

**A Model for
Resident-led, Place-based, Phosphorus Source Reduction
Inside Watersheds**

Based on a case example from the Como neighborhood in St. Paul, MN

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About the Project Team

Lindsay Schwantes and Jessica Bromelkamp, staff members at [Capitol Region Watershed District](#) (CRWD) initiated this project. CRWD, a special purpose unit of government located in the Twin Cities metro-area of Minnesota, works to protect, restore, and improve water resources in a highly urbanized portion of the Upper Mississippi River Basin. Together Lindsay and Jessica lead CRWD's watershed education and outreach work in several metro-area cities, including most of St. Paul and parts of Falcon Heights, Lauderdale, Maplewood, and Roseville.

Lindsay has worked for many years with Janna Caywood, a resident of St. Paul's Como neighborhood and place-based organizing consultant ([BlueCatConsulting, LLC](#)). With grant support from CRWD, Janna and her neighbors have honed an approach for organizing themselves into a collaborating network of 108 households (as of 2016), called the [Como Active Citizen Network](#) (CACN). The CACN synchronize their practices on their home blocks reducing phosphorus sources in streets that pollute nearby Como Lake and the Mississippi River through the [Como Curb Cleanup](#) initiative (more on this in our report).

In 2016, the annual, collective work of CACN prevented an estimated 13.7 pounds of phosphorus from entering Como Lake and the Mississippi River via residential streets. In 2017, Lindsay and Jessica teamed with Janna to create a model, based on this success in Como, for resident-led, place-based, phosphorus source reduction to share with other neighborhoods in the Capitol Region Watershed District.

The primary author of this report is Janna, however this project is very much a collaborative effort with Lindsay and Jessica guiding the project purpose, scope, organization, and editing. We are grateful to CRWD's Board of Managers and Citizen Advisory Committee for their valuable feedback and support.

A note about terms

In this report, we use the term "resident," "neighbor," and "household" when referring to people who live inside a watershed community. These terms may seem interchangeable, and in some respects they are, however, we wanted to explain why we use one versus another in certain places in this report.

RESIDENT refers to people who own or rent private property in a community and make that property their home. A resident has decision-making authority for how their property is cared for. Decisions on yard care practices, for example, have an impact on local water quality. Developing the resident role in watersheds, so that they leverage this decision-making authority, advances cleaner local waters.

NEIGHBOR refers to the relationship between residents within a community. Neighbor is a social identity and implies a common interest in the health of the broader neighborhood and its assets (such as a neighborhood lake). As such, neighbors have accountability to one another and to the common good.

HOUSEHOLD is similar to resident in that there is responsibility for a particular private property. A household might include one individual, a couple, or a family. We use household to indicate the smallest unit of scale (the "household-scale") we focus on within our model. For example, we don't advocate organizing a network of random neighbors, we advocate organizing a network of households – neighbors *and* their home property. By strategically aligning the practices of multiple households we create a *collective* practice that has positive, neighborhood-scale (or watershed-scale) impact.

Report Summary

Minnesota's greatest water quality challenge, *nonpoint* source pollution, is a difficult problem to solve because of the diffuse nature of pollutant sources. All communities throughout the state create pollution of this type on local landscapes that easily washes into nearby waterways. Our state's water governance system places the greatest responsibility on government agencies to tackle this problem, but a study conducted by the nonprofit, Citizens League, revealed both a need and an opportunity to rethink the role of watershed residents in helping to solve this complex challenge. The study inspired an experiment in St. Paul's Como neighborhood to define and develop a leadership role for watershed residents in reducing water pollution sources that accumulate inside the community and to create and grow a network made up of households that collaborate across blocks and with other sectors, most especially local government agencies, in tackling the challenge of nonpoint source pollution.

In section one of this report, we discuss the above statewide context in more detail. We then describe the launch, evolution, and growth of the **Como Active Citizen Network (CACN)** in St. Paul and the phosphorus source reduction solution strategy designed and implemented by the CACN, the **Como Curb Cleanup**. We also discuss key **lessons learned** by the CACN and changes made after 8-years of experimentation in neighborhood organizing and resident-led water pollution source reduction.

