

Rein in the Runoff



Alternative Stormwater Management Practices that Address the Environmental, Social, and Economic Aspects of Water Resources in the Spring Lake Watershed (MI)

FINAL PROJECT REPORT

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Chapter 3: Stakeholder Education and Participation

Stakeholders represented a key component of the Rein in the Runoff Integrated Assessment (IA) project. Stakeholder involvement is essential to knowing what is important to whom and why it is important, and also for encouraging broad-based approval of final recommendations and outcomes (National Park Service 2002). Input from all stakeholders should be constantly sought, and co-management of the natural resources should be encouraged (Ducros and Watson 2002). Governmental policymakers should be armed with information regarding the effects of management decisions and policies on individual properties and landowner interests (Dreyfus and Denbow 2003).

The project team identified a broad range of stakeholders to involve in the Rein in the Runoff IA that included local and county officials, watershed residents, schoolteachers, business owners, developers, nonprofit organizations, community groups, state agency representatives, and regional representatives. To help these stakeholders understand the causes and consequences of stormwater and its associated environmental, social, and economic problems for the Spring Lake Watershed, several methods of distributing information were adopted and implemented.

PROJECT WEBSITE

Researchers at the Annis Water Resources Institute (AWRI) assisted the project team in the design and maintenance of a detailed project website. Online information includes introductory information about the Rein in the Runoff IA project and the problems and challenges associated with stormwater runoff and management, both generally and in the Spring Lake Watershed in particular; stakeholder information, including meeting announcements, summaries, and presentations; stormwater education information, including information about what individuals and communities can do to minimize their own contributions of stormwater runoff to local waterways; project products; and project team contact information. Usage of the website has not been tracked by the project team, but there is a link that allows site visitors to send in electronic comments or questions. Although the stakeholders requested this comment feature, its use has been limited. The website has been updated throughout the duration of the project, and it will continue to be maintained after the IA's conclusion.

The Institutional Marketing Department at Grand Valley State University established a unique URL for the project website to increase ease of access. This URL is: <http://www.gvsu.edu/wri/reinintherunoff>.

PROJECT BRANDING

Developing the “Rein in the Runoff” project brand was an important component of this IA project. Not only is branding the cornerstone of successful services marketing (Berry 2000), but stakeholder participation in the development of the brand was expected to increase community “buy-in” for the project results. Guided by the communications expert on our project team and a volunteer graphic artist¹, stakeholders were asked to come up with an easy to remember name and simple logo for this IA project. The branding process was strengthened by the integration of traditional marketing communication tools with communication and service delivery strategies, and communication strategies aimed at different stakeholder groups (Gray 2006).

PRESENTATIONS, DISPLAYS, AND DEMONSTRATIONS

Stakeholder education and outreach was a large component of the Rein in the Runoff IA project, and several versions of an informational presentation were created to present to different stakeholder groups and organizations. The presentation was most often in the form of a formal PowerPoint presentation, but displays, flyers (Appendix B), newsletter articles, press releases, and demonstrations were also used. Each presentation generally consisted of four main sections: (1) a brief introduction of the IA project, including defining what is meant by “integrated assessment”; (2) a short overview of “what is stormwater” and “why it matters”, including basic principles of hydrology and stormwater discharges; (3) a description of current, local stormwater management practices, problems, and challenges; and (4) introductory information regarding stormwater management solutions.

The project team targeted different audiences for these different educational opportunities, including municipal officials and land use decision-makers, residents within and downstream of the Spring Lake Watershed, students, and other interested parties.



The primary goals of these different education and outreach sessions included: increasing stakeholder knowledge about the causes, consequences, and correctives associated with polluted stormwater discharges from the Spring Lake Watershed; and encouraging implementation of behaviors, practices, and stormwater best management practices (BMPs) at the municipal and household level to help minimize local contributions of stormwater pollution to Spring Lake, the Grand River,

¹ Shane VanOosterhout of Kendall College of Art and Design in Grand Rapids (MI) graciously volunteered to help with the Rein in the Runoff logo design. He created four basic designs and then finalized the Rein in the Runoff project design based on stakeholder input.

and Lake Michigan. The majority of these educational sessions were one-time events; the exceptions to this were presentations to the Stakeholder Steering Committee (see below) and to the Spring Lake Intermediate School Wetland Detectives Club. Team members gave the Wetland Detectives a formal presentation, an Enviroscope (Environmental Education Products, www.enviroscapes.com) stormwater demonstration, and a local BMP (or potential BMP) site tour.

