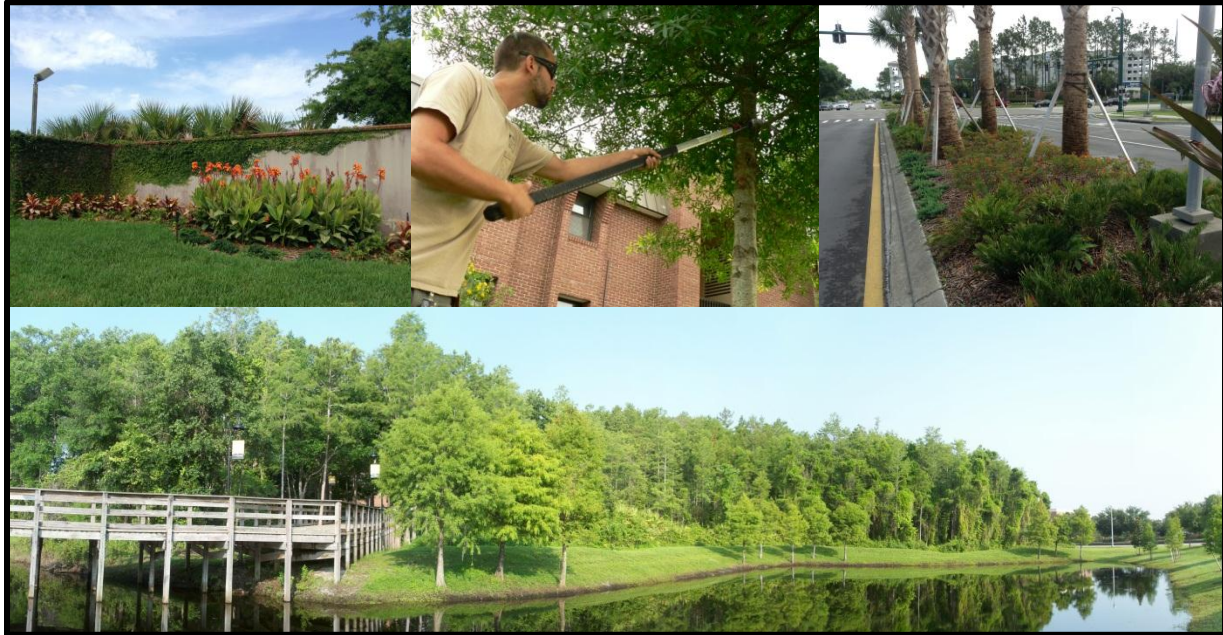


## 2012-2013 Annual Report



### Department Mission and Vision

Landscape and Natural Resources (LNR) enriches the community by creating and maintaining an inviting and sustainable outdoor environment; providing high quality service for operational activities; and generating research and educational initiatives that guide conservation and stewardship of natural resources. LNR creates and maintains a beautiful campus that contributes to a sense of place; advances learning; and reflects a commitment to stewardship of human, financial, and natural resources.



## Contribution to UCF Goals



### *Offer the best undergraduate education in Florida*

Landscape and Natural Resources (LNR) advances undergraduate education through internship, service-learning and volunteer courses, and research projects across campus. This year, we hosted four (4) independent student projects, covering: gopher tortoise population assessment and changes through time; developing management plans for the MacKay Tract and Student Union Cypress Dome; and assessing Sand Hill Crane seasonal distribution and habitat use on

campus.

Seven (7) classes, reaching 1,311 students, were conducted in the campus natural lands in disciplines of Anthropology, Engineering, Ecology, Biodiversity, and Entomology. Additionally, the Natural Lands supported ROTC and Police training exercises, film course work, and athletic races through site use permitting, involving 1,456 students and staff.

Over 640 volunteers contributed to landscaping, natural resources, urban forestry, and community garden work this year, supplying 2,954 hours of work. Adopt-a-Road and -Pond groups contributed 1,410 hours of labor, helping to keep the campus clean with 981 volunteers in 15 different student groups. Through these volunteer efforts, 176 bags of recycling and 317 bags of trash were collected along roads and ponds.

