

December 12, 2007

Mr. Jay Bestgen  
MoDOT Design Division  
1320 Creek Trail Drive  
Jefferson City, Missouri 65109

**2008 AWARDS FOR EXCELLENCE  
IN PRACTICAL DESIGN**

Dear Mr. Bestgen:

Shannon & Wilson is pleased to submit our *Formations* Wetland Software in the MoDOT 2008 Awards for Excellence in Practical Design competition.

*Formations* Wetland Software was first used on the Improve I-70 project. Shannon & Wilson participated in two sections of the study, SIU 6 and SIU 7. On SIU 6, between Kingdom City and Montgomery City, Shannon & Wilson identified and evaluated the wetlands in the corridor and potential impacts to wetlands. On SIU 7, from Montgomery City to U.S. Highway 40 in Wentzville, Shannon & Wilson identified and evaluated impacts to wetlands, threatened and endangered species, natural resources, well head protection areas, water quality, floodplains, parks and trails, and visual resources. Between the two SIUs, Shannon & Wilson delineated 95 distinct wetlands.

All delineation data was entered into *Formations* Wetland Software via a Palm OS PDA in the field. Indicator status of plants was chosen from the software's drop-down menus. Upon return to the office, there was no need for manual transfer of data or correlation to the USFWS "National List of Plant Species that Occur in Wetlands: 1988 National Summary." The software printed high quality forms ready for submittal. We estimate that this process alone saved one hour of labor for each of the 95 wetlands delineated.

Because all data for the Improve I-70 project was analyzed and presented using ArcView, we estimate that an additional two hours per wetland were saved by the ability of the *Formations* Wetland Software to export data points directly to ArcView.

On the Improve I-70 projects, MoDOT realized a savings of \$18,810 by Shannon & Wilson's use of *Formations* Wetland Software – a 10.5% savings on the wetlands portion of the project.

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Shannon & Wilson now sells *Formations* Wetland Software commercially. Other consultants across the state of Missouri are using *Formations* on MoDOT projects, continuing and increasing the cost savings. This is a process that will provide benefits to MoDOT projects beyond the Improve I-70 project.

Very truly yours,  
SHANNON & WILSON, INC.

Murray L. Meierhoff, CHMM  
Vice President

MLM/pag

Enclosures

**NON-PROJECT PRACTICE  
2008 APPLICATION FORM**  
(required for each entry)

**Process or Product** Formations Wetland Delineation Software

**Description** (brief description of process or product before and after analysis) Formation Wetland Software was designed to save time and money in the completion of Section 404 permit applications. It is a practical tool that makes field delineation easier, faster and more accurate while automatically producing high quality, professional permit applications. Formation Wetland Software can be used to complete the delineation process in two easy steps. 1) In the field, vegetation, hydrology, and soils data is entered directly into a Palm OS PDA using prompts, drops boxes, and other user-friendly tools. 2) Upon return to the office, information can be hot-synced from the PDA to a PC and professional delineation forms automatically printed ready for submittal. The data entry application includes: choices for common or scientific names of all plants listed on the USFWS "National List of Plant Species that Occur in Wetlands: 1988 National Summary;" the flexibility to record unknown plants for later identification; the ability to link a selected plant to its indicator status in the USFWS list; and the capability to store hundreds of data points on a PDA before it must be downloaded to a PC.

**Team Leader** Russell W. Schwab, R.G., Associate, Shannon & Wilson, Inc.

**Other Key personnel** (limit of 9)

James L. Dutt, R.G., Environmental Scientist

**Overall Savings:**

**Cost of using process or product before value analysis** \$171,829

**Explanation** Without Formations Wetland software, delineation data would have had to have been written by hand, indicator status would have to be cross-referenced manually, and data entered onto submittal forms. Also, duplicate entry of data into ArcView would have been required.

**Cost of using process or product after value analysis** \$153,019

**Explanation** Formations Wetland software saved approximately 3 hours per wetland delineation (there were a total of 95 delineations along SIU 6 and SIU 7). The software eliminated time and effort during the delineation process, and also allowed for quick transfer to a GIS platform, resulting in a 10.5% project cost savings.

