FCS9261

UF UNIVERSITY of FLORIDA
IFAS Extension

Science Symposiums: Connecting Scientists, Managers, and Citizens[1]

A. Dodd, J. Jolley, M.A. Brennan[2]

The natural resource issues facing Florida are numerous and complex. A few examples include the restoration of the Everglades, water resource management, farmland and natural lands protection, and invasive species management. These issues are public matters of broad interest because they affect the environmental, economic, and social health of Florida and its local communities. They are also typically controversial, require a public decision (usually in the form of a government law, regulation, or program), and involve using value judgments to arrive at solutions.

Policy-makers and natural resource managers are often challenged by limited existing scientific knowledge that provides only partial answers to resource management questions. In response, government agencies are moving toward adaptive management approaches that focus on moving forward with management actions while simultaneously remaining open to new scientific applications and the possibility of changing or adapting approaches to incorporate those discoveries. Therefore, there is a need for policy-makers, natural resource managers, and scientists to share and understand the latest research findings and to identify future research needs (National Research Council, 2004).

"Science symposiums" may be an appropriate and important educational method to address this need. A symposium is a single or multiday session for information exchange, skills development, and/or the exploration of ideas or issues (US National Park Service, 2002). It is best described as an integrative educational method, "allowing the learner to clarify, discuss, and gain a greater understanding of the information; and integrate new information with existing information" (Guion, 2006). It also provides an opportunity or forum to share the latest work completed in an area of study.

The Loxahatchee River Watershed Science Symposium demonstrates how this kind of educational effort can be used to effectively meet the educational needs of natural-resource-related scientists, managers, and interested citizens. Spearheaded by the Florida Department of Environmental Protection in partnership with the Loxahatchee River Watershed Planning Committee, this effort pulled together local partners to organize a free two-day symposium consisting of over thirty oral

1. This document is FCS 9261, one of a series of the Department of Family, Youth and Community Sciences, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: January 2007. Please visit the EDIS website at http://edis.ifas.ufl.edu.
2. Alyssa Dodd, UF/IFAS Palm Beach County Extension; Jo Anne Jolley, Florida Center for Environmental Studies, Florida Atlantic University; and Mark A. Brennan, Assistant Professor, Department of Family, Youth and Community Sciences, University of Florida.

presentations and poster presentations. This publication summarizes the history of this symposium, its educational objectives, its implementation, its evaluation, and the lessons learned.

The Loxahatchee River Watershed Science Symposium

The First Symposium: Understanding the Environmental State of the Watershed

In 2000, the Florida Department of Environmental Protection (Southeast District) obtained grant funding from the Florida Fish and Wildlife Conservation Commission to host the first Loxahatchee River Watershed Science Symposium. The symposium, held February 21-22, 2001, aimed to increase awareness of the environmental state of the watershed based on scientific findings. Organizers anticipated that increased awareness would lead to an increased demand for resource protection and preservation of natural areas. Symposium goals included increasing public awareness of environmental issues affecting the watershed, increasing understanding that a healthy watershed strengthens the economy, increasing interest in environmental studies among high school students, improving communication within the research community, identifying outstanding research needs, and creating new research partnerships.

The two-day program included twenty-two oral presentations and twelve poster presentations. The audience consisted primarily of government agency scientists, natural resource managers, and students. Topics ranged from habitat protection and enhancement to stormwater management. To complement the symposium's formal presentations, various community action events were held, such as exotic plant species removal, planting of native vegetation, and demonstrations of restoration techniques. For example, thirty-eight local residents removed exotic plants and planted 270 trees at Riverbend Park in Jupiter, Florida.

The Second Symposium: Coordinating Research and Restoration Efforts

The first symposium brought attention to the environmental state of the watershed. Three years later, the Second Loxahatchee River Watershed Science Symposium, held February 24-25, 2004, showcased early attempts to coordinate research and restoration efforts. The symposium's goals included providing progress reports on restoration projects and strengthening communication and coordination within the research community. Symposium planners also focused on increasing overall participation and involving the local community.

The program included twenty-five oral presentations and twenty-one poster presentations. Many of these highlighted preliminary sampling, data gathering, and restoration planning efforts. Building on the success of the first symposium, the program attracted 179 participants, including scientists, natural resource managers, academics, community leaders, environmental interest groups, environmental, planning, and engineering consultants, and interested citizens. An evening community social event included a formal poster reception, an art exhibit featuring wildlife and natural resource subjects, and a book signing of a newly published history of the Loxahatchee River.