### *Become more inclusive and diverse*

LNR supports a diverse work force, which is comprised of sixty (60) full time staff and one (1) student intern. This year the Department instituted a more formal training program, in partnership with the Resource Management Training Manager, to elevate staff's job knowledge and skill set. One hundred percent (100%) of LNR employees attended at least one training session this year. We offered a fall training series to our entire staff, which focused on development of Department Standard Operating Procedures (SOPs). In an effort to be more inclusive, all staff were involved in the development of the SOPs, which will be finalized this summer to create more consistent work efforts within LNR.

*Be America's leading partnership university*

LNR continues to expand UCF's goal of creating and maintaining partnerships, by developing strong relationships with meaningful national groups, such as the Arbor Day Foundation, and local agencies, such as the Cooperative Invasive Species Management Area (CISMA).

This year, LNR partnered with the Florida Forest Service, Florida Department of Environmental Protection, The Nature Conservancy, UF IFAS, Orange County, Seminole County, the Native Plant Society, and Florida Fish and Wildlife Conservation Commission, in hosting the 3<sup>rd</sup> annual grasses identification workshop, the Mega Air Potato Raid, and the Aquatic Plant Identification workshop. Hosted on campus, the Grass Identification Workshop provided 93 participants continuing education credits (CEUs) for federal, state, and local government agencies, along with community members, and various interested private groups. Additionally, 128 participants attended the Aquatic Plant Identification workshop hosted by the CISMA. Fifteen (15) LNR staff were able to attend these meaningful workshops free of charge due to our partnerships with this group.

Additionally, in partnership with City of Winter Park, City of Winter Springs, Florida Park Service, Lake Lotus Park, City of Casselberry, City of Altamonte Springs, Seminole County, Orange County, and Parkland Nature Preserve, LNR participated in the annual Mega Air Potato Raid. This event raises awareness about invasive species in Central Florida, and 575 participants helped remove 10,420 lbs. of this non-native species in Orange and Seminole Counties.

## Department Highlights

### Department Organization and Process Review

In an effort to increase efficiency and stability, LNR completed an assessment of staffing organization and processes this year. These evaluations resulted in a reorganization of landscaping zones (figure 1), and restructuring of reporting lines for department personnel.

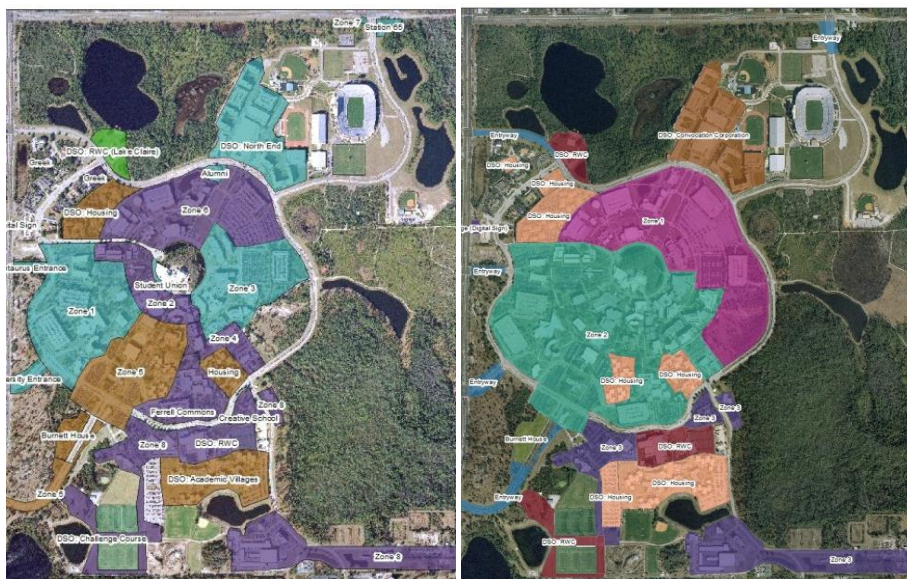
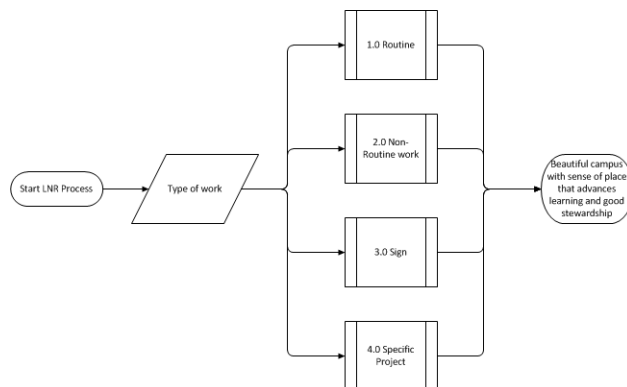


