UNIVERSITY OF NEBRASKA MEDICAL CENTER unmc.edu

University of Nebraska Medical Center
Tree Campus USA 2013 Application

Arbor Day Foundation™

TREE CAMPUS USA®

University of Nebraska Medical Center

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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	tpayne@unmc.edu 402-559-4050
Faculty	Shannon Boerner	Physician, Assistant Professor	Advice, Service Learning Project	sboerner@unmc.edu 402-559-7502
Student	Kristin Watkins	Graduate Student	Advice, Documentation, Tree Care Plan	kristin.watkins@unmc.edu 402-559-3803
Community	Graham Herbst	Community Forestry Specialist – Eastern Nebraska	Tree care plan implementation, Expert advice	gherbst2@unl.edu 402-444-7875
LiveGreen	Julie Sommer	Administrative Research Associate, LiveGreen volunteer	Documentation, Coordination, Service Learning Project, Arbor Day Observance	julie.sommer@unmc.edu 402-559-7977
LiveGreen	Melanie Stewart	Live Green Chairperson	Service Learning Project, Arbor Day Observance	mlstewart@unmc.edu 402-559-3231

Meeting Minutes

UNMC Tree Campus USA Committee Meeting Minutes
First Meeting
DRC atrium 12:00-1:00
19Jun2013
Present at the meeting: Tom Payne, Shannon Boerner, Kristin Watkins, Graham Herbst, Julie Sommer, Jessica Kelling (from ReTree Nebraska)

1. Introductions and established committee members and roles
2. Described the tree campus USA standards for certification
    a. Standard 1 – Form a committee…complete.
    b. Standard 2 – Campus Tree care plan
    c. Standard 3 – Dedicated annual expenditures for Campus Tree Care program
    d. Standard 4 – Arbor Day observance
    e. Standard 5 – Service Learning project

3. Standard 2 – Campus Tree care plan
    a. Prior to the meeting we were all given the examples from the Tree Campus USA website and the MCC example from Verdis group.
    b. As a group we decided to make a template (Kristin) from all the other examples for Tom and Graham to fill in.
    c. Several topics discussed
    d. Campus maps
    e. TNMC vs. UNMC areas

4. Standard 3 – Dedicated annual expenditures for Campus Tree Care program
    a. Tom provided us with a list of the UNMC Grounds expenditures
    b. We need to focus on this standard a bit more next meeting to see if we can break it down into the broad categories in the application.

5. Standard 4 – Arbor Day observance
    a. Gather the photos and media coverage of the UNMC Earth day activities and Swanson tree relocation.
    b. Discussed the ReTree project. Jessica Kelling joined us to talk about ReTree funding opportunities.

6. Standard 5 – Service Learning project

a. Several Ideas discussed
b. MPH students (contact Ruti Margalit)
c. JP Lord School
d. ReTree
e. Public outreach
f. Tree Identification/inventory

Action Items

Action	Committee member	Due date
Contact TNMC Energy Advocates group to tell them we are applying for TCUSA	Julie	Next meeting
Get a Tree Care Plan Template to Tom and Graham to start filling in.	Kristin	As soon as possible
Contact Ruti Margalit in COPH to discuss partnering for a Service Learning Project (SLP)	Shannon	Next meeting
Locate any campus maps that can possibly be utilized for the Tree Care Plan and SLP	Tom/Graham	Next meeting
Start filling in the Tree Care Plan template from Kristin	Tom/Graham	Whenever possible. We can discuss any obstacles next meeting
Get more information to the group regarding ReTree	Graham	Next meeting
Identify Tree Identification areas (areas in need of ID?)	Tom	TBD
See if UNK is a TCUSA school	Julie	By Next meeting
Evaluate the Campus Tree Care Program Expenditure Worksheet regarding the feasibility of utilizing Tom's information for our application	Tom and anyone he would like to help him with that task.	Next meeting
Find volunteers to do Tree Identification	Melanie	Next meeting

UNMC Tree Campus USA Committee Meeting Minutes
DRC atrium 12:00-1:00
25Jul2013
Committee members present: Tom Payne, Graham Herbst, Julie Sommer, Kristin Watkins, and Melanie Stewart

1. Tree Care Plan update
    a. Kristin suggested that Graham and Tom take MCC's Tree care plan and make edits directly on the sheet, and then she will type up the plan.

   b. UNK is not a certified Tree campus

2. Tree care expenditures
   a. Tom will get the cost center #s to Kristen.
   b. Kristen will do the breakdown for the expenditures worksheet