The Third Symposium: Presenting New Discoveries

Over 170 people participated in the third symposium, held April 26-27, 2006. The program included twenty-eight oral presentations and five poster presentations. Many presentations featured data and findings from the ongoing projects discussed during the first and second symposiums, demonstrating to participants, citizens, local officials, and legislators that publicly funded projects were delivering results. An evening community event included watershed-related exhibits and demonstrations at a local wildlife rehabilitation sanctuary. More details about the planning and implementation process for the Third Loxahatchee River Watershed Science Symposium are provided below.

Steps in the Science Symposium Planning Process

While each science symposium event will have unique educational and research objectives, topics, and implementation logistics, the following planning and implementation steps typically must be considered. For each step, we provide sample questions to help guide the planning process and include specific examples from the Third Loxahatchee River Watershed Science Symposium.

1. Go Ahead...Get Started!

Hosting a science symposium in a local community requires planning early and often! For example, planning for the Loxahatchee River Watershed Science Symposium begins one year in advance. Ensure a successful symposium by allowing adequate time to effectively plan and host the symposium.

Successful science symposiums addressing local natural resource issues typically require a community effort. Consider organizing a planning committee that includes diverse stakeholders, ranging from government agency representatives to local environmental interest groups. Each group will bring unique scientific and local knowledge, perspectives, understandings of research and educational needs, and resources to the table. Agencies and organizations represented at the Third Loxahatchee River Watershed Science Symposium Planning Committee included:

- The Florida Center for Environmental Studies
- The Florida Department of Environmental Protection
- The Friends of the Loxahatchee River
- The Jupiter Inlet District
- The Loxahatchee River District
- The Loxahatchee River Coalition
- Martin County
- Palm Beach County
- The South Florida Water Management District
- The Institute of Food and Agricultural Sciences (IFAS) at the University of Florida

In addition to the diversity of planning committee members, success depends on the dedication of individual members. At a minimum, eight to ten active members who are able to commit time to planning meetings and follow through on task assignments are needed. Remember, gaining planning support and involvement from stakeholders and government agencies can be as simple as informally stating your science symposium idea, or may require a more formal proposal or preliminary meeting with upper management to request "buy in" and funding commitments.

Once a symposium planning committee is assembled, it is important to identify a committee chair (or co-chairs). A leader is necessary to provide overall conference guidance, due to the likelihood of diverse interests among committee members and the numerous decisions and activities involved with planning and hosting the event. The committee chair must be able to commit the time and resources necessary to guide the group and manage the planning process. He or she serves as the main point of contact for questions, record-keeping, budget, report delivery, communication to the planning committee, and general organization duties. Additionally, while individual committee members and subcommittees will do much of the work, a committee chair is needed to make sure that tasks are completed on time.

Questions to Ask:

- Which groups or agencies must be involved to make the event a success?
- What is the minimum number of active, committed members needed?
- What is the best strategy for gaining government agency and stakeholder planning support and involvement?

- Which agency or environmental group has the resources to devote to chairing the committee and spurring the development of the symposium?

2. Define It!

As is the case with all educational programs, a successful science symposium requires clear goals and a well-defined audience. Often this is one of the hardest parts of the planning process. There are many audiences that may be interested, but with limited time and resources, it is often unrealistic to attempt to reach all audiences or achieve all goals identified by the planning committee. While it may be difficult, the process of defining a target audience and developing specific goals will ensure that participants have realistic expectations and that goals are met.

Your event can seek to attract multiple audiences, but it is important to recognize that different audiences typically must be reached in different ways. For example, the Loxahatchee Symposium has always targeted scientists, natural resource managers, and stakeholder representatives, with the goal of bringing together researchers and restoration project managers to communicate and exchange information. Since this information is also of interest to environmentally aware citizens, the event is open to all. While presentations are delivered at a level appropriate for the scientific community, many can be understood by the general public.

Organizers have always included a community-oriented event to provide information to citizens who can't attend during the day and those who are interested in more general information on the status of the watershed. The first symposium organized more hands-on, participatory events, the second sought to attract those interested in the arts, and the third organized a more family-oriented event that combined exhibits and demonstrations on watershed wildlife and resources at a popular wildlife center.

