



The Certified Environmental Professional

The Newsletter of the Academy of Board Certified Environmental Professionals

<http://www.abcep.org>

April -May 2017

President's Message

It is truly an honor to have been elected as your new President! I give my gratitude to my current and previous Board Members for all of their hard work and dedication to the organization and for their guidance and words of wisdom for me!

Having just come off of our March 2017 In-Person Meeting at the 2017 NAEP Conference in Raleigh NC, I am fully energized! We have a lot of momentum being created by the CRB, Mentors, the Board of Trustees and our management company – Bower Management!

For the upcoming year, I have a few items I am going to focus on:

1. Improving CEP-Express. I will keep you posted on this as the year progresses!
2. CEP - **Connect, Engage, Promote!**

For this month – let's **Connect** - I challenge each of you to reach out to a fellow CEP and Connect! Here are some ways to do so:

- ◆ Arrange a lunch meeting with CEPs, CEP-ITs, and those who might be interested in being a CEP in your local area. In my area, a group of us meet every few months for lunch. This month, we invited two perspective professionals to join us and learn more an ABCEP and the CEP certification. Search for a CEP near you on CEP-Express or contact the ABCEP Office at Office@abcep.org
- ◆ Attend a local chapter of an NAEP meeting and get on the Agenda to do a short presentation on the CEP. This year, several CEPs plan to do a booth at the upcoming Permitting Short Course in Ft. Lauderdale. In September, members of the BOT in Florida will be heading to Tallahassee to do a class on "How to Become a CEP" at the FAEP Chapter Meeting.
- ◆ Become a Mentor – we have a robust mentoring program in need of Mentors. It's a small time demand with a great reward.
- ◆ Join the Certification Review Board – this is a great way to drill down into our candidates to make sure they have what it takes to be a CEP. You will be so pleased to learn about the qualifications and expertise all of the great professionals we have out there! Right now, we need CEPs who have more than 20 years of professional experience to join the CRB and be assigned to CEP by Eminence candidate reviews.
- ◆ Join a BOT Task Force – anyone have skills in the website design area? We need you!

There are so many opportunities within our organization to Connect!

At your service,

Elizabeth R. Johnson, CEP, PWS
ABCEP President
Liz.johnson@ocfl.net/407-836-1511



Elizabeth R. Johnson
ABCEP President

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CONGRATULATIONS NEW OFFICERS OF THE ABCEP BOARD OF TRUSTEES

The results of the 2017 BOT elections are in. The ABCEP Board of Trustees would like to announce the following officer positions:

PRESIDENT - Ms. Elizabeth R. Johnson, CEP

Orange County Government (Florida)

PRESIDENT-ELECT - Mr. Corry T. Platt, CEP

AMEC Foster Wheeler (North Carolina)

SECRETARY - Ms. Shari L. Cannon-Mackey, CEP, ENV SP

Burns & McDonnell Engineering Company, Inc. (Texas)

TREASURER - Mr. William A. Eggers, CEP

AquaFiber Technologies Corporation (Florida)

EX-OFFICIO IMMEDIATE PAST PRESIDENT - Mr. Mark Gerber, CEP

Pape Dawson Engineers, Inc. (Texas)

CERTIFICATION REVIEW BOARD CHAIR - Mr. Kris W. Thoemke, Ph.D., CEP

Coastal Engineering Consultants, Inc. (Florida)

**KEEP STRONG
AND
MAINTAIN ON**



**Log on to
CEP-EXPRESS
today and
take credit
for all your
hard work!**



The Newsletter of the
Academy of Board Certified Environmental Professionals

CALL FOR ARTICLES on Renewable Energy and Coastal Resources

The June-July edition of *The Certified Environmental Professional* will showcase two topics: RENEWABLE ENERGY and COASTAL RESOURCES.

Tell us about your coastal restoration projects, innovations in siting wind and solar farms, and challenges overcome in the regulatory environment. We welcome a variety of perspectives on the topic from the environmental practice community.

