

As previously printed in *Wetland News*, June-July 2007, Association of State Wetland Managers, Inc.

## State Wetland Delineator Certification Programs

by Leah Stetson, ASWM



Bunchberry  
*Jeanne Christie photo*

Wetland delineations are generally required for dredge and fill permits. An inaccurate delineation can delay a permit application. Some states have encountered problems with poor delineations. The delays occur because the staff have to 1) send a letter of deficiency, 2) check the wetland boundaries, 3) ask for the delineation to be conducted by a certified delineator, or some combination. When the wetland boundaries are identified by a certified delineator, the regulatory staff can be reasonably assured that the delineation is correct.

### Similar certification programs

Although there are numerous certification programs offered in a wide range of professions on a state and national scale, three are worth mentioning here because they are analogous with state wetland delineator certificate programs. One program is very well known among wetland scientists, another, floodplain managers. The third is a brief, historical account of the Corps' program, which is not currently active.

The Society of Wetland Scientists established a program that awards certificates to qualified Professional Wetland Scientists (P.W.S.) and Wetland Professionals in Training (WPIT) in 1994 with a grandfathering period that ended July 1995. Wetland delineation training and/or experience is not specifically required for this program's certificate. For a link to the requirements of this program, visit: <http://www.wetlandcert.org/requirements.html>

The Association of State Floodplain Managers (ASFPM), established a program to certify floodplain managers working in local, state, federal and private organizations. The goal of the certification program is to help reduce the nation's flood losses and to protect and enhance the natural resources and functions of its floodplains by improving the knowledge and abilities of floodplain managers in the U.S.. Although ASFPM has made this program voluntary, approximately 4,000 professionals have become *Certified Floodplain Managers (CFMs)*. According to its website, there is a national level certificate offered as well as state-level certification in states where it is available: "This certification is awarded directly by a state, ASFPM chapter, state agency, or state or regional association that has been accredited by the ASFPM Certification Board of Regents (CBOR) in accordance with the CFM Program Charter. This certification, although issued by the appropriate state or other entity, is entitled to include a statement that it is, 'ASFPM accredited.' A person awarded ASFPM accredited certification under a state program might not be recognized as an ASFPM accredited CFM in other states." The issue of reciprocity also occurs between state certification programs for wetland delineators. For more on ASFPM's certification program, go to: <http://www.floods.org/Certification/certprog.asp>

The U.S. Army Corps of Engineers (Corps) set up a pilot program in three districts in the mid 1990s. Pilot testing and certification of delineators was implemented in the Seattle, Washington; Jacksonville, Florida; and Baltimore, Maryland Corps Districts. Several colleges and universities, such as Johns Hopkins, advertised their wetland science courses with the added benefit that these classes prepared students for the written exam portion of the Corps' certification.

Wetland delineators earned their certificate after passing a two-part regional exam administered by the Corps District. The material covered in the exam was based on the 1987 Corps delineation manual and field application of delineation criteria; the three areas of the exam were soils, vegetation and hydrology. The field test included accurate identification and delineation of wetlands according to guidelines in the 1987 manual. For a link to the proposed rulemaking from 1995 for this now-expired program, go to: <http://www.wetlands.com/coe/coewdcp1.htm> For more information, visit the Corps Wetland Regulatory Program website: <http://www.usace.army.mil/cw/cecwo/reg/wetcert.htm>

The Corps' certification program for wetland delineators did not advance to the national level and stopped issuing professional certificates at some point in the mid-to-late 1990s. The Corps is currently talking with Society of Wetland Scientists about a coordinated certification process so that the Corps certification program might be revitalized in the future. Certification will require a working knowledge of the appropriate approved regional supplement(s) to the delineation manual as they are finalized.

Partly because the Corps' national certification program did not progress beyond the pilot phase and in response to a growing need for correct wetland delineations, a few state wetland agencies decided to pursue the necessary legislation to start in-state certification or assurance programs. Four states currently offer certificates for wetland delineators who have met specific education and experience requirements. In addition to these four states (NH, VA, WI and MN), several other states are looking into starting similar certification programs for wetland delineators.

