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FB Environmental E-NEWS

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FBE water quality experts and ECS expert dog handlers can offer:

- Presence/absence determinations for human sources of bacteria
- Effective and low-cost IDDE for municipalities
- Public awareness of surface water issues

THE NOSE KNOWS: FBE & ENVIRONMENTAL CANINE SERVICE TO DEVELOP PARTNERSHIP

FB Environmental was pleased to host Sable and Logan, the dogs from Environmental Canine Services (ECS) of Vermontville, MI for a second annual week of bacteria source tracking using canine detection in Seacoast NH and southern Maine. **Plans are underway for a Northeast office of ECS to open soon.** Founders Scott and Karen Reynolds are moving to northern New England and will head up the northeast branch of ECS. FBE and ECS will be working together to address pathogen issues in our surface waters. Canine detection is an innovative, cost-effective method to identify human sources of bacteria in waterbodies. In 2013, FBE and ECS worked with eight towns to develop comprehensive bacteria source tracking plans to address known or potential bacteria issues to their beaches and waterways. The dogs are trained to alert to the presence of human wastewater by performing a signal – Sable barks and Logan sits. Conventional bacteria tests were conducted alongside the dogs to determine the magnitude of pollution and the potential for other sources. Outreach events were held highlighting the work of the dogs and the town's efforts to protect water quality.

FEATURED PROJECT- DOLE BROOK RESTORATION

Portland, ME - The City of Portland, FB Environmental and Woodard & Curran worked together to implement a buffer planting on Dole Brook, an impaired stream located at the Riverside Municipal Golf Course in Portland, Maine. Over 400 shrubs and flowering perennials were planted in the portion of Dole Brook that flows through the course's 17th fairway. A total of 1,000 feet of riparian habitat was restored. An existing golf cart path, which ran adjacent to the banks of Dole Brook, was removed and re-vegetated. As a result of the July 2013 planting, a 25-foot no-mow zone now exists around this portion of Dole Brook. The thriving buffer provides multiple benefits to the water quality of the brook, including reduced sediment and nutrient inputs from adjacent cart paths and fairways, stabilized stream banks, and critical habitat and shade for terrestrial and aquatic wildlife species.



Dole Brook before (top) and after (bottom) buffer enhancement.

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FBE WELCOMES NEW STAFF



Jeremy Deeds
Aquatic Ecologist



Kevin Ryan
Wetland Scientist



Logan Cline
Project Scientist

Aquatic Ecologist, **Jeremy Deeds** joined FBE's Portland office in September, bringing over 10 years of professional experience in project management and freshwater ecological monitoring and assessment in streams, lakes and wetlands. He received a B.A. in Environmental Science from the University of Maine at Farmington and an M.S. in Aquatic Ecology from Kent State University. He has worked with a variety of non-profit, state government and research institutions. Most recently, he worked with the Lakes and Ponds Section of the Vermont Department of Environmental Conservation. Early in his career, he worked in the biological monitoring unit of the Maine DEP. Jeremy has experience with GIS, statistical analyses, aquatic macro-invertebrate surveys and data analysis and water quality assessment.

Kevin Ryan joined FB Environmental in March of 2013, and is concurrently finishing his Ph.D. in the Wildlife Ecology Department at the University of Maine. Prior to his current appointments, Kevin worked as a field herpetologist/office manager for the Wildlife Conservation Society's Metropolitan Conservation Alliance. At FB Environmental, Kevin conducts wetland delineations, vernal pool assessments, herpetological surveys, and assists with water quality sampling and data sonde maintenance and deployment. Using CommunityViz software, Kevin conducts build-out analyses for municipalities and watershed groups to evaluate land use regulations, compare alternative development scenarios, and assess potential environmental impacts from future development. He also assists with conservation planning, technical report writing, and GIS analysis and mapping.

Logan Cline joined the Portsmouth, NH office in September after completing her B.S. in Biology at UNH, where she received an Undergraduate Research Fellowship, and spent two summers studying the effects of invasive shrub species on the productivity and nestling diet composition of the common yellowthroat, and has strong suite of skills in avian monitoring and ecology. Logan also worked at the Tin Mountain Conservation Center in Albany, NH, where she completed forest ecology and avian research internships. She has been busy this fall supporting FBE staff with stormwater sampling, wetland delineations, GIS mapping and literature reviews for a cutting edge climate project.