Deadline for submittal July 20, 2017 to
scannonmackey@burnsmcd.com

Articles should be submitted in Word, with all graphics/photos provided in either tif or jpg formats. Do not send PDFs. All exhibits/figures/photos must have sources documented and all permissions to use obtained by the author of the article prior to publication.

For questions, please contact Shari Cannon-Mackey, CEP, ENV, SP, Editor at 512-872-7132 or by email to scannonmackey@burnsmcd.com

Using Habitat Restoration Practices for Habitat Conservation on Orange County Lands

Melanie Brodhead

Habitat conservation is considered the management of lands set aside for ecosystem conservation, restoration, and protection of these lands for wildlife and vegetative species to thrive. Many wildlife and vegetative species within fragile and imperiled ecosystems are quickly diminishing due to habitat loss and these losses are occurring at rapid rates. To maximize habitat conservation, natural areas require the use of land management efforts to decrease and offset these losses. Acquisition of natural areas from private citizens, non-profit organizations, and governmental agencies is an optimal first step to habitat conservation. The acquisition of historical agriculturally altered lands is becoming one of the main sources of acquisition because intact natural lands are becoming less and less prevalent. Natural succession does not create a desirable natural community within pasture or agricultural (ruderal) areas; the implementation of restoration efforts such as groundcover restoration is becoming a more predominant option for habitat enhancement. There are two fundamental strategies used in habitat conservation to restore fragmented and imperiled ecosystems; those include either protecting already intact viable habitat or restoring altered degraded habitat. Habitat conservation and enhancement is critical for the survival of degraded ecosystems and utilizing land management strategies of intact systems and restoration of altered systems are essential.

Managing for wildlife and ecosystem function is typically conducted through the practice of active land management of ecological processes. Using habitat conservation and enhancement strategies including prescribed fire within fire adapted communities such as flatwoods and habitat restoration on altered ruderal lands are necessary for vegetative and wildlife species adapted to these physical activities to thrive. These historically adapted practices have been altered by the creation of ruderal areas, specifically the creation of pasture lands historically used for agricultural practices. Due to these disturbances and the introduction of invasive non-native species to natural biological processes active management and restoration are vital to conserving habitats.

It is apparent that the management and maintenance of already intact natural ecosystems results in a considerable rapid positive outcome compared to the implementation of restoration management of ruderal habitats. For example, the restoration of pasture lands requires decades for the biological systems to reach historical habitat function and diversity. There are documented examples in which abandoned pasture areas dominated by bahia grass (*Paspalum notatum*) for up to 30 years result in the complete lack of succession of natural herbaceous species composition (Mitchell et al. 1996). Mechanical treatments using heavy equipment including roller chopping and mulching of overgrown habitat along with prescribed fire are the most basic and successful land management strategies used for habitat conservation. However, many conservation lands are altered to the point that mechanical treatment and prescribed fire alone are not adequate and restoration efforts are necessary for natural systems to once again exist. One of the restoration strategies being implemented on conservation lands is the restoration of pasture lands to a historical natural community that once existed on that ruderal area. The method of using both land management and restoration efforts is necessary for success.

A restoration activity that has become increasing prevalent is groundcover restoration which is the practice of re-establishing groundcover species including native grasses, herbaceous species, forbs such as sedges and rushes, and other ground vegetative species making up one of the Florida natural habitats most commonly flatwoods or sandhill communities. Flatwoods habitat consists of three different community types, wet or hydric, mesic, and scrubby or dry. The vegetative components that create the vertical layers of these systems include an understory or groundcover of grasses, herbs and forbs; a mid-story of shrubs; and an overstory tree canopy consisting mostly of pine species relative to the hydric state of the flatwoods system.

Groundcover restoration of pasture lands is considered a new method of practice within Florida ecosystems, specifically within Central Florida. The groundcover projects

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that have been implemented have returned both positive results and challenges. Obstacles to the success of these projects include non-native pasture grass species competition and the high financial costs associated with these projects.