Questions to Ask:

- What are the symposium's overarching goals and specific objectives?
- Who is the audience?
- What is the best format, time, and location to reach the primary target audience?
- If the goal is to attract multiple audiences, what changes to the symposium program (content, format, dates or locations, times) will be required to do so?

3. Time it Right

After the planning committee has reached consensus on the goals and target audience, the committee must decide on the length of the symposium. Can the goals be achieved in one day, or are multiple days needed? When deciding on a specific date or dates, be sure to consider not only the month, but also the individual day(s), major holidays and other events that are targeting a similar audience. It was found that Tuesday through Thursday was best for the Loxahatchee River Watershed Science Symposium's target audience.

Closely tied to setting the date is selecting a site. Site selection is another reason to begin planning well in advance. As soon as a tentative date is chosen, with perhaps one or two alternates, an appropriate and available venue must be identified. Many sites must be booked a year or more in advance. Depending on the format of your event, you may consider holding it at a hotel, conference center, local auditorium, community center, or school auditorium. The last two Loxahatchee Science Symposiums have been held at the Jupiter Community Center, which has a large meeting room with state-of-the-art audiovisual support and an adjoining commercial kitchen.

Once an appropriate date and venue are secured for the symposium, the planning committee must develop a work plan and timeline. It is easiest to work backwards from the event date, identifying key tasks and deadlines.

Questions to Ask:

- Which month and which day(s) of the week will work best for the target audience?
- What costs are included in room rental fees and what additional costs are required?

- Are there catering fees and is gratuity included?
- If using a local auditorium or community center, are rental chairs, tables, and audiovisual equipment needed?

4. Develop a Budget

Expenses can be covered by either cash support or in-kind services. Some agencies may be able to provide services more easily than cash support. For example, for the Loxahatchee River Watershed Science Symposium, one agency provided Web design and hosting, while another provided color printing services. These in-kind services reduced cash requirements. Government agencies and local organizations and businesses funded the Third Loxahatchee River Watershed Science Symposium, which cost approximately $15,000, including both in-kind and cash support.

Be sure to include all anticipated expenses when developing the budget. Major expenses include postage, printing, developing and maintaining a mailing database and Web site, registration, and developing conference proceedings. To reduce costs, ask planning committee members if their agency or organization can provide a bulk mail permit to reduce postage costs, and consider using black and white or one-color printing instead of color, which is more expensive. Mailing database development and maintenance, conference registration, graphic design work, and the creation of a book of abstracts are all labor-intensive tasks. If these services can't be provided in-kind, be sure labor estimates are sufficient.

Registration fees can be used to offset some expenses, but accepting checks and credit card payments involves more labor and financial record-keeping. Registration fees may also limit the number of attendees or the participation of certain audiences, such as local citizens. The Loxahatchee River Watershed Science Symposium does not charge registration fees. Instead it solicits cash sponsorships from various agencies and companies. A few agency sponsors are able to provide several thousand dollars in support, while private firms and environmental organizations provide support in the $200 to $500 range. All sponsors are recognized on the symposium Web site, on printed materials, and on posters at the event. Major sponsors are also provided with display space at the event.

A formal sponsor solicitation letter (including tiered sponsor benefits) should be developed. One person should be designated to coordinate external sponsor contributions. While various members of the planning committee can solicit sponsors, the coordinator should assure that potential sponsors are only contacted by one member, that initial contacts are followed up on if necessary, that funds are deposited and acknowledged, and that promised sponsor benefits and recognition are provided. Organizers should be aware that there may be limitations on the types of expenses some sponsors can support. For example, public funds from certain state agencies cannot be used to pay for food. One must be careful not to spend restricted funds on unallowable expenses.

Example Budget Items:

- Registration brochures
- Marketing flyers
- Sponsor posters and on-site signs
- Abstract books and participant lists
- Call for papers and reminder postcards
- Nametags
- CDs
- Display panels for posters
- Database management
- Graphic design
- IT support
- Speaker fees and travel
- Facility rental
- Lunch
- Evening community reception

- Breaks

Questions to Ask:

- Which expenses are required and which are optional?
- What in-kind services or cash can organizers commit?
- Will a registration fee be charged?
- Will sponsors be solicited, and what benefits will sponsors receive?
- Which group or agency will be responsible for depositing funds, paying expenses, and reporting requirements?