Figure 1: Historic zones (left) and reorganized zones (right)

The reorganization of zones clarified and consolidates responsibilities of superintendents and created more efficiency in operation. The staff restructuring balanced the reporting lines of supervisory staff and created teams with new specializations. The new structure includes a newly created position, Assistant Director of Landscape Planning, Design and Construction, which was filled in early 2013 by Christopher Kennedy, a local landscape architect with 17 years' experience working in Central Florida. Additionally, LNR completed a review of current processes, and developed a Department process guide to capture work flow, accountability for work process, and data capturing methods. LNR work is completed through four (4) specific processes (see figure 2; level 1 process below), which is carried out through the Supervisor.

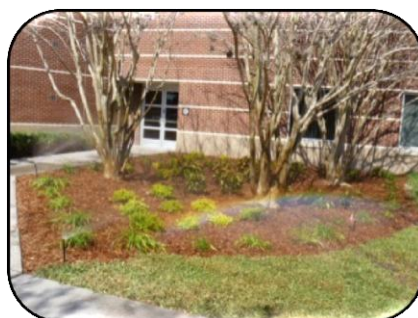




**Figure 2: LNR work process and outcome**

### Landscape Enhancements

LNR completed 42 campus enhancements this year on the main campus, Lake Nona campuses and several other satellite campus locations to refurbish worn out areas and provide a more pleasant learning and working environment. Projects completed included revising the Communications Building



entrance; completing tree colonnades at University entry ways; redesigning the Counseling Center entrance by revising the landscape and adding a plaza; and redesigning the Memory Mall planters. A major focus was placed on resolving

problem areas with drainage and erosion control issues, such Health and Public Affairs (HPA) and various areas around the Lake Nona Campus.

In addition, the Department has continued to place a priority on removing invasive and hazardous trees and plants to improve the campus environment and protect the Central Florida ecosystem. In all of the campus landscape improvements, great care was taken to provide the right plant in the right place. Plant material that was failing on campus is being replaced with plants more adaptable to the specific microclimates. Increasing Florida-Friendly™ and Florida native plant selections has been a priority in each new installation throughout campus.

Several new campus construction projects were started or completed this year, including two new Greek Houses and the Greek Life Center; the Libra Parking Garage; an expansion to Academic Villages; and Classroom II. LNR continues to oversee the landscape construction of these areas of campus growth.

Additionally, the campus irrigation system has now been completely converted to reclaimed water. This transition allows the University to act in a more sustainable, eco-friendly manner and to help protect Florida's valuable ground water supply.

In order to provide guidance and direction in developing and enhancing the campus landscape as the University enters its second half century of operation, the Department developed a Request For Proposals for a Campus Landscape Master Plan, to be completed in the coming year. The plan will provide a unified vision that identifies and develops major campus districts and helps ensure consistency in materials, form, and character, while allowing flexibility for innovation and sustainability. This plan will be consistent with the other University planning initiatives, and the project scope will include helping develop the Landscape Element of the 2015 Campus Master Plan. The planning process will include a Campus Landscape Advisory Team, composed of representatives from UCF Facilities and Safety, administrators, and other relevant campus stakeholders. A Campus Landscape Technical Committee composed of the Director and Assistant Directors of Landscape and Natural Resources and the Director of Facilities Planning and Construction, will direct the process.

### *Natural Resources*

Approximately 60% of UCF's campus is natural lands that are actively managed through prescribed burns, mechanical mulching, invasive species treatments, direct seeding, and habitat restoration plantings. Seventy (70) acres were treated for invasive plant species this year through a \$7,800 grant awarded by the Florida Fish and Wildlife Conservation Commission (FWC). This is the third time the grant has been awarded to UCF in recent years, and it has played a vital role in maintaining the ecosystem health and redirecting invasive exotic plant material, which is a major threat to local ecosystems.