When considering a restoration project, it is imperative to determine if the cost of the project is conducive based on the potential benefits for a successful outcome. Components to consider when determining if a site will have successful ecosystem function if restored include the existence of adjacent maintained habitat that will create a corridor, and determination if wildlife and vegetative diversity exists on those adjacent lands. Other components include the potential that the historical seed bank still exists on the site. Questions to consider include if the site has any existing desirable native habitat specific species and what kind of non-native invasive species are currently present?

There have been both successful and unsuccessful restoration projects conducted on ruderal lands within Florida. An example of a successful on-going groundcover restoration project conducted in Orange County was initiated in 2010 in Christmas, Florida on an Orange County Environmental Protection Division's (EPD) Green PLACE property called Savage/Christmas Creek Preserve (SCCP). SCCP was purchased by Orange County in 1999 and is 1,126 acres in size. EPD is responsible for land management of the natural resources on 893 acres. The remaining 229 acres are managed by the Orange County Parks and Recreation Division.

SCCP is located at the northwest intersection of State Road 50 (Colonial Drive) and West Fort Christmas Road in east Orange County [1046 NW Christmas Rd in Christmas Florida] (see Figure 1). EPD implemented the groundcover restoration within subunit 4A, located on the east portion of the property (see Figure 2). The site is defined by the Florida Natural Areas Inventory (FNAI) as approximately 57 acres of improved pasture. It is surrounded by scrubby and mesic flatwoods with small depression marshes and a small cypress dome located within the restoration area. According to historical aerals the site was converted into pasture between 1969 and 1987, and was a mix of wet, mesic, and scrubby flatwoods.

The overall goal of the SCCP restoration project was to restore the current improved pasture to the site's historical habitat condition and promote and enhance species