**What would make this entry stand out from the rest of the entries when considering MoDOT's practical design philosophy?** (In layman's terms – 100 words or fewer) The Formations Wetland software is an innovative product that saved time and money on the I-70 project, while increasing accuracy and reliability of information. This software is available commercially. It has been purchased by, and is being used by, several other consultants across Missouri on MoDOT projects. Therefore, the cost savings are not limited to those projects on which Shannon & Wilson participates. We anticipate that Formations Wetland software will continue to provide cost savings on future MoDOT projects.

**Send entries to:** MoDOT Design Division, ATTN: Jay Bestgen  
1320 Creek Trail Dr., Jefferson City, Missouri 65109

**ALL ENTRIES MUST BE RECEIVED NO LATER THAN CLOSE OF BUSINESS ON DECEMBER 15, 2007.**

# "The delineation process in 2 steps"

Use *Formation Wetland Edition* to complete the delineation process in two easy steps.

1. In the field, enter vegetation, hydrology, and soils data directly into a Palm OS® PDA using our prompts, drop boxes, and other user-friendly tools.
2. Return to the office and hot-sync the PDA to your PC. Then automatically print professional delineation forms for submittal to your client or the Corps of Engineers.

## The data entry process includes:

-  Choices for common or scientific names of all plants listed on the USFWS "National List of Plant Species that Occur in Wetlands: 1988 National Summary."
-  The flexibility to record "unknown" plants for later identification.
-  The ability to link a selected plant to its indicator status in the USFWS list, eliminating this step when you return to the office.
-  The capability to store hundreds of data points on your PDA before downloading to your PC.

Use with or without a PDA!

**Don't use or want to use a PDA? That's OK!** Transfer your handwritten field notes to your office PC using *Formation Wetland Edition* to generate a highly professional submittal package.

No more mud-streaks, scribbles, erasures, or incorrectly transcribed indicator statuses.

The benefits are substantial.

*You can save more than 3 times the cost of the software on your first project by:*

**Saving Time:** Directly access common and scientific names, automatically select the indicator status, and seamlessly print quality reports.

**Increasing Accuracy:** Eliminate classification, indicator status, and spelling errors.

**Enhancing Customer Satisfaction:** Decrease permit application schedules and enhance permit quality.

## Free Demonstration

Visit [www.sw-formations.com](http://www.sw-formations.com) for more information, to take advantage of your free demo, or to purchase a copy today!

### PDA Requirements:

Palm OS® v 3.5 or later

1.5 MB memory available for application and regional plant list

### PC Requirements:

**Computer/Processor:** Intel Pentium class, 90 MHz or higher

### Operating System:

Microsoft Windows 2000

Microsoft Windows XP

Microsoft Windows NT 4.0 (Service Pack 6a)

Windows Millennium Edition

(Windows Me)

Windows 98

### Minimum Ram Requirements:

32 MB (96 MB or higher recommended)

### Hard Disk:

To install: 180 MB

To run: 80 MB

### Display:

Video: 800 x 600, 256 colors

### Input Device:

Microsoft mouse or compatible pointing device

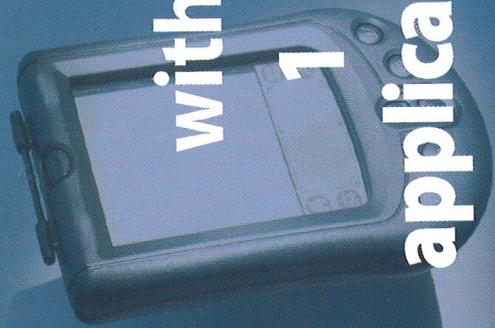
### Other:

(System components available on CD or via Download)

Microsoft .NET Framework

Microsoft Internet Explorer 5.01 or later

Microsoft Data Access Components 2.6 (Microsoft Data Access Components 2.7 is recommended)



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1  
application

## introducing

Formation software  
Wetland Edition

**The delineation process just got easier!**

Formation Wetland Edition was **designed by professional delineators** to save you time and money in the completion of Section 404 permit applications.

It's a **practical tool** that makes **field delineation easier, faster, and more accurate**, while automatically producing high quality, professional permit applications.

And, you don't have to be a computer specialist to use it! Formation Wetland Edition is **designed to work with commonly available software** on your office PC and handheld PDA.

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