Recreational opportunities, combined with management and research activities, help create opportunities for relevant, experience-based learning, urban ecology research, and human connection with ecosystems and landscapes. LNR hosted four (4) student projects, impacting 21 students through a "System's Sustainability" course taught by LNR's Assistant Director and the Arboretum Coordinator. Projects addressed sustainable green roof plantings, invasive species treatments using synthetic compared to natural ingredients, amphibian diversity across campus, and ecosystem analysis between solar and forest.

Our department continues to facilitate and conduct environmental compliance projects on campus. In compliance with the Clean Water Act, LNR is currently maintaining National Pollution Elimination System (NPDES), requirements and audits. Actions include six (6) minimum control measures: Public education and Outreach; Public Involvement; Illicit Discharge Detection and Elimination; Construction Site Runoff Control; Post-Construction Stormwater Inspection, Management; and Pollution Prevention.



Three (3) ongoing mitigation projects were overseen by LNR, including the Environmental Lift, and mitigation in areas P-3, and P-3A/W-9B. These three projects include restoration plantings to provide wildlife connectivity between wetland systems and restoring damaged wetlands. All have been planted and are currently on schedule as defined by the St. Johns River Water Management District (SJRWMD). There are sixty (60) vegetation monitoring plots that are surveyed twice annually to document plant community changes and provide supportive data for ongoing mitigation projects. This data are also available for ongoing research in Florida ecosystems and land management activities being conducted at UCF.



### Urban Forestry

LNR is working toward establishing a more complete and aesthetic tree canopy using a diverse selection of native trees, appropriate for campus. This will provide shade to offset cooling costs; filter harmful runoff; and stabilize riparian buffers around waterways and retention ponds.

The Department began a major initiative to improve the campus tree canopy and arbor care by adding an Urban Forester to the staff in the spring of 2012. We now have three (3) International Society of Arboriculture (ISA) Certified Arborists on staff. This team manages an extensive campus canopy, including the removal of 82 invasive/exotic, dead or diseased trees and planting 241 trees and palms across campus. Additional arbor work included the pruning of 603 hardwood trees, pruning 112 palms, and doing soil improvement work on eight (8) trees with an arid spade to improve root health.

A complete campus tree inventory that details the location, species, and size of all trees located within the developed areas of the University was conducted this past year. This survey was done with the use of a sub meter accurate GPS unit and is currently being designed to become an interactive web site in a GIS format. Users will be able to visually see tree locations displayed on aerial views, with details of each tree. This tool will be used by the Urban Forestry program to schedule pruning events for newly planted trees, removal of staking and support systems, and other tree maintenance activities.

This year, as a part of UCF's 3<sup>rd</sup> consecutive year as a Tree Campus USA as designated by the National Arbor Day Foundation, LNR partnered with UCF Athletics and Orange County Public School's (OCPS) Post High School Transition Class to host a tree planting. Thirty (30) volunteers helped install 37 new trees at the UCF Softball Complex entrance. This event strengthened partnerships between the Arbor Day Foundation, UCF Athletics, Florida Forest Service, and the UCF community by educating volunteers about trees and their importance in the urban environment.



### Staffing

LNR completed a workforce analysis this year to capture the staffing needs for the Department. The results indicated that LNR is understaffed in the number of ground crew needed to provide a consistent, satisfactory level of service for basic landscape maintenance throughout our areas of service under our current landscape configuration

(see table 1). With expected growth in the next few years, it was estimated that LNR would need to increase our grounds crew staff by 20-25% (6-8 grounds crew) to meet a Level 3 campus landscape maintenance standard, and by 10-15% (grounds crew) to maintain the current Level 3-4.