For a complete list of project educational presentations to stakeholders and project partners, please see Appendix C.

STAKEHOLDER STEERING COMMITTEE

In late 2007, the Rein in the Runoff IA project team began to identify specific individuals, organizations, or municipal units to include in a Stakeholder Steering Committee. The initial member list of 47 included top officials for the 15 governmental units within and downstream of the Spring Lake Watershed; representatives from the MDEQ; developers, marina operators, anglers, and local businesses; nonprofit organizations and community groups; environmental consultants; schoolteachers; other potentially interested individuals; and individuals identified by members of the Stakeholder Steering Committee. The main roles of this group were to: receive information about the IA project; disseminate (formally or informally) project information to their neighbors, friends, constituents, etc.; and provide input on various technical and non-technical aspects of the IA.

Table 3-1. Rein in the Runoff Integrated Assessment Project Stakeholder Steering Committee Meetings.

Meeting Date	Participants	Discussion Topics
February 6, 2008		Meeting postponed because of severe weather conditions.
March 19, 2008	12	Introduction to project/team/concepts; stormwater topics of concern; project name/identity ("Rein in the Runoff"); meeting format and preferred communications
June 4, 2008	15	Project overview; local conditions of concern; application of BMPs
September 30, 2008	8	Project overview; effects of land use and BMPs on stormwater runoff; selection of Rein in the Runoff project logo
January 27, 2009	8	Project overview; structural and non-structural BMPs; identification of specific sites for application of BMPs; identification of growth/building constraints

The inaugural meeting of the Stakeholder Steering Committee was held in March 2008², and the group met quarterly thereafter for approximately one year (Table 3-1). Meetings were conducted in the evenings to attempt to maximize stakeholder attendance; however, meeting attendance still declined over the course of the year. However, a member list of approximately 55 individuals was maintained throughout the project, and everyone on this list received copies of all correspondence, meeting notices, projects updates, and website updates via U.S. mail or email. All meetings of

² The inaugural Stakeholder Steering Committee meeting was originally scheduled for February 6, 2008. It was cancelled and rescheduled because of localized blizzard conditions.

the Stakeholder Steering Committee were held at the Spring Lake Library in the Village of Spring Lake; the presentations for each meeting can be found on the Stakeholders page of the project website.

Over the course of the year that the Stakeholder Steering Committee met, members provided input to the project team on a variety of administrative and technical matters. Administrative input included feedback on meeting time, location, and frequency; preferred methods of communication with the project team; format and timing (dates) for a public meeting (or open house); selection of the “Rein in the Runoff” project name; ongoing identification of potential members of the Stakeholder Steering Committee; identification of community groups, school groups, or special events for team members to do presentations, displays, or demonstrations regarding stormwater issues, the need for stormwater management and stewardship in the Spring Lake Watershed; and selection of the Rein in the Runoff project logo.

However, because of the complexities of the environmental, economic, and social aspects of stormwater management, stakeholder input on the technical aspects of the Rein in the Runoff IA project was more limited. Members of the Rein in the Runoff Stakeholder Steering Committee seemed to struggle with providing feedback on stormwater-related issues, and they were reluctant to provide input on the technical questions posed by the project team. These questions included stakeholder assistance in the identification of particular areas within the Spring Lake Watershed that potentially contribute stormwater pollution to the waterways (i.e., stormwater “hot spots”); where new building/development should be limited or restricted and where stormwater best management practices (BMPs) would be appropriate for implementation or installation; and identification of the most appropriate or most appealing BMPs to watershed residents.

Although a few individual members of the Stakeholder Steering Committee worked with the project team to help identify specific areas of concern within the watershed (e.g., road ends, areas lacking sewer systems, storm drain and pipe outlets, and an old landfill site), this input was also fairly limited. The primary reason for stakeholder reluctance appeared to be lack of sufficient knowledge on the many and varied facets of stormwater runoff and management. This was true even immediately after educational presentations that attempted to simplify these issues. The input that stakeholders were able to provide was not detailed enough in many cases to assist the project team in formulating BMPs specific to the Spring Lake Watershed.

