial actions required to bring the activity into compliance with this policy.

## **8. PROHIBITED PRACTICES**

Tree Planting: Trees will not be planted on UNMC campus for dedication without pre-approval from Facilities Management& Planning.

Tree Destruction: It is not allowed for any person to destroy a tree on campus without permission.

Tree Topping: Topping, heading, hat-racking, or any other form of inappropriate crown/branch reduction pruning shall not be permitted except in emergency situations or in executing a crown restoration procedure.

## **9. DEFINITIONS**

Terminology related to campus trees:

Critical Root Zone – the minimum area surrounding a tree that is considered essential to support the viability of the tree and is equal to a radius of one foot per inch of trunk diameter (DBH)

Crown – the branches, leaves, and reproductive structures extending from the trunk or the main stems of a tree

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.

Dichotomous key – a key for the identification of organisms based on a series of choices between alternative characters

Drip line – the area defined by the outermost circumference of a tree canopy where water drips from and onto the ground

Girdle – a ring made by removing bark around the trunk of a tree, in order to kill it

Hat-racking – a process where the tree pruner draws an arbitrary line at some point in the canopy and removes everything above that line

Rootball – a spherical aggregate of roots and soil that is transplanted with a tree or shrub

Tree Canopy – the highest level of branches and foliage in a forest, formed by the crowns of the trees

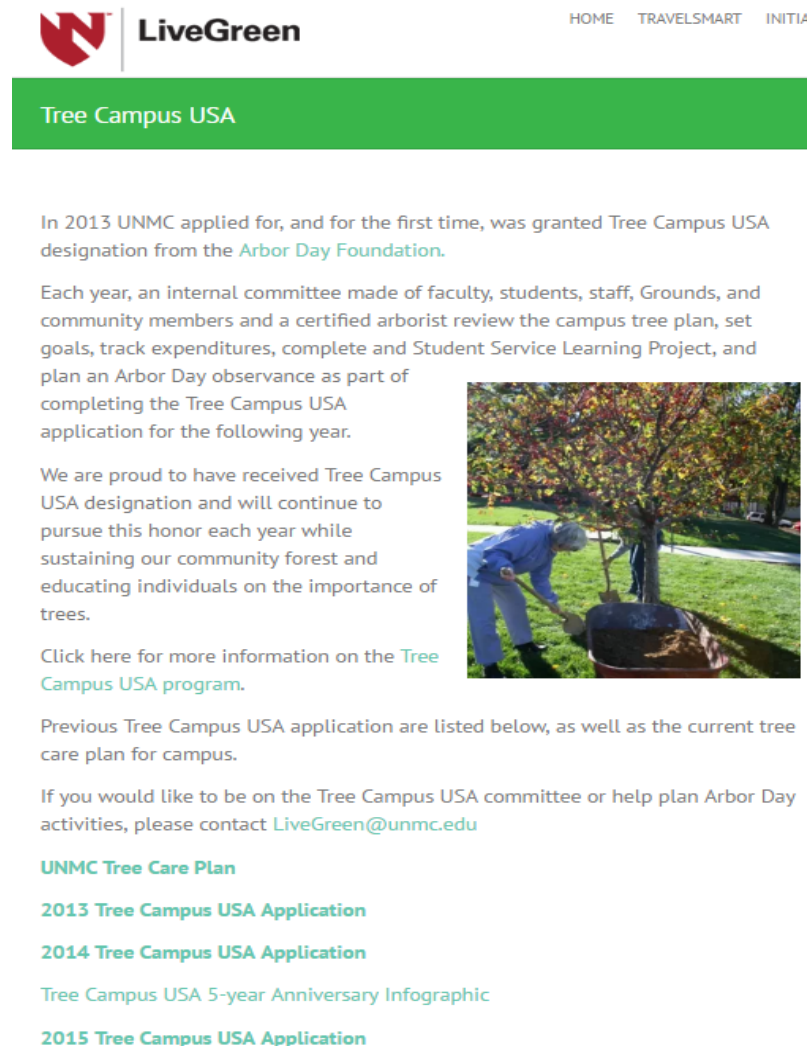
## **10. COMMUNICATION STRATEGY**

UNMC LiveGreen manages most of the communication to the students, staff, and general public. LiveGreen uses targeted and mass emails and posts information on their website regarding lawn and tree care, Arbor Day, Tree Campus USA as well as other sustainability issues and resources.