5. Develop a Program

It is suggested that the planning committee first decide how program presenters will be identified. Will speakers be invited based on recommendations from committee members or from a formal "Call for Papers"? The advantages of the first strategy include more control over program content, more control over presenter quality, and reduced costs (since presenters can be recruited in person or via e-mail or phone). The "Call for Papers" option requires more time and money, but has the advantage of capturing program presenters and content that may be overlooked.

The Third Loxahatchee River Watershed Science Symposium Planning Committee chose to conduct a "Call for Papers." A tri-fold brochure outlining the purpose of the symposium and topics of interest identified by the planning committee was sent to all previous speakers, as well as to scientists, researchers, and consulting firms working in the watershed. Oral and poster presentation proposals were submitted online via the symposium Web site.

Applicants provided a 250-word abstract and indicated if it was for an oral presentation or poster. The deadline for submissions was about twelve weeks from the date of the first "Call for Papers" announcement. Within two weeks of the submission deadline, the review committee selected the most relevant abstracts and used them to develop the final program. All submitters were notified via e-mail as to whether or not their proposal had been accepted. At that time they received specific instructions as to the length of their presentation, the date and time it was to be given, and when the CD of their PowerPoint materials was due (two weeks prior to the event).

In addition to session speakers, the committee identified two keynote speakers, one for each day of the symposium. One keynote speaker was from out of state, but had much experience with similar river systems, while the other was local and knowledgeable of early river protection initiatives. You may want to consider recruiting specific speakers if abstract submissions do not adequately cover the topics identified by planning committee members. Other important considerations for developing the program schedule include allowing adequate time for networking, breaks, lunch, and viewing of poster presentations.

Questions to Ask:

- Will the planning committee select speakers or conduct a call for papers?
- If you will be conducting a call for papers, is an adequate mailing list available?
- Will the program consist of a keynote speaker and oral presentations, or include panel discussions and other presentation formats?
- Who will collect abstracts and who will sit on the review committee?
- Who has the expertise to design the final program, symposium registration/announcement brochures, and abstract book (if desired)?
- How many oral and poster presentations are anticipated? (If presentations are twenty minutes long, plan on no more than twelve to fifteen per day.)

6. Confirm Speakers

Communicate clearly with presenters to ensure they understand planning committee expectations, deadlines, and what the facility has available on site. All presenters should be given the contact information for a planning committee member who

can answer questions. The Loxahatchee River Watershed Science Symposium notified all abstract submitters who were selected to present within two weeks. At that time, presenters were informed of their scheduled presentation times, the deadlines for confirming participation and delivering their final presentation electronically, the time allotted for their presentation, and the explicit instructions for submitting their PowerPoint presentations electronically.

It is recommended that the deadline for submitting final presentations be set two weeks in advance of the event. All presentations can then be loaded onto a laptop that will be used at the symposium, allowing the program to move forward without pausing for speakers to load their presentations on a computer. These two weeks also allow the planning committee time to follow up with any presenters who do not meet the deadline.

7. Promote It!

Explore various venues to promote and publicize the event. A master mailing database is invaluable, and the entire committee should help to develop, update, and expand it. However, finding more ways to publicize the event will help increase attendance. Additional methods used to promote the Loxahatchee River Watershed Science Symposium included:

- Flyers in libraries, parks and environmental sites
- Press releases and news articles, especially in the "local" section
- Flyers at events such as Earth Day and local environmental events
- Asking environmental organizations to distribute information to their membership via e-mail
- Making presentations at local meetings held by various community organizations
- Banners posted outside the symposium site
- Asking committee members to include information in staff newsletters or announcements
- Asking participating agencies and organizations to provide a link to the symposium Web site from their Web sites.

Don't forget to make the "Save the Date" announcement early. If the budget allows, send another announcement with more specific information several months later that includes the address of the symposium Web site with up-to-date information. The final announcement and registration brochure should go out at least three months prior to the event. It should contain a brief description of the symposium, the final program with all topics and speakers, directions to the site, and instructions for online registration. A phone number contact for those who cannot register online must be provided.

Even if there is no registration fee, pre-registration is helpful because it gives some idea of attendance numbers. Online registration promotes attendance and makes it easier to collect the necessary information from registrants. The online form should require all necessary information to be entered before the registration is accepted, and should either generate an automatic acknowledgement or notify the registrar to send an acknowledgement to each registrant. You can use these registrations to enlarge your master mailing database for future events. Be sure to set a registration deadline so an accurate count for seating and meal functions or breaks can be obtained. Once that deadline has passed, the Web site should state that further registrations can be made onsite on the day of the event.