In section two, drawing from the Como case example, we describe a **four-phase model** for organizing the people and supports needed for resident-led, place-based, phosphorus source reduction:

- **SMALL LEAD TEAM** of 2 to 5 residents is identified, convened, and trained to gather facts and organize fellow residents to address local water quality challenges from inside the watershed.
- **LOCALIZED LEARNING** is defined, researched, and discussed by the lead team of residents to clearly articulate the particular water quality challenge impacting their particular place – the neighborhood where they live – and to define and develop the role played by residents in the community to advance the common good of cleaner, healthier local waters.
- **PROBLEM IDENTIFICATION** and **SOLUTION STRATEGY** is defined, designed and implemented by the lead team of residents. The solution strategy is collaborative, scalable to neighborhood-wide, and aligns with the larger Minnesota goal of tackling nonpoint source pollution.
- **NETWORK STRUCTURE** is created, expanded, and sustained by the lead team of residents so they can organize a broader base of fellow neighbors, strategically synchronize and maximize resident-led impact on their identified, local, water quality issue as they implement their strategy and build their neighborhood's capacity to act collectively.

Section two also includes an **outline of Collaborative Curb Cleaning** as an example solution strategy and a discussion of **pathways for rolling out this model** in CRWD neighborhoods. Questions to consider include: Who should lead the launch? Which neighborhoods are priority areas? Should seed money be invested by CRWD in these network startups? What's the larger vision? What's the return on investment (ROI)?

We conclude with final thoughts on the opportunity this model provides to lead Minnesota in a new direction by organizing the role, relationships, and resources of watershed residents and their capacities to lead on the prevention side of nonpoint source pollution.

SECTION 1: History and description of resident-led, place-based, phosphorus source reduction in St. Paul's Como neighborhood

1.1: Background and context

In order to understand why the residents of the Como neighborhood in St. Paul felt they needed to organize themselves into a network of collaborating households, and why the Como Curb Cleanup initiative, their primary phosphorus source reduction strategy, evolved in the way that it did, it's helpful to understand the larger context of water pollution in Minnesota statewide and how the resident role is traditionally conceived.

1.1a: Minnesota's statewide challenge – nonpoint source pollution

“Nonpoint” source pollution, as the name implies, comes from everywhere. Human activity and our built environment create land-based pollutants that move quickly and efficiently, thanks to modern flood control infrastructure, into our waterways in quantities that are unnatural and that damage or degrade the health and ecological functioning of our waters. All Minnesota communities, without exception, create pollution of this type. This is our generation's greatest water quality challenge. It is a complex problem to solve because it occurs in an open system with many interdependent, dynamic subsystems, including natural systems, economic systems, and political systems. Minnesota spends billions of dollars, both public and private, to mitigate the impact of nonpoint source pollution on our water resources.

Minnesota's approach to governing our shared waters has evolved over time and today places the lion's share of responsibility on government agencies. By way of example, Como Lake, a small, shallow lake embedded within a regional park in an urban neighborhood, has multiple government agencies – state, county, and municipal – each with a different slice of responsibility for Como Lake's water quality health and ecological and recreational functioning. Very few responsibilities are placed on the residents who live within the watershed where pollutants originate and then drain to Como Lake.

All urban dwellers, knowingly or not, contribute to nonpoint sources of pollution. In neighborhoods like Como, there are many, small, private properties owned by residents, businesses, houses of faith, schools, and nonprofit organizations. Individually these properties are too small to be regulated by local pollution mitigation rules. Yet in the aggregate, our human activities as simple as driving on roads, digging and creating loose soil, maintaining lawns and trees in our landscapes, salting our sidewalks, parking lots and streets, these and more can result in the accumulation of pollutants on our land surfaces that wash into local waters. Because the sources are so diffuse it's simply not reasonable to expect government agencies to solve this problem alone. Diffuse sources require diffuse strategies. All property owners from all sectors have a role to play in preventing pollution that impacts local waters.