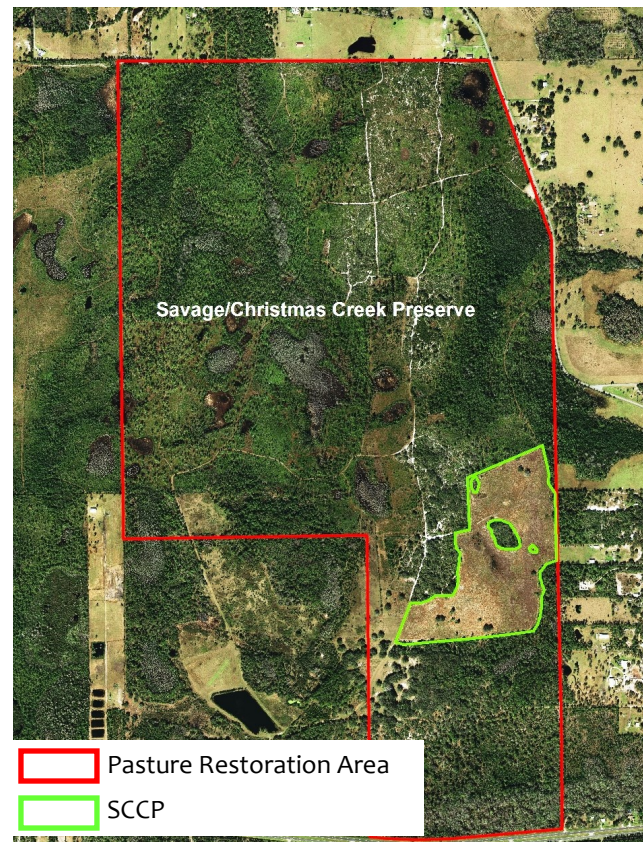


Figure 1: Savage/Christmas Creek Preserve Property Location

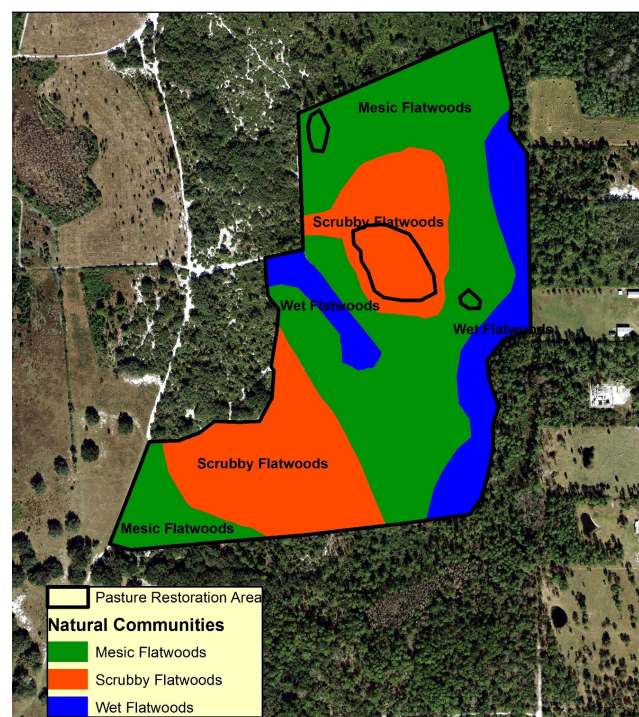


Figure 2: Desired natural communities to restore

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diversity and richness, provide natural habitat corridors between existing natural areas, and offset carbon sources with longleaf pine tree plantings.

Wet, mesic and scrubby flatwoods habitats were chosen as the target natural communities to create within the restoration site based on key factors including historical photographs that depict wet, mesic, and scrubby flatwoods, correlated with soil type and topography.

Materials and methods used for the pasture restoration activities included four major components:

- ◆ Eradication of non-native invasive species, specifically bahiagrass and other pasture grasses on the site using herbicide and disking techniques. Initial and follow up herbicide and disking were conducted to eradicate enough of the undesirable species to decrease competition with seeded desirable species. Herbicide events are still continued as an on-going basis to continually remove the minor amount of invasive species that still exist.
- ◆ Prescribed fire of the site was completed after the initial herbicide and disking event and the site is currently ready to be burned again when weather permits (see Figure 3).
- ◆ Donor site - Once the site was burned seeding of wiregrass and other flatwoods groundcover species was completed using a donor site where mechanical harvest and hand collection was within wet, mesic and scrubby flatwoods. The ratio of the collection amount of each natural community for the donor sites were chosen based on location within the central Florida region closest in proximity to the restoration site as possible so that central Florida ecotype seed is used. Seeds were collected using a Flail-vac and spread with a Grasslander (see Figure 4). It is important to harvest seeds with specific desirable species as the goal and determining those species before the project is initiated.
- ◆ Planting of pine trees - The final stage of the restoration project will be to plant young pine trees. Several shrub species will also be planted if needed, rather than seeded, to increase survivorship. Longleaf pine will be planted in the scrubby and mesic areas and both slash and longleaf will be planted within the wet flatwoods locations. Shrub species that may be planted include gallberry (*Ilex glabra*), lyonia (*Lyonia lucida*) and blueberry (*Vaccinium spp.*) species. This step has not occurred in the project because it is necessary to have a thriving groundcover established before planting trees. Once the trees are planted it is difficult to maintain and develop the groundcover component. According to vegetative monitoring measures it is anticipated that the groundcover is established to a respectable level and prescribed burning will be conducted by the end of summer 2017 to ready the site for tree planting.



Figure 3: Seed ready restoration area



Figure 4: Seeding using a Grasslander

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Monitoring of species was completed once or twice a year beginning before the project was initiated and the most recent monitoring occurred in the spring of 2016. Monitoring of the site will continue on an on-going basis. According to the final data collected in the spring of 2016 compared to initial monitoring data, species diversity increased within all habitats restored with non-native species decreasing to less than one percent within each habitat type.