RECENT & ONGOING PROJECTS

Long-Term Monitoring of Long Creek

Portland, ME – FB Environmental is currently conducting long-term monitoring in Long Creek in Portland, ME for the Long Creek Watershed Management District. The monitoring includes field monitoring and data collection for continuous water quality, grab and storm event water quality, weather statistics, hydrological and biological information. The project includes a unique stream enclosure study which examines the effects of water toxicity on benthic macroinvertebrates. FBE is partnering with Stantec and Lotic, Inc. to complete this work.

RECENT & ONGOING PROJECTS, *continued*

Stream Restoration Work Underway at Whitten Brook



Skowhegan, ME - FBE Senior Project Manager Jennifer Jespersen is on-site this month helping coordinate the installation of several cutting edge BMPs in the Whitten Brook Watershed as part of the Whitten Brook Phase 1 Watershed Restoration Project. The Town of Skowhegan received Clean Water Act funds in 2012 to help restore the impaired stream, and hired FB Environmental to manage the project, with engineering support from Acorn Engineering. When completed, the Town Conservation Area on Russell Road will serve as a community demonstration area with several examples of conservation practices that landowners can use to prevent polluted stormwater runoff from reaching the stream. This includes a hybrid bioretention cell (biocell and vegetated underdrain soil filter) which will serve as a perennial garden with dozens of species of native wildflowers and shrubs, and a porous parking area that allows rainwater to soak into the ground rather than run off.

Topsham Fair Mall Stream Watershed Management Plan

Topsham, ME – FB Environmental is wrapping up an 18 month project to develop a watershed management plan for the Topsham Fair Mall Stream in Topsham, Maine. This stream is impacted by stormwater runoff in a highly impervious (~30% IC) watershed. High levels of chloride are entering the stream from both surface water and ground water sources. The management plan will focus on addressing these concerns at commercial areas as well as planning for future development in one of the Town's few commercial zones.



DEP and FBE coordinate efforts to conduct targeted monitoring in Topsham.

Province Lake Watershed Management Plan

Wakefield, NH and Parsonsfield, ME – FB Environmental is assisting the Province Lake Association (in cooperation with the Acton Wakefield Watersheds Alliance) through a New Hampshire DES 319 grant to develop a Watershed Management Plan for Province Lake which is located along the ME/NH border in Wakefield and Effingham NH and Parsonsfield ME. Province Lake has been experiencing cyanobacteria blooms for the last several years. FBE is conducting a comprehensive water quality data overview, land use and in-lake modeling, build out analysis and developing an action plan to address phosphorus loading issues from the adjacent watershed. The draft plan will be completed in the Spring of 2014.



Summer 2013 meeting with ME & NH DOT to discuss comprehensive solutions on Rt. 153.

RECENT & ONGOING PROJECTS, *continued*

FBE Assisting NH Town meet MS4 Permit Requirements

North Hampton, NH – FBE is currently assisting the Town of North Hampton, NH to evaluate and streamline their current MS4 program in anticipation of the new MS4 Stormwater Permit to be released in 2014. This project involves the evaluation of all reported stormwater outfalls and their existing IDDE program as well as training in new roles for municipal staff.

WETLAND NEWS

FBE Signs Three Year Contract with NH Dept. of Transportation

Concord, NH – FB Environmental was awarded a three-year contract to provide on-call wetland services to the New Hampshire Department of Transportation (NHDOT) beginning in the fall of 2013.



Spring salamanders live in cold, clean streams.

FBE Conducts Spring Salamander Surveys

Bingham, ME – FBE wetland scientist Kevin Ryan conducted several days of spring salamander (*Gyrinophilus porphyriticus*) surveys in the early fall of 2013. Subject streams were assessed for the presence of salamanders along a proposed transmission line corridor for a proposed wind power project.

FBE Heads to the “other” Land of Lakes

Northern Minnesota – FBE wetland scientist Kevin Ryan was part of a crew delineating wetlands within a proposed oil pipeline that is slated to run from North Dakota to Wisconsin. His work on the project took place in northeastern Minnesota – near the headwaters of the Mississippi River.

CONFERENCES & WORKSHOPS

ME Watershed Roundtable ~ Belgrade, ME -November 6

- ❖ Jeremy Deeds presented on the use of mobile Apps for conducting lake shoreline surveys based on a recent project led by FBE at Ossipee Lake in New Hampshire.

ME Stormwater Conference ~ So. Portland, ME -November 21 & 22

- ❖ Come visit the FBE booth at the reception from 4-6pm on Thursday night!
- ❖ Come learn more about the work we’ve been doing with our partner ECS!