**Table 1: Current Staffing and Projected Staffing needs for level 2 and 3 Maintenance Levels**

| Staffing area    | Current FTE | FTE Demand Level 2 | FTE Demand Level 3 |
|------------------|-------------|--------------------|--------------------|
| Grounds crew     | 35          | 57                 | 43                 |
| Grounds trash    | 2           | 2                  | 2                  |
| Irrigation techs | 3           | 4                  | 4                  |
| Shop mechanics   | 2           | 2                  | 2                  |
| Urban forestry   | 2           | 3                  | 2                  |
| Land Management  | 2           | 4                  | 3                  |
| <b>Total</b>     | <b>47</b>   | <b>71</b>          | <b>56</b>          |



In addition, LNR commissioned a landscape inventory from one of our continuing service landscape architecture firms (Woolpert, Inc.) to provide a basis for estimating and forecasting staffing level, and to create a database for making informed, operational decisions and tracking landscape information that may improve efficiency and record- keeping (see table 2 for summary).

**Table 2. Landscape elements on UCF Main Campus and Satellite Campuses for which LNR Grounds Crew is responsible**

| <b>Entity</b>         | <b>Panting Bed Area (Sq. ft.)</b> | <b>Turf Area (Sq. ft.)</b> | <b>Pedestrian Pavement (Sq. ft.)</b> | <b>Sum of Turf Edge Length (linear ft.)</b> |
|-----------------------|-----------------------------------|----------------------------|--------------------------------------|---|
| Main Campus E&G       | 952,252                           | 9,329,371                  | 1,432,305                            | 465,064                                     |
| Housing               | 232,466                           | 697,812                    | 287,654                              | 66,830                                      |
| Rec and Wellness      | 60,469                            | 528,141                    | 224,796                              | 24,166                                      |
| Convocation Corp.     | 102,432                           | 272,595                    | 217,503                              | 27,468                                      |
| Lake Nona             | 467,466                           | 208,255                    | 127,725                              | 10,373                                      |
| Rosen School          | 122,019                           | 177,344                    | 58,106                               | 19,710                                      |
| South Campus          | 5,658                             | 198,565                    | 1,635                                | 5,631                                       |
| Digital Media         | 10,414                            | 33,316                     | 28,635                               | 5,908                                       |
| <b>Grand Total</b>    | <b>1,953,175</b>                  | <b>11,445,398</b>          | <b>2,378,360</b>                     | <b>625,151</b>                              |
| <b>Total in acres</b> | <b>44.84</b>                      | <b>262.75</b>              | <b>54.60</b>                         | <b>NA</b>                                   |

LNR is currently developing a career progression plan to facilitate the appropriate promotion of deserving employees into higher level positions. This will include identification of quantitative steps required to move from a Groundskeeper to a Senior Groundskeeper, requirements for special pay increases within each class title, and clearer expectations of the requirements of each position. Currently, performance is being measured through annual or off-cycle performance appraisals, and a more quantitative strategy is needed to capture qualifications for promotion.

## Other Accomplishments

### Grants and Awards

For the fourth consecutive year, LNR applied for and was awarded \$7,800 from the Florida Fish and Wildlife Conservation Commission to fund the treatment of upland invasive plant species in the campus natural lands. This grant helps support the continued management of the campus natural lands by reducing nuisance species, thus improving habitat quality.

Additionally, we received the designation of “Tree Campus USA” from the National Arbor Day Foundation for the third (3<sup>rd</sup>) year in a row.

### Cost Effectiveness

Volunteers, coordinated in partnership with the UCF Arboretum, contributed approximately \$29,590 worth of labor, which is equivalent to one full-time employee’s time annually. Work performed included application of compost and mulch, weeding in landscape beds, pruning, and planting of several landscapes on campus. The LNR Adopt-a-Road and Pond program contributed a savings of \$14,071 through volunteers’ efforts to remove trash and recyclable items from around pond and road edges.

### Employee Achievements and Awards

Four (4) staff were promoted from Assistant Superintendent to Superintendent this year. Three (3) staff members received state and national certifications in Prescribed Burning, ISA Arborist, Licensed Storm Water Inspector, and Natural Lands Herbicide Applicators License. Eight (8) landscaping employees received Best Management Practice certification for fertilizer application. Two (2) LNR employees received “Employee of the Month” within Facilities and Safety. Additionally, LNR’s administrative assistant, Barbara Brown, completed the Leadership Enhancement Program, which included a formal project execution on, “Fundraising Fundamentals”.