### **How did these programs start?**

Out of the four states with active certification programs, Virginia's is the oldest. It took the stakeholders ten years to establish the program, initially because they needed to convince the state to start a new certification program, when there were already similar programs for other professions, such as soil scientists. The Virginia Association of Professional Soil Scientists had difficulty funding its certification program. When it merged with the new certification program for wetland delineators, the two groups combined the boards and income. "It is a marriage that so far has worked," explained Robin Bedenbaugh of the Virginia Association of Wetland Professionals (VAWP), an independent nonprofit organization comprised of consultants, regulators, educators and other professionals. VAWP took the initiative to push for the certification program. "The catalyst for getting the program started involved a number of cases in the 1990s [in which] nonqualified people did some bad delineations for permits," said Bedenbaugh. When the Corps' national wetland delineator certification program did not advance, there was a need for a certificate program at the state level in Virginia.

New Hampshire modeled its certification program for wetland scientists after the existing *Certified Soil Scientist* program, which is administered by the state's Joint Board of Licensing and Certification. In the beginning, it instituted a grandfathering period that lasted one year. The Joint Board acknowledged approximately 200 people as *Certified Wetland Scientists* during the grandfathering period, although many of those certifications have lapsed.



Jeanne Christie photo

Wisconsin's Wetland Delineation Professional Assurance Initiative is a pilot program of the Department of Natural Resources (DNR). The state made regulatory changes to the requirements for waterway permits in 2004, which engendered a need to streamline the wetland program. Each time the regulatory staff reviewed a delineation, consultants and municipalities requested a concurrence letter. Staff obliged by writing these letters, which had increased to over 450 per year, free of charge in the state's southern half alone. The state wetland agency began to pilot this program in 2006 with the goal of enhancing wetland protection as well as the certainty of wetland boundaries for project planning and to save time in state review of those boundaries. By donning the term, "assurance" instead of "certification," Pam Biersach, Regional Aquatic Habitat Expert with the DNR, says, "this wetland initiative is intended to work through any issues during a pilot phase prior to pursuing a legislative process for a formal certification program."

Turtles, neck-in-neck at a tidally influenced wetland in Williamsburg, VA, June 2007.

Minnesota's certification program is fairly new and may be considered a grassroots effort. Builders and developers in the private sector called for a certification program to improve the quality of wetland delineations for permitting purposes. The concept for a program was born in 2001. The legislature mandated that the Board of Water and Soil Resources (BWSR) conduct a study, which was done in partnership with Minnesota Association of Professional Soil Scientists (MAPSS), the Minnesota Wetland Professionals Association (WPA) and representatives from local government (LGUs). According to Greg Larson, a professional soil scientist with BWSR, all the stakeholders agreed that state funding would be necessary for an effective certification program. But state funding has not been provided. Start-up funds were provided instead by the University of Minnesota in 2005. Since its inception the funding to pay staff has come from the course fees for training, one of the requirements for this program. In addition to the Board (BWSR), other interested parties have contributed significant time—including the Saint Paul District of the Corps, U.S. Department of Agriculture Natural Resource Conservation Service and several other state and federal agencies, added Larson. Under the Minnesota program, no delineators were "grandfathered" and no one complained. Currently

Minnesota's wetland delineator certification program is in its second summer of training. Minnesota's program has certified 143 delineators between 2005-2007. They added a second level certificate for, "Wetland Delineator in Training," in 2006, and 22 individuals have earned that. According to one of the program coordinators, Rachel Roszina, the strength of the program lies in the partnership between the university and the state water board (BWSR). Because of that partnership, the program has a chance to grow.

Unlike Minnesota and Wisconsin, which have not "grandfathered" any delineators, Virginia and New Hampshire certified a percentage of wetland delineators at the onset of their certification programs. These included professionals who demonstrated substantial prior experience and were thus "grandfathered." As part of quality control, in at least one state's case, the future delineations of those who are certified are randomly selected and evaluated for accuracy, regardless of whether certification was obtained under a grandfathering provision. When program staff track and evaluate future delineations, they can be sure that the work of all certified wetland delineators meets the standards set by the program.

### **What is required of wetland delineators to be certified?**

In different parts of the country, different levels of expertise are necessary to delineate wetlands. This is because of the great diversity of wetland types and the complexity of some wetlands—some are considered "problem wetlands" because of drought and/or disturbed or altered systems, where upland plants now grow interspersed with wetland plants. There are also times of the year when wetlands are harder to delineate, e.g. vernal pool sites under snow in winter or dried stream beds in late summer.