8. The Big Day

If responsibilities include setting up the symposium site, consider setting up the room a day before the event. At the same time, set up poster display boards and do a final test of all audiovisual equipment. (A detailed run-through of all AV set-ups, including sound testing, should be done several days prior to the event.) If possible, provide time for posters and exhibits to be set up prior to the start of the symposium.

Allow at least thirty minutes for registration check-in. Be sure to have enough help at the registration desk to get everyone checked in quickly.

With two hundred attendees expected at the Loxahatchee Watershed Science Symposium, we provided six registrars for the first hour of check-in. It was helpful to have multiple copies of the preregistrants list in order to quickly check off names. The registration table should be staffed at all times to assist late arrivals and to provide general information to participants. In addition, someone should be available to carry messages to speakers and moderators.

It is recommended that one person be responsible for operating the audiovisual equipment and the computer, with all presentations preloaded. This technician changes presentations between speakers to avoid delays in the program.

An overall moderator is necessary to keep the program running smoothly and on schedule. This moderator should be chosen carefully. He or she must be very familiar with the program and schedule, and will need to introduce speakers and session moderators, keep everything on time and graciously cut off speakers who are exceeding their allotted time, provide instructions regarding lunch and breaks, and call attendees back into the meeting room when the break is over.

Be sure to have sufficient help available at the end of the event to break down and clean up the meeting room, if that is required. This includes assigning responsibilities for returning any borrowed equipment.

Don't forget to thank all the people who assisted with the development of the symposium and helped make it a success.

9. Evaluate

Evaluation surveys are important because they help to determine what worked and what did not, enabling changes that can improve the next event. Evaluations should include assessments of logistics, program content, and advertising and provide an opportunity to make suggestions and other comments.

Over 170 people attended the free two-day Loxahatchee River Watershed Science Symposium held April 26-27, 2006 in Jupiter, Florida. Evaluation results collected from fifty-three participants indicted that the symposium was rated above average (n = 35) in terms of meeting expectations for learning and that almost all participants (n = 50) indicated that they would attend a future symposium.

10. Celebrate Success

The planning committee should meet several weeks after the event to review the event, the final attendance figures, and the evaluation results, and to discuss lessons learned. The meeting should be held after all expenses have been paid so the final budget can be reviewed. The meeting also gives the group an opportunity to celebrate their success and determine if the symposium will be repeated at a later date.

Our planning committee has already committed to holding the Fourth Loxahatchee Watershed Science Symposium in 2008. For the next symposium we plan to:

- Include one keynote speaker for each day, as these speakers were well received in 2006;
- Have a separate moderator for each topical session to synthesize presentations and show how they relate to watershed management;
- Have a panel discussion on the status of the current watershed management plan;
- Send out an e-mail reminder to all registrants two weeks prior to the event, asking them to notify the registrar if they find they can no longer attend;
- Have one person coordinate sponsor solicitations.

Conclusion

While science symposiums typically require a lengthy planning process, significant financial and human resources, and strong leadership, the process and method presented here have been found to be effective at meeting the educational needs of scientists, natural resource managers, and citizens. Science symposiums provide a forum for connecting

participants to the latest natural resource management-related research and sharing timely information on restoration efforts.

References

US National Park Service. 2002. *Conferences and symposiums*. Rivers, Trails and Conservation Assistance Program. http://www.nps.gov/phso/rtcatoolbox/events_conferences.htm (accessed January 17, 2007).

Guion, L.A. 2006. *Educational methods for extension programs.* FCS6013. Gainesville, FL: Family, Youth and Community Sciences Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. http://edis.ifas.ufl.edu/FY399 (accessed January 17, 2007).

Panel on Adaptive Management for Resource Stewardship, Committee to Assess the US Army Corps of Engineers Methods of Analysis and Peer Review for Water Resources Project Planning, National Research Council. 2004. *Adaptive management for water resources project planning*. Washington, DC: National Academies Press.

Acknowledgements

We would like to thank Dianne Hughes of the Florida Department of Environmental Protection for making the Loxahatchee River Watershed Science Symposiums successful and for reviewing this publication.