The one area where stakeholders were willing and able to provide more-detailed feedback was on proposed ordinance changes. On February 16, 2009, the project team hosted a Joint Council Session with representatives from the Village of Spring Lake, Spring Lake Township, and the City of Ferrysburg. This well-attended session included approximately 20-25 council members, trustees, and top officials from these three communities, as well as few representatives from Ottawa County. The project team presented information about the Rein in the Runoff project, an overview of a proposed stormwater ordinance, and information about stormwater utility ordinances. Although not

everyone was in agreement, there was a great deal of discussion about these proposed



Photo credit: P. Isely.

ordinances, the water quality in Spring Lake, and the need for ongoing stormwater management and education. This stakeholder meeting made it clear to the project team that not all local communities understand the need to manage and control stormwater discharges to Spring Lake, the Grand River, and Lake Michigan, and that ongoing local education regarding these issues is important and strongly needed.

WATER QUALITY SURVEY

In the Spring of 2008, the project team developed the “Rein in the Runoff Water Quality Survey”, which was designed to do three things: (1) gather information about Spring Lake Watershed residents’ knowledge about, and their behaviors affecting, stormwater runoff; (2) provide another means of educating watershed residents about behaviors that affect the water quality of local waterbodies; and (3) gather information about watershed residents’ willingness to pay for improved water quality – i.e., reduced phosphorus levels in Spring Lake. There were two versions of the survey, which differed only in the amounts proffered in the willingness to pay questions (#21-23). Both versions of the Rein in the Runoff Water Quality Survey can be found in Appendix D.

This survey was kicked-off to the general public at the Rein in the Runoff Public Meeting and Open House on June 25, 2008, and subsequently distributed to a small group of conveniently sampled residents at stakeholder meetings, presentations, and community events. Version 2 of the Rein in the Runoff Water Quality Survey was also made available on the Stormwater Education page on the project website, with its own unique URL: <http://www.gvsu.edu/wri/waterqualitysurvey>. Notices regarding this URL were included on Rein in the Runoff project flyers, community newsletters, Spring Lake School District newsletters, and press releases from June 2008 – Spring 2009.

The project team received very few responses to the Water Quality Survey. From the hard copies handed out at community festivals and events and the survey posted online, only 40 surveys were completed and returned³. Because of the reliance on convenience sampling to distribute the survey, these responses are non-scientific and

³ Forty one surveys were completed, but one was thrown out because the respondent was less than 18 years old.

likely biased toward individuals already having concerns about water quality in either Spring Lake, the Grand River, Lake Michigan, or another local waterbody. However, even with such a limited amount of responses, there were still some interesting results.

Sixty percent of survey respondents believe that the water quality of Spring Lake is fair or poor, with 35% of respondents believing that the water quality of the lake is good or excellent (Figure 3-1). This suggests that the majority of respondents understand the need for local water quality improvement. However, despite this, and the presumed bias of the response sample, only 40% of these respondents were willing to pay more than \$50 per year if phosphorus levels could be reduced below the eutrophic threshold of 20 ppb (Figure 3-2). Respondents' answers to this question could have been influenced by the fact that they were already paying for phosphorus reductions in Spring Lake through local assessments related to the application of the alum treatment in 2005, or by the fact that parts of West Michigan were experiencing high rates of unemployment during the course of the Rein in the Runoff project period.