Minnesota's certification program implements the Wetland Conservation Act (WCA) and other wetland regulations by formally recognizing individuals uniquely qualified to perform wetland delineations. In order to become certified in Minnesota, a wetland delineator must meet a variety of requirements in the areas of education and experience. Applicants must also provide references and undergo related training such as a 4-5 day wetland course on the 1987 Corps manual and other technical guidelines. A combination of education and experience is required for the *Certified Wetland Delineator* level; no experience is required for the junior-level, *Wetland Delineator In Training*, however, a four year college degree (any major) will meet at least some of the requirements for both levels. A written exam is required for both certificate levels but there is no field component of the testing. Applicants who carry the Society of Wetland Scientists' PWS certification typically do quite well on the certification exam in Minnesota. Continuing education is required after certification; this is defined as "pertinent seminars or training sessions totaling 8 or more hours per year."

No written or field exam is required for the Wisconsin Wetland Delineation Professional Assurance Initiative. However, while some sort of field evaluation is still being considered, there are several other requirements to qualify for assurance. Criteria for individuals, not firms, having work assured includes education, training and work experience relevant to wetland delineation. Candidates must also submit six wetland delineations that were done while the individual was the primary field observer and report writer, all to have been completed within the past two years. The candidate should show that s/he can accurately assess the presence or absence of the three wetland parameters – hydric soils, hydrophytic vegetation and wetland hydrology. After a

wetland delineator has received notice that his/her work is professionally assured by the Wetland Delineation Review Panel, a few things are required to maintain this assurance. These include continuing education (wetland-related courses & training) and providing copies of future delineations to the panel, who will randomly select a few of the reports to evaluate on an annual basis.

New Hampshire's *Certified Wetland Scientists* must have at least 24 credit hours of course work in the environmental sciences, such as botany, forestry, soil science, wetland science, geology. Although a college degree is not required, relevant work experience is necessary. Additionally, a minimum of one year of actual, wetland field delineation experience and six restoration plans, is required of applicants. A key distinction is that applicants must provide the names of at least two certified wetland delineators, who held supervisory roles in the applicant's apprenticeship. The testing for this certification is rigorous and involves both written and field exams. Test administrators dig test pits and give applicants data sheets. Applicants then make observations on the data sheets in accordance with the 1987 Corps Delineation Manual and the "Field Indicators for Identifying Hydric Soils in New England" manual.

Similarly Virginia's certification program requires delineators to be supervised by a certified or professional wetland delineator, although this requirement is currently waived until 2010. In addition, applicants must complete a formal 38-hour delineation course, show proof of four years experience delineating wetlands and obtaining jurisdictional confirmations, as well as meet specific educational requirements before taking the written exam. A panel of over 20 wetland delineation subject matter experts (SME) from regulatory agencies, universities, state agencies and consultancies convened to write the test questions. Among the panel of experts, ASWM's Board Secretary/Treasurer, Dave Davis and former board member, Ellen Gilinsky, Ph.D., both with Virginia Department of Environmental Quality, contributed material in three question areas—hydrology, soil science and plants. Then a testing agency designed the actual test. Although there is no field component, 40% of the test involves synthesizing the three question areas into scenario-based interpretation. It had been determined that field exams would be too expensive and too impractical. The SME panel sought more than just minimal competency, explained Bedenbaugh, so the requirements for certification were set very stringently. Initially the committee decided that the delineators needed supervisory oversight by a certified delineator, however it is now recognized that this requirement may have unexpected and unintended consequences. Requiring four years of supervision by a certified delineator has the potential to exclude two groups of fully qualified delineators—those who work for small companies in which they are the only wetland staff and those who move from another state that does not have a certification program. This requirement is currently under review and could be removed in the future. Overall, the certification program is voluntary. Sixty-six wetland delineators have been certified. Out of those, about a dozen obtained the certification by meeting the education and experience requirements and taking the written exam. The remaining 50+/- delineators obtained certification through the grandfathering provisions, which allowed for certification based on a minimum of 10 years of experience and did not require candidates to take the exam. Those grandfathering provisions have now expired and all current applicants must meet the experience requirements and take the exam. For a direct link to the regulations concerning this program, visit: <http://leg1.state.va.us/cgi-bin/legp504.exe?021+ful+SB61> and [http://www.dpor.virginia.gov/dporweb/wet\\_reg.pdf](http://www.dpor.virginia.gov/dporweb/wet_reg.pdf)