3. Observing Arbor Day
   a. Take more pictures of Swanson Hall trees
   b. Take screen shots of all UNMC coverage of Earth Day/tree related news
   c. Melanie will get me links to local media coverage of the tree planting

4. Service Learning Project Update
   a. Ruti Margalit and Chris's contact at OLL fell through
   b. New ideas
   c. Sheila Packard Sept 5th service day (Graham)
   d. Midtown specific organizations like 'Omaha by design' (Kristin/Graham)
   e. JP Lord school
   f. MMI Dr. Michael Crawford
   g. Montessori kids to come and do a tree ID activity (Julie contact)

5. Go over blank application to see if all information is ready
   a. Examining the application we still need the following information
   b. Number of trees planted for 2013
   c. Number of trees pruned for 2013
   d. Number of trees removed for 2013 (incl. reason i.e. storm)
   e. Full time student population
   f. Goal and Targets-the application suggest we develop at least one goal and one target. Include how goal will be measured.

Action Items

Action	Committee member	Due date
Get Tom and Graham's Tree Care plan notes	Kristin	As soon as possible
Start editing the MCC Tree Care Plan template for Kristin to type.	Tom/Graham	As soon as possible
Get cost center #'s to Kristin for Tree Care Expenditures	Tom	Before the next meeting
Break down the Tree Care expenditures on the Worksheet	Kristin	Next meeting

Tell Julie ANY opportunity to take pictures of tree moving, planting, etc	Tom/Melanie	Ongoing
Get Julie any local media coverage/links of UNMC Earth week	Melanie	Next meeting
Follow up on Sheila Packard Sept 5th service day for SLP	Graham	As soon as possible
Contact Montessori (MPCC) to invite them for a Tree Identification/Education field trip on (grades 1-6)	Julie	By Next meeting
Contact someone at JP Lord School to discuss a possible tree activity for students (half-day activity similar to above)	Shannon	As soon as possible
Come up with possible materials (dichotomous keys, worksheets, campus area for the school field trip activity)	Graham/Julie	As soon as possible
Find the following data for 2013; 1) # trees planted, 2) # trees pruned, 3) # trees removed (including reason)	Tom	Next meeting
Think about the specific "Goals and Targets" for our application. The requirement is one of each.	All	Julie will compile the ideas for us to pick at next meeting

UNMC Tree Campus USA Committee Meeting
DRC atrium 12:00-1:00
05Sep2013
Committee members present; Julie Sommer, Kristin Watkins, Tom Payne, and Graham Herbst

1. Tree Care Plan working meeting
    a. Went page by page over the Tree Care Plan, Compared Notes, and started to complete the plan

2. Briefly discussed SLP
    a. We will meet again prior to the Montessori SLP on October 4th, 2013.
    b. Can Graham get trees to plant with Lord students?
    c. Discussed where and if any trees can be planted close to Lord School. This is actually OPS property so we cannot plant there. In addition, the children are severely disabled and it may be difficult to tailor an activity to their physical abilities.

Action Items

Action	Committee member	Due date
Take all notes from today's meeting and type up the finished Tree	Kristin	As soon as

Care Plan to disseminate.		possible
Complete the activities for the Tree Identification Service Learning Project on October 4th.	Julie/Graham	As soon as possible
Contact Jackie and Carolyn (LiveGreen) about the SLP art project. Follow up with Melanie about who to contact on campus regarding the Montessori field trip here for the SLP.	Julie	As soon as possible

UNMC Tree Campus USA Committee Meeting
DRC atrium 12:00-1:00
30Sep2013
Committee members present; Julie, Kristin, Tom, and Graham

1. Read through completed Tree Care Plan and made final edits

2. SLP
    a. Discussed activities
    i. Dichotomous Key- Julie added more pictures and definitions to the key so the children had something to reference during the activity.
    b. Trees to identify on campus.
    i. Tom, Graham, and Julie walked through the campus and identified the route to take and the trees that the students would identify.

Action Items

Action	Committee member	Due date
Take all notes from today's meeting and type up the finished Tree Care Plan to disseminate.	Kristin	As soon as possible
Make copies of the dichotomous keys for the Tree Identification Service Learning Project on October 4th.	Julie	As soon as possible
Collect all media and pictures from Arbor Day observances and Service Learning Project to add to the application.	Julie	As soon as possible
Contact LiveGreen committee to ask for volunteers for the Service Learning Project on Friday October 4th at 9:15am	Julie	As soon as possible

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
   Melanie Stewart, MPA, UNMC LiveGreen Chair
   Shannon Boerner, MD, UNMC Faculty
   Kristin Watkins, UNMC student
   Tom Payne, UNMC Grounds Supervisor and certified arborist
   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.