Obstacles will likely be associated with many restoration projects and are a component to anticipate. The most current issue associated with pasture restoration projects typically include the control of non-native invasive pasture grass species notably bahiagrass and native pioneer species including dog fennel (*Eupatorium spp.*). According to Green PLACE land managers, the results of the final monitoring data indicate the site conditions are successful with species richness and diversity. Only one invasive grass species was found in late stages of the project, that species was a pasture grass called brunswick grass (*Paspalum nicorae*). Originally the species was identified as a native grass species on the project and later determined to be a common invasive species found in pasture fields. However, from the initial observation of this species to the current status, it has decreased to less than one percent coverage over all habitat types. On-going herbicide treatments have been conducted since the species was discovered in 2014.



Figure 5: Pre-restoration photo of site (dominated with dog-fennel and pasture grasses)



Figure 6: Current spring (2017) status of the restoration area (dominated with *Andropogon spp.* and moderate cover of *Stricta spp.* and *Sorghastrum secundum*)

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Habitat restoration is a growing practice for habitat conservation and is an essential tool for conservation areas as intact lands are becoming increasingly rare. There are certain aspects of restoration in which more research is highly relevant for the success of the practice to continue. Those research components include determining what is occurring physically and chemically within the soils with these projects. Pasture areas have a history untold in which many alterations to the soils and topography historically occurred. Other research that should be conducted includes hydrological studies due to potential topographic alterations. Research to determine the most successful seed mixes is also critical to understand how these areas will thrive and become successfully functioning ecosystems. It is important to be specific with seed selection and research is necessary to determine what seed mixes create a favorable outcome.

As intact natural areas become more and more unavailable, maintenance of those intact habitats and restoration of altered habitats will be the answer to habitat conservation on natural areas. Based on current conditions Florida will be relying on habitat restoration for the survival of natural communities. Both practice and research are required for the success of this tool and determine if this is our future answer to habitat conservation.

Author - *Melanie Brodhead is a Senior Environmental Specialist with the Orange County Environmental Protection Division in Orlando, Florida.*

Reference

Mitchell, R.J., Kirkman L.K. Michener W.K and Boring L.R. "Ecosystem Restoration of Longleaf Pine Wiregrass: Challenges and Opportunities. Workshop, Ecosystem Restoration Workshop. April 1996. Accessed April 2017: <http://fipr.state.fl.us/wp-content/uploads/2014/11/03-000-143Final.pdf>.

UPCOMING NEWSLETTER TOPICS

(The topics listed help us showcase different areas of study common among the environmental profession. An article on any topic can be submitted at anytime.)

JUNE-JULY

Renewable Energy and Coastal Resources

(due July 20, 2017)

AUGUST

Air Quality/Greenhouse Gases

(due August 18, 2017)

SEPTEMBER

Ecosystem Restoration

(due September 22, 2017)

OCTOBER

Inland Lakes and Rivers

(due October 20, 2017)

NOVEMBER

Remediation

(due November 17, 2017)

DECEMBER

CEPs in the Construction Sector

(due December 15, 2017)

2017 Award Winners

During the 2017 NAEP Annual Conference held in Raleigh Durham March 27-30, the ABCEP Board of Trustees presented the following two awards:

2017 Emerging Professional Award

Tina Richards, CEP

Tina is a biologist with the Water Sciences section of the Orange County Environmental Protection Division (OCEPD) in Orlando, Florida. Tina received her CEP in January 2017.

In her position at OCEPD, Tina is responsible for monitoring surface water quality of regional streams and lakes. She is a certified trainer for the statewide University of Florida LAKEWATCH Program where she conducts sample collection trainings for volunteers within Orange County and coordinates sample analysis with the Gainesville laboratory.