Most of the exams for the state-level certification of delineators are based on the 1987 Corps Manual. The Corps is currently developing regional supplements to improve delineation criteria by ecoregion. Most of the supplements are under development and have not yet been finalized. As states think about how to develop and revise certification for wetland delineators and scientists, updating criteria to include the regional supplemental information will be important. For more information on regional supplements to the Corps 1987 Wetland Delineation Manual, visit: [http://www.aswm.org/member/wetlandnews/status\\_0207.pdf](http://www.aswm.org/member/wetlandnews/status_0207.pdf)

Minnesota's wetland delineation training program has benefited from a strong relationship with Saint Paul District of the Corps, which has supported the certification program. Several Corps staff members have assisted with training and offered advice on the testing, Larson explained.

Reciprocity is an issue that each state certification program must decide on individually. According to Louise Lavertu, Executive Director for the New Hampshire Joint Board of Licensure and Certification, "individuals licensed or certified in other states cannot use that certification in New Hampshire. They must apply for NH certification before they can practice in New Hampshire. Once that candidate meets all of [New Hampshire's] requirements they must take and pass both the written and field exam to become certified." By contrast the certification program in Virginia does allow for reciprocity between adjacent states. If a certified wetland delineator moves from West Virginia, for example, to Virginia, s/he could be recognized as certified without having to apply and take the exam. Regardless of whether an adjacent state certifies its delineators, wetland delineation experience gained in that state is considered to be reciprocal and can be applied to meet the requirements for certification in Virginia. In conjunction with this, 13 of the 66 currently Virginia certified wetland delineators, neither live in Virginia nor in adjacent states. Some of these delineators obtained their certification during the grandfathering period and submitted their applications from other states—as far away as Oregon, while others in this group have moved out of state after being certified.

### **How are these programs evaluated?**

Minnesota's program is evaluated by the University of Minnesota's Department of Soil, Water and the Climate & Water Resources Center, as well as the state's BWSR. Professor Jay Bell is co-director of the delineator certification program with Greg Larson of the Board. There are also representatives from local government, Minnesota Association of Professional Soil Scientists and WPA, who serve as consultants to the University and Board (BWSR).

The Wisconsin DNR's pilot program will be evaluated over the next several years to determine whether it meets the goals of protecting wetlands, increasing efficiency and building certainty in land development decisions. The Wisconsin Builders Association-Development Council, Wisconsin Wetlands Association, 1000 Friends of Wisconsin, American Transmission Company and the Wisconsin DNR all helped to develop this program and will each take a role in its evaluation.

New Hampshire's *Certified Wetland Scientist* program is administered and evaluated by the state's Joint Board of Licensing and Certification.

The Department of Professional and Occupational Regulation (DPOR) has the sole responsibility for Virginia’s certification program. The Board for Professional Soil Scientists and Wetland Professionals serve as advisors. In addition, the Virginia Association of Wetland Professionals (VAWP) continues to track the program’s progress and collaborates with the board and DPOR to improve on it wherever possible.

### **How do these programs affect the permit issuance process?**

Among the benefits of certifying or assuring wetland delineators’ work is its effect on the permit issuance process. In the case of the older, more established programs, it moves a permit application along more quickly than if a regulatory agency has to visit the site to check the accuracy of a potentially bad delineation. The state wetland delineator certification programs strive toward improving the accuracy of wetland delineations not only to protect wetlands but also to make the permit process more efficient.



*Jeanne Christie photo*

Minnesota does not require wetland delineations to be done by a certified delineator. Nonetheless some LGUs do require one for wetland permits. This trend has become popular because delineations done by certified professionals speed up the permit application process.

Collis Adams, Wetlands Bureau Administrator at the NH Department of Environmental Services, said that this process has proved to be a time saver for both the department and applicants as it avoids the need for department personnel to inspect each property to confirm wetland delineations done by those who are not experienced in the science. Prior to this certification process, Adams explained, “there were too many questions relative to the location of jurisdictional wetlands —now the department only becomes involved where there is a dispute over the delineation.”