1.1b: The role of watershed community residents

The way in which watershed residents are involved in addressing the issue of water pollution has also changed over time. Today, there is great emphasis by government on engaging and educating residents about water pollution and providing a menu of options for how they might contribute to solutions.

Common ways residents are invited to contribute to solutions include:

- Consume educational information and implement recommended practices, primarily on one's home property.
- Take part in a project or program, typically managed by government or nonprofit staff.
- Apply for cost-share grants from government or nonprofits to install structures on one's

property that will capture and/or filter polluted runoff.

- Attend public meetings or comment online to provide feedback to government about local or state water management plans.
- Join a citizens advisory committee to advise government or nonprofits on their work.

More recently, new programs have been developed to provide residents with deeper training in the science of watersheds, so they can be a local water science resource in their community.

1.1c: Rethinking the resident role

In 2008, the civic non-profit, [Citizens League](#), convened a one-year study committee made up of 25 Minnesota citizens. Their charge was to explore Minnesota's water quality challenges and the public policies in place to address them and make recommendations for improvement. Janna, one of the authors of this report, was among the 25 citizens. Committee members had a wide range of perspectives and experiences with water and water policy, but all were asked the same question: What is the *citizen* role in protecting and restoring our state's water resources. The implication was that all Minnesotans, as citizens in a democracy, have both a right and a responsibility to contribute to the common good of clean water. Are all citizens playing a role? What is that role when viewed through the lens of citizenship?

The committee's work revealed both a challenge and an opportunity. Government agencies bear an enormous and complicated responsibility for protecting and restoring our shared water resources, while the average watershed resident, those who live inside the communities where water pollutants originate, bear little to no responsibility, even though they are most impacted by polluted local waters. The role of the watershed resident, when it is defined at all, is often marginal, vague, or ambiguous, which reinforces the perception that government can and should fix the problem alone.

There are reasons why our water governance system has evolved in this way. Residents in a community often are viewed as a mass of separate households, far too numerous for government agencies to partner with individually in any serious or effective way. There's also a perception that residents are not willing or don't have the knowledge or expertise needed to take on an important governance role within their home watershed. And our state's approach to addressing nonpoint source pollution tends to focus primarily on science-based, technical solutions that require professionals with expertise in those fields to design and implement technical, and often capital intensive, treatment strategies.

That said, much has changed in recent years. Many communities are experiencing a renewed interest in local capacity building. They want to tackle larger public issues that are impacting them at the local scale. Government agencies also are focusing more resources on community involvement opportunities. And there is growing connectivity between residents in many Minnesota communities, thanks to advancements in electronic communication technology and a proliferation of inexpensive and free web forums, social media channels, and other online collaboration tools, making community-wide collaboration more possible.

The Citizens League's committee concluded the timing was right for Minnesota to rethink our expectations for watershed residents. In their 2009 report, [To the Source](#), the committee reframed the problem to be solved as not just a technical problem of pollutants moving from land to waters, but also as a water governance system in need of recalibration. In order to address the modern challenge of nonpoint source pollution, Minnesota needed to expand responsibility for our waters "upstream, to the source," to include residents making impactful decisions in watershed communities. Therefore, the

committee's priority recommendation was for Minnesota to experiment with new forms of *collaborative watershed governance*.

1.1d: The Como story

In the summer of 2009, inspired by her committee experience, Janna invited eight of her neighbors from St. Paul's Como neighborhood to meet in her living room and talk about Como Lake's water quality condition. Como Lake is a small, shallow, urban lake at the center of the Como neighborhood. Its poor water quality health is caused by excessive phosphorus that fuels an overgrowth of algae. 2009 was a year when Como Lake's water levels were low, causing the algae to appear especially gooey and slimy and inundate much of the shoreline habitat and water surface. Not only was it sad for the neighbors to watch wildlife trying to live in this environment, it also reduced the appeal of walking the lake path and boating on the lake, which meant less interaction between neighbors and with nature.