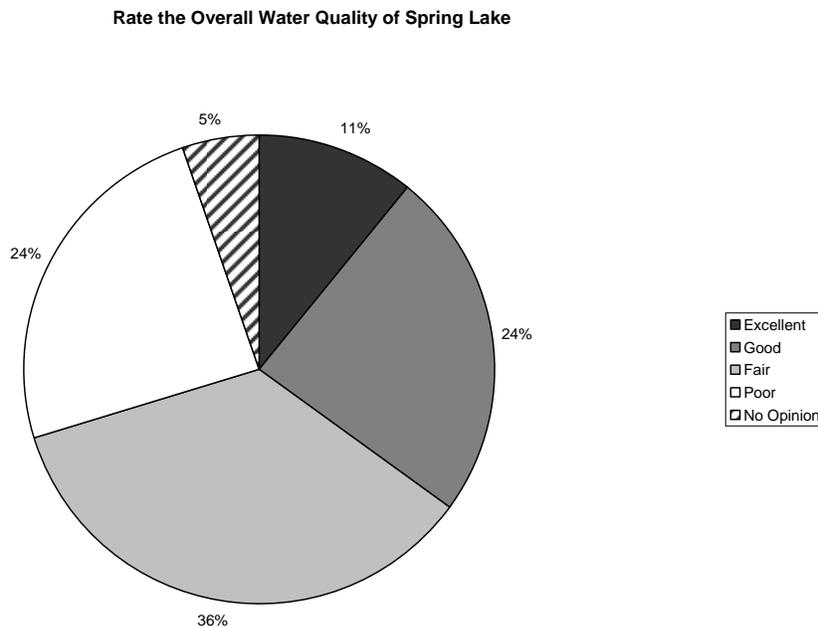


Figure 3-1. Water Quality Survey responses regarding the water quality of Spring Lake.

Distribution of Willingness to Pay for Phosphorus Reduction Below 20ppb

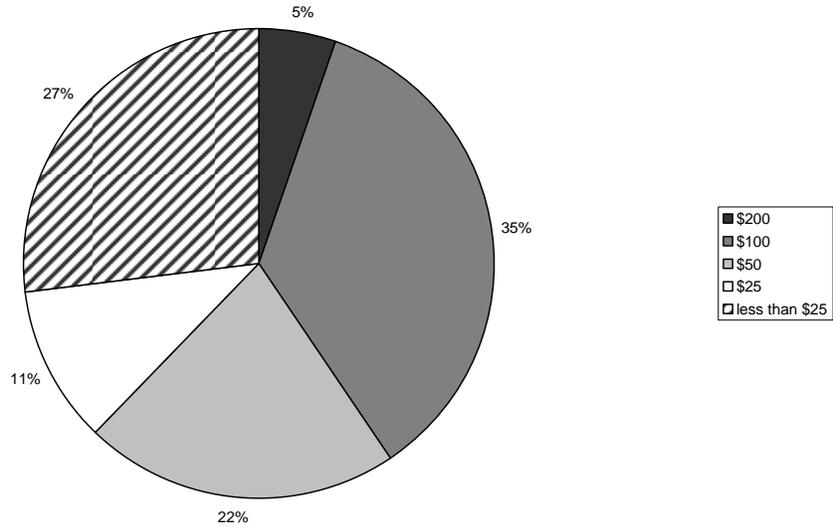


Figure 3-2. Water Quality Survey responses regarding stakeholder willingness to pay for phosphorus reduction below 20 ppb.