Tina Richards receiving the Emerging Professional Award from Liz Johnson, President of the ABCEP Board of Trustees

2017 Dr. Richard J. Kramer CEP Memorial Award for Environmental Excellence

Kris Thoemke, Ph.D, CEP

Kris is a Senior Scientist with Coastal Engineering Consultants Inc. in Naples, Florida, and a part-time faculty member for the American Public University System (APUS). He has extensive knowledge of and experience with the coastal ecosystems and regulatory processes in Florida and the Gulf of Mexico. For APUS, he teaches graduate and undergraduate classes in environmental policy and management including classes in the NEPA Certificate Program.

Kris has served as the ABCEP Certification Review Board (CRB) Chair for more than three years.



Kris Thoemke receiving the Kramer Award from Don Deis, former past President of the ABCEP Board of Trustees

NOW ACCEPTING NOMINATIONS FOR 2018

Nominate an Emerging **Environmental Professional**



Know an Environmental Professional who has made a valuable contribution to the profession?

Someone who should be recognized for their leadership, professional involvement and commitment to the environmental profession?



Nominate them today for this prestigious award!

Email office@abcep.org
or visit

www.abcep.org/blogs/awards

Candidates must:

- Not be older than 35 years old.
- Possess a bachelor's degree from an accredited university in an applicable field.
- Be a full-time environmental professional.
- Have a minimum of 5-years professional experience in a position of responsible charge.



NOW ACCEPTING NOMINATIONS FOR 2018

NOMINATE AN ENVIRONMENTAL PROFESSIONAL



Dr. Richard J. Kramer, CEP Memorial Award for Environmental Excellence



NATIONALLY RECOGNIZE EXTRAORDINARY ACHIEVEMENTS, LEADERSHIP, AND SPIRIT OF A CERTIFIED ENVIRONMENTAL PROFESSIONAL

Dr. Kramer's involvement in ABCEP spanned more than two decades. In 1982, he was the 31st person to earn the CEP designation. He served on the Academy's Certification Review Board from 1985 to 1999, when he resigned to become the first President of the Academy. Dick began his career in the environmental profession in 1972. For many years he was head of the environmental planning and NEPA office for the Camp Pendleton Marine Corps Base in California.

The ABCEP Trustees are responsible for selecting the winner of the award. More than one award may be given each year. The award was presented for the first time in 2004, to commemorate the 25th Anniversary of the creation of the Certified Environmental Professional designation by the National Association of Environmental Professionals (NAEP) and the 5th Anniversary of the creation of the ABCEP, which was created in 1999 to oversee the CEP program.

**All ABCEP Members are eligible for the Award
& must be nominated by an active ABCEP Member.**

Nomination Deadline: February of each year

SEND NOMINATIONS TO OFFICE@ABCEP.ORG OR VISIT WWW.ABCEP.ORG/BLOGS/AWARDS



Thank you for your service!

The ABCEP Board of Trustees would like to extend our fond appreciation to the following retiring Board Members:

Don Deis

Payton Doub

Without your tireless dedication and thankless commitment to the organization, ABCEP would not be where it is today.

May our paths cross again soon.

The Certified Environmental Professional

The ABCEP Newsletter is published monthly and is intended to be a:

- ◆ Communication vehicle for the Board of Trustees and ABCEP Committees to inform and engage with CEPs and CEP-ITs on current activities within ABCEP and its future direction.
- ◆ Forum to report on current and emerging environmental issues, regulation and policy changes, and professional trends.
- ◆ Forum to provide professional guidance and advice to expand the professional growth and knowledge of members.
- ◆ Means for members to communicate with one another on current accomplishments, interesting projects, or lessons learned on the job with new approaches and successful problem solving solutions.
- ◆ Platform to acknowledge, highlight, and welcome active CEPs and CEP-ITs.

All members are encouraged to be active in their profession and affiliated professional organization.

If you have an article or a topic of interest that you would like presented in *The Certified Environmental Professional* newsletter please submit your completed article or topic request to Shari Cannon-Mackey, CEP ENV SP, at scannonmackey@burnsmcd.com; or to Andrea Bower at office@abcep.org.

Thank you,

Shari Cannon-Mackey, CEP, ENV SP
Editor