   <u>Planting</u>

   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 lnformation:
   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^{o} 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 projectB. 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 15.

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
- 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 and staff via a company-wide email from the LiveGreen campus sustainability initiative. LiveGreen will continue to update the campus community on items of importance related to trees throughout the year via emails and articles in the "UNMC Today," the electronic campus newspaper that is published Monday – Friday and sent to the entire campus community. 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 here.

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:		$16,100
Labor & Tree Management		$21,430
Equipment used for trees		$32,500
	Total:	$70,030

There are 3,600 full time students at UNMC, making tree maintenance cost per student: $19.45

UNMC Commencment May 2013.

Dr. Bill Lydiatt with UNMC High School Alliance students

Standard 4 – Arbor Day Observance

To recognize the importance of trees and celebrate the tradition of Arbor Day, UNMC kicks off the Earth week festivities with a tree planting ceremony.

2013 Arbor Day Observance "UNMC Earth Week" April 15th, 2013

Taken from Campusearthweek.com, this describes UNMC's Tree planting activity.

Screen shot from the UNMC Facebook page highlighting the Tree Planting Ceremony

SunCo, landscape contractor for The Nebraska Medical Center, collected acorns from a black oak outside of Johnny Rosenblatt Stadium in Omaha, Nebraska. Johnny Rosenblatt Stadium opened in 1947 and was the largest non-MLB baseball stadium in the United States. It was home to the Omaha Royals, and made famous for hosting the Men's College World Series for almost 60 years before it was torn down in 2012. SunCo cultivated these acorns and then donated 20 seedlings to the medical center for our tree planting event. Saplings were given to the first 20 people in attendance to plant in their yards or on their farms. These trees help us to remember that our favorite places are not just brick and mortar; they are shaped by the landscape around them and improved with the addition of trees. These trees are tied to one of the most famous locations in Omaha and will help to preserve that history for generations to come.

Don Futrell, Executive Director, Facilities and Clinical Space Planning for The Nebraska Medical Center

Ken Hansen, Assistant Vice Chancellor, Facilities, Management, and Planning for the University of Nebraska Medical Center

Local news coverage of the tree planting events

Two local news stations covered the UNMC tree planting event:

The segment that ran on KPTM (Fox) on 4/15/13 on the 9pm news had a Nielsen Audience of 19,969. The segment that ran on KMTV (CBS) on 4/15/13 on the 6pm news had a Nielsen Audience of 12,895.

Standard 5 – Service Learning Project

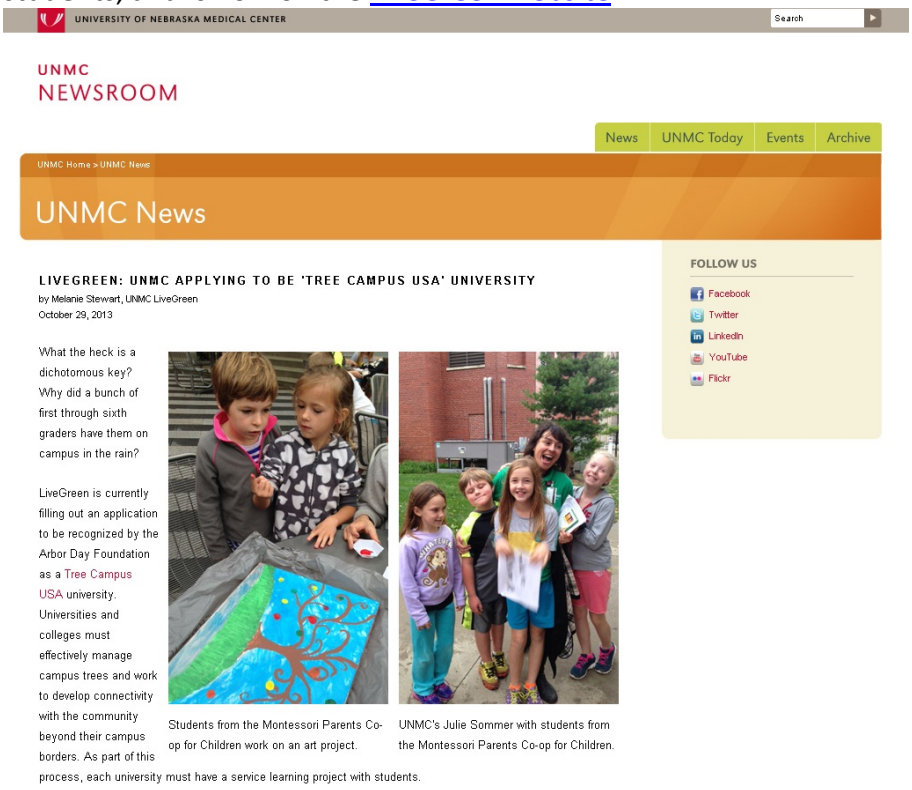
UNMC is an urban campus located along the main thoroughfare to downtown Omaha, and surrounded by neighborhoods. As UNMC works to improve the health of all Nebraskans and what we do here directly impacts the residents of those neighborhoods, we chose to make this years' Service Learning Project community-based.