Tree Campus USA policies and procedures will be communicated to UNMC faculty, staff and students via online article, in the “UNMC Today,” the electronic campus newspaper that is published Monday – Friday and sent to the entire campus community via daily email. This article will also be published in “Nebraska Medicine NOW,” the electronic campus newspaper for Nebraska Medicine, UNMC’s clinical partner. These articles will be republished for the public on the LiveGreen website and Facebook Page. LiveGreen will continue to update the campus community on

items of importance related to trees throughout the year via emails and online articles. This will also be the mechanism for communicating information about our past and future Arbor Day observances and Earth Day celebrations.

The Campus Tree Care Plan is located on the UNMC website under the LiveGreen page <http://livegreennebraska.com/programs-initiatives/tree-campus-usa/>



**LiveGreen** HOME TRAVELSMART INITIAT

## Tree Campus USA

In 2013 UNMC applied for, and for the first time, was granted Tree Campus USA designation from the [Arbor Day Foundation](#).

Each year, an internal committee made of faculty, students, staff, Grounds, and community members and a certified arborist review the campus tree plan, set goals, track expenditures, complete and Student Service Learning Project, and plan an Arbor Day observance as part of completing the Tree Campus USA application for the following year.

We are proud to have received Tree Campus USA designation and will continue to pursue this honor each year while sustaining our community forest and educating individuals on the importance of trees.

Click [here](#) for more information on the [Tree Campus USA program](#).

Previous Tree Campus USA application are listed below, as well as the current tree care plan for campus.

If you would like to be on the Tree Campus USA committee or help plan Arbor Day activities, please contact [LiveGreen@unmc.edu](mailto:LiveGreen@unmc.edu)

[UNMC Tree Care Plan](#)

[2013 Tree Campus USA Application](#)

[2014 Tree Campus USA Application](#)

[Tree Campus USA 5-year Anniversary Infographic](#)

[2015 Tree Campus USA Application](#)

## Standard 3 – Campus Tree Program with Dedicated Annual Expenditures

### Annual Work Plan

UNMC has a full time staff of Grounds Technicians whose job is to manage and care for all of the green spaces on the campus. Tom Payne, tree campus committee member and certified arborist is the Supervisor for that department and manager in charge of the work plan for green spaces.

The following are expected expenditures for the next year:

Cost of trees planted:	\$16,000.00
Labor & Tree Management	\$24,310.00
Volunteer hours	\$ 5,489.48
Equipment used for trees	<u>\$ 1,500.00</u>
Total:	\$47,299.48

**There are 2,745 full time students at UNMC, making tree maintenance cost \$17.23 per student.**



*UNMC College of Pharmacy Graduation*



*Dr. Bill Lydiatt with UNMC High School Alliance students 2014*



*Graduate studies convocation 2015  
2015*



*First snow of the winter Dec 9<sup>th</sup>,*



## Standard 4 – Arbor Day Observance

To recognize the importance of trees and celebrate the tradition of Arbor Day, a National Holiday started in Nebraska, UNMC traditionally holds a Arbor Day Observance Ceremony. The entire campus is invited to the event, guests/public are welcome, information about the tree being planted is available to attendees, free trees are given away and the event is covered by campus media. Local media was unable to attend this year due to an emergency event.