Cherie Wieloch, Wetland Team Leader for Wisconsin DNR, added, “Since this is still a fairly new program, I think we will see a bigger impact as more consultants receive professional assurance.” The goal, of course, is to make the permit process more efficient by assuring the delineation work. If someone is “professionally assured,” Wieloch explained, the delineation receives a desktop review and if it looks reasonable, the permit application proceeds through the process. By contrast, delineations that are not done by a person who is professionally assured may require a site visit to confirm accuracy.

## Four State Wetland Professional Certification Programs at a Glance

State Wetland Delineator Certification Program	Funding or Legislative Process?	Is there an exam? Field test?	# of delineators in program
New Hampshire Certified Wetland Scientist program	Added onto existing soil scientists' certification program	Yes, w/ field test	209
Virginia Delineator Certification Program	10 year process, combined board & income with VA Assoc. of Soil Scientists	Yes, multi-choice w/ scenario-based synthesis (no field test)	66
Wisconsin Wetland Delineation Professional Assurance Initiative	No legislation necessary- Call it "assurance" instead of "certification"	No test yet but they are looking into developing an exam.	6
Minnesota Delineator Certification Program	Legislature: BWSR conducted study; no state funding came. Initial funding came from Univ. of MN	Yes, multi-choice test. No field test.	143*

\*Number is based on the current count of professional certified or assured wetland delineators or wetland scientists in these programs as of June 2007. These numbers do not include any participants of the program who have been certified as a "wetland professional in training" or "wetland delineator in training."

ASWM has developed a checklist of things to consider if and when a state decides to adopt a new certification program for wetland delineators. This list can be found at: [http://www.aswm.org/member/wetlandnews/june07/checklist\\_0607.htm](http://www.aswm.org/member/wetlandnews/june07/checklist_0607.htm)

For more information on the four state certification programs discussed in this article, visit the following links:

Wisconsin's Wetland Delineation Professional Assurance Program

<http://dnr.wi.gov/org/water/fhp/wetlands/assurance.shtml#s1>

WI's program requirements can be found at:

[http://dnr.wi.gov/org/water/fhp/wetlands/documents/delineation\\_assurance.pdf](http://dnr.wi.gov/org/water/fhp/wetlands/documents/delineation_assurance.pdf)

Virginia's program regulatory information can be found at:

<http://www.townhall.virginia.gov/chapter/ViewChapter.cfm?Vac=116&Chapter=30>

VA's Dept. of Professional & Occupational Regulation (for wetland delineators)

[http://www.dpor.virginia.gov/dporweb/ssc\\_main.cfm](http://www.dpor.virginia.gov/dporweb/ssc_main.cfm)

Candidate Information on Exam and Qualifications for Certificate

<http://www.dpor.virginia.gov/dporweb/Wetlands%20CIB.pdf>

Application

<http://www.dpor.virginia.gov/dporweb/forms/wet/3402cert.pdf>

New Hampshire's program: <http://www.nh.gov/jtboard/home.htm>

<http://www.nh.gov/jtboard/wslst.htm> (list of wetland scientists)

<http://www.nh.gov/jtboard/nsceu.htm> (continuing education)

<http://www.nh.gov/jtboard/natscien.pdf> (application for a wetland scientist)

<http://www.nh.gov/jtboard/wetland.pdf> (app for a wetland scientist apprentice)

Minnesota Wetland Delineator Certification Program: <http://www.mnwetlands.umn.edu/cert/>

Acknowledgements. ASWM would like to thank the following people for their time and contributions to this newsletter: R. Harold Jones, SWSPCP Certification Review Panel; Collis Adams, New Hampshire DES Wetlands Bureau; Robin Bedenbaugh, Virginia Association of Wetland Scientists; Pamela Biersach-Pawloski, Wisconsin DNR; Rachel Roszina, University of Minnesota; Greg Larson, Board of Water & Soil Resources, University of Minnesota; Cherie Wieloch, Wisconsin DNR; Katherine Trott, U.S. Army Corps of Engineers; Karen Kochenbach, U.S. Army Corps of Engineers; Louise Lavertu, NH Joint Board of Licensure and Certification; Bill Sipple, W. S. Sipple Wetland & Environmental Training & Consulting; and Ellen Gilinsky, Virginia DEQ.