In early October, children from the Montessori Parents' Cooperative for Children ranging from grades 1 to 6 came to campus to learn the difference between trees and shrubs, why trees are important to individuals and society, and what a dichotomous keys is, as well as how to use one to identify trees. Arborist Graham Herbst was on hand to explain the dichotomous key, provide information about local trees, and answer questions. In addition to the Tree Campus USA committee members present to help the children, the UNMC students that serve on the LiveGreen committee were also involved in the planning and execution of the Service Learning Project.

After the students correctly identified several trees on campus using the dichotomous key from "Trees of Nebraska" by Kuhns and Mooter 2007 published by the University of Nebraska Lincoln-Extension (see the Dichotomous key in additional application material attached), they gathered in the student plaza for a tree art project. LiveGreen provided a canvas with a bare tree on a landscape and the students used their painted thumbprints to apply leaves. The tree ended up with many different colors of leaves, and some students even combined paints to show the leaves were changing color and/or falling to the ground. The artwork now hangs in the students' classroom as a reminder both of their time on campus and the importance of trees in our lives.

We received a lot of positive feedback from the students and their teachers have contacted us to see if we would be willing to do this again next year. A teacher from the school emailed us recently stating, "Our trip to UNMC was educational and exciting for our students. We are using the information we learned in conjunction with our botany lessons at school. We are looking forward to identifying the trees at our new school building this spring. The kids were able to have a hands-on experience with the trees and their parts using their various senses. As a Montessori teacher, you can't ask for much more than that!" -Miss Annie Gray
The students will be invited to campus for our Arbor Day tree planting/dedication in April and we are already planning another Service Learning Project for 2014. A story highlighting the

service learning project was featured on “UNMC Today,” the home page for all employees and students, and is now on the [LiveGreen website](#).



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LIVEGREEN: UNMC APPLYING TO BE 'TREE CAMPUS USA' UNIVERSITY

by Melanie Stewart, UNMC LiveGreen
October 29, 2013

What the heck is a dichotomous key? Why did a bunch of first through sixth graders have them on campus in the rain?

LiveGreen is currently filling out an application to be recognized by the Arbor Day Foundation as a Tree Campus USA university. Universities and colleges must effectively manage campus trees and work to develop connectivity with the community beyond their campus borders. As part of this process, each university must have a service learning project with students.

Students from the Montessori Parents Co-op for Children work on an art project.

UNMC's Julie Sommer with students from the Montessori Parents Co-op for Children.

On Oct. 4, students from the Montessori Parents Co-op for Children visited UNMC for the opportunity to learn about and identify different species of trees. Local arborist Graham Herbst gave some fun facts about trees on campus, fielded questions on trees around the world, and was able to identify the lacewing fly eggs on the back of one leaf. Most importantly, he helped everyone to understand and use a dichotomous key.

Never heard of one? Dichotomous keys are a tool used to identify specific items in the natural world by answering "logical" questions in a progression. The key provides "yes or no" questions and based on your answer you move to another question. This continues until you work your way down to a specific species of tree.

Have a tree that you want to identify? Try the Arbor Day's Online Dichotomous Key.

After successfully identifying four different trees, the students met at the student plaza. They used various colors of paint to make "thumbprint" leaves on a painting of a tree. The students will hang the painting in their classroom as a reminder of their visit to UNMC and the importance of trees.

Comments

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