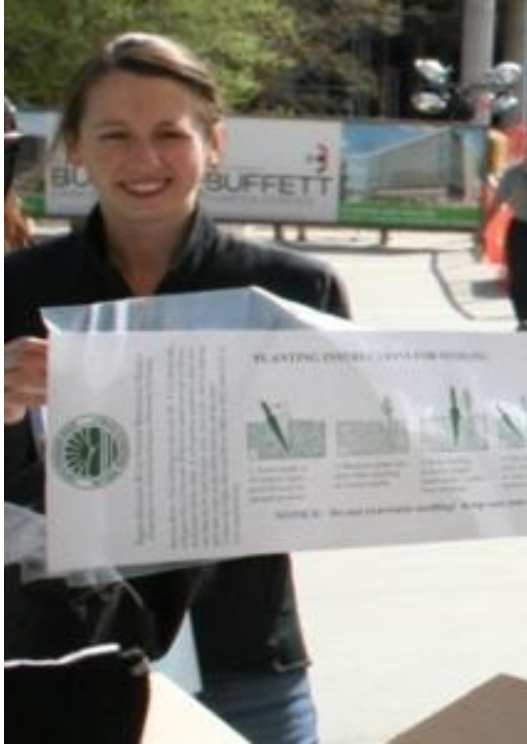
For the 2016 observance a Serviceberry tree was planted in a rain garden in the Michael Sorrell Center Student Plaza on April 29<sup>th</sup>, 2016. These trees are native to Nebraska, fit the space well, and will help to reduce rain runoff as they grow and while the young Bur Oaks mature. In addition to the tree planting, an arborist was on hand to answer questions about trees on campus and at home. Elderberry trees were given away free to all attendees, as well as 200 packets of indigenous wildflowers by the local Natural Resource District. Attendees were also encouraged to provide feedback on the campus tree plan and Tree Campus USA application, and to provide suggestions for what they would like to see. This feedback and suggestions were taken to campus leadership.

After the tree planting, participants could head inside to help City Sprout plant seeds before eating celebratory ice cream!



*A chilly and blustery day for tree planting.*





*The proud owner of a free trees supplied by the NRD after the tree planting.*



*Planting seeds with City Sprouts*

## Standard 5 – Service Learning Project

UNMC is an urban campus located along the main thoroughfare to downtown Omaha, and surrounded by neighborhoods. The Emerald Ash Borer (EAB) was identified in Omaha/Nebraska on June 6<sup>th</sup>, making us the 27<sup>th</sup> state to confirm its presence. The discovery was made close to campus, placing us in a treatment zone. While we have worked to educate the campus about this previously, we decided that we needed to do more this year and again centered our service learning project around the EAB. In the past the High School Alliance took part in this, but this year we targeted graduate and medical students as some of them are home owners. We again marked all campus ash trees with green ribbons to help people understand how drastically the landscape would change if these trees were lost. Education materials were produced using information provided by the Nebraska Forest Service as well and University of Nebraska Extension Office to educate people on the danger the EAB poses, promote places where homeowners, neighborhoods, and businesses can find information on the EAB, and show the effect the EAB can have.

On September 16<sup>th</sup>, 2016, UNMC students, along with the help of some faculty/staff and Tree Campus USA Committee members Li Westman, Jannah Obid, Julie Sommer, Melanie Stewart, Tom Payne, and Sarah Emanuel helped the students to identify Ash trees on campus, especially along main thoroughfares.



*UNMC Students tie green EAB awareness ribbons around a small stand of Ash Trees in front of Bennett Hall.*

In addition to identifying the tree, the ribbon notes that it is one of over 100,000 Ash trees that could be lost to an EAB infestation. It also provides a web address to the local extension office for more information.

While this date is a significant time after the discovery of EAB, the date in mid-September was selected for 3 reasons: we needed to get the majority of our students back on campus, a Friday afternoon time increased participation, and we knew that in early October some of the trees we marked would be removed due to poor health/native borer damage (as a means of prevention). While we are never happy to see trees removed, the loss of several smaller ash trees along one street was definitely felt by the campus community, allowing us to better demonstrate the tragedy we would be facing if mature trees are lost.

Two articles were also published in UNMC "Today" and Nebraska Medicine "NOW" to further educate the campus on EAB. The first provided information on [EAB's discovery](#) in Nebraska and the second on [our response on campus](#), which included treating all applicable trees and the removal of 17.



*Some of the education materials used along with a roll of green Ash tree ribbon.*