**Perceived Significance of Stormwater Source on Spring Lake Pollution
Listed from Least to Most Significant**

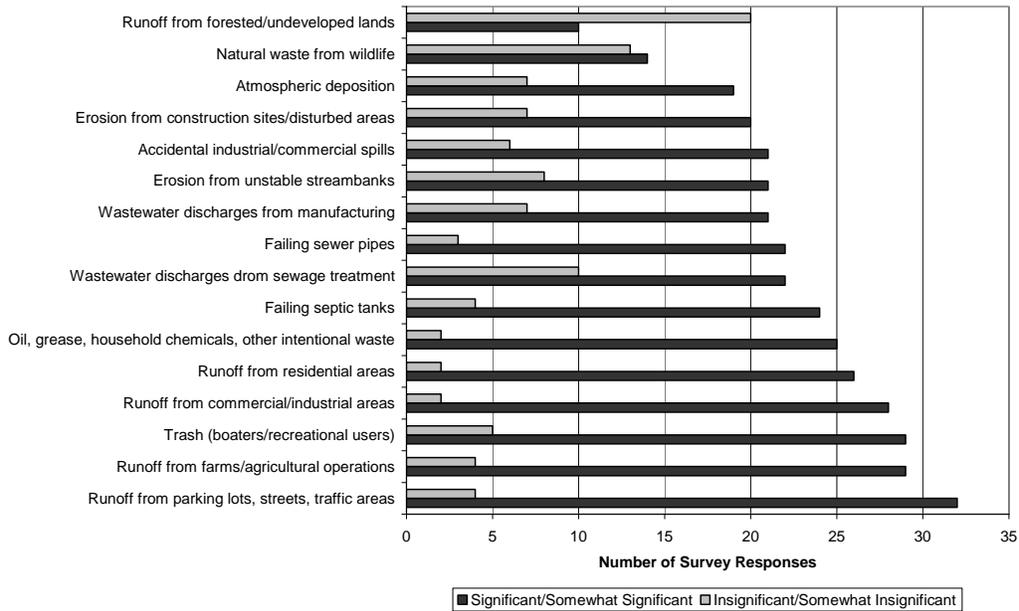


Figure 3-3. Water Quality Survey responses rating potential sources of pollution to Spring Lake.

Additionally, when asked to rate potential sources of water pollution to Spring Lake, the top five (5) ranked sources were runoff from parking lots, streets, and traffic areas; runoff from farming and agricultural operations; trash from boaters and recreational users of the lake; runoff from commercial or industrial areas; and runoff from residential areas (Figure 3-3). This suggests that there is at least some understanding among these stakeholders regarding the influence of development and land use on stormwater pollution in Spring Lake. However, given that 95% of these respondents live in the more urbanized areas of the watershed and 85% recreate on the water, there seems to be a disconnect between individual actions, urbanization, and their relationships to stormwater pollution in Spring Lake.

For example, 17% of respondents that change their own oil for their automobile simply throw the used oil into the garbage; 23% of respondents that own and walk their dogs rarely or never pick up after them; 72% of respondents that fertilize their own lawns have never had a soil test, and 9% continue to use a phosphorus-based fertilizer (Table 3-2.) These data suggest that while some stakeholders understand how their behaviors affect local water quality, ongoing educational efforts regarding local stormwater pollution and control are needed throughout the watershed. Table 3-2 provides guidance regarding potential opportunities for such educational efforts.

Table 3-2. Water Quality Survey Results Regarding Stakeholder Behaviors.

Survey Questions (Behaviors affecting Stormwater Pollution)	Percent Responses¹
Respondents that have and mow their own lawn	98%
Leave grass clippings in the yard	40%
Throw grass clippings in the garbage	10%
Rake or blow grass clippings into storm drain or ditch	3%
Mulch, compost or otherwise recycle grass clippings	49%
Respondents that fertilize their lawn	80%
Have tested soil	28%
Use phosphorus free fertilizer ²	91%
Respondents wash their personal vehicle at home	50%
Soapy water flows into grass, dirt or gravel	53%
Soapy water flows into the street or driveway	37%
Soapy water flows directly into a storm drain	11%
Respondents that change their own (motor) oil	30%
Dispose of used oil in garbage	17%
Dispose of used oil at recycling center	83%
Respondents have and walk a pet	53%
Always pick up after pet	65%
Often pick up after pet	13%
Rarely pick up after pet	19%
Never pick up after pet	4%
Respondents have a septic tank	18%
Pump it out every 3-5 years	86%
Pump it out more than every 5 years	14%

¹ Percent responses for some survey questions do not add up to 100% because respondents could give multiple answers.

² Ottawa and Muskegon counties have ordinances regulating the use of fertilizers containing phosphorus.

CITIZENS GUIDE TO STORMWATER

Hard copies of this Rein in the Runoff project report can be found at the municipal offices of Spring Lake Township, the Village of Spring Lake, the City of Ferrysburg, the Spring Lake Library, and at the Annis Water Resources Institute (AWRI) in Muskegon. Because of the length of this report and the complexity of the material presented, there is also a consolidated and condensed Citizens Guide to Stormwater that is more “user-friendly” than this full-length report.

The Rein in the Runoff Citizens Guide to Stormwater is an abbreviated version of this full Project Report, targeting the residents of the Spring Lake Watershed. This guide summarizes the IA processes and outcomes, and provides information directly relevant to how individuals can manage and control stormwater runoff associated with their own activities. The Citizens Guide is included as part of the final version of this Project Report (Appendix E).