This was not a new problem. Como Lake had been suffering from an overgrowth of algae for decades. In fact, in the late 1990s Como Lake's condition had prompted another group of neighbors, from [Como Community Council](#), to petition the state to form Capitol Region Watershed District. The result was focused government attention to Como Lake. Since then, much work has been done to improve Como Lake's condition and fate. But in 2009 the eight neighbors who gathered that summer could see the lake still had a long way to go.

The group decided they needed to learn more – what was happening, why was it happening, what were government and other local organizations doing already, and what could they as residents of the surrounding neighborhood do within their own sphere of authority – their properties and home blocks – to advance Como Lake's restoration. After spending several months learning about Como Lake's water quality challenges and the causes of those challenges, the neighbors concluded the best place for them as residents to focus their intervention was on the abundance of autumn leaf litter that covered Como's residential streets each year. This, they learned, was a major source of the excessive phosphorus that entered Como Lake each year via underground storm sewer pipes and fueled the overgrowth of algae.

As luck would have it, in the spring of 2010, the nonprofit organization [Freshwater Society](#) began hosting workshops to teach community groups a project model for group cleanups of leaves in streets. Two Como neighbors attended and that spring, with the help of funding from Capitol Region Watershed District and collaboration from City of St. Paul, the neighbors conducted their first leaf cleanup project.

Thus began an 8-year experiment of a small group of Como neighbors learning the ups and downs of organizing themselves, developing and refining their resident role in the effort to restore an ailing lake, and building a collaborating network of neighbors for synchronized and maximized phosphorus source reduction at the neighborhood-scale. Each year they adapted the strategy and each year it grew larger. As of 2016 the neighbors, who now call themselves the [Como Active Citizen Network](#) (CACN), are 108 households strong. The leaf removal strategy, which now spans neighborhood-wide and is called the [Como Curb Cleanup](#), is successful enough that Capitol Region Watershed District is interested in developing a model from the Como experience that can be shared with other neighborhoods interested in developing the resident role in restoring and protecting local waters.

1.1e: Redefining the problem and the solution

All of the eight Como neighbors who gathered in the summer of 2009 had been involved in one, often more than one, of the traditional options for community involvement in water management (see 1.1b).

However, the group determined it was time to move beyond other organizations taking the lead and the responsibility for the resident role. They agreed they would develop the role of the resident so it was self-defined, self-led, and that they would build their capacity – as individuals and as a community - to solve difficult problems impacting the neighborhood.

As mentioned, the neighbors embarked on several months of learning about the particular water quality challenge for Como Lake. At the end of that initial learning, the “problem to be solved” as defined from the resident point-of-view was focused not on changing the *behavior* of watershed residents, as was the traditional problem definition for most citizen engagement programs, but rather on changing the resident *role* – as perceived by residents themselves and as perceived by government agencies and nonprofit organizations. The group understood all sectors and all property owners had a leadership role to play in addressing nonpoint source pollution. The resident role was not well defined in Como. Therefore, the group reframed the problem to be solved this way:

PROBLEM FRAMING

- Too much phosphorus is moving from the neighborhood that surrounds Como Lake into the lake’s water via the street stormwater drainage system.
- The reason this problem persists is two-fold:
 - Most residents who live “at the source” (the streets where runoff flows into drains) don’t see themselves as having a leadership role to play in reducing phosphorus sources in streets.
 - For those who do embrace this role, carrying it out individually is not strategic, nor sustainable.

SOLUTION FRAMING

- We will organize fellow neighbors interested in joining us in a coordinated, household practice – removing leaves from street gutters in front of our homes - thereby reducing phosphorus “at the source” - our home blocks. As we organize, we will make the case that building the resident role inside the neighborhood is necessary if we want to restore Como Lake for the long-term.
- In order to synchronize and maximize our resident impact on this problem at the neighborhood-scale, we will develop a collaboration network to strategically align ourselves, our collective work, and our cross-sector partnerships toward the shared goal of a cleaner Como Lake.

1.2: Describing the Como Active Citizen Network (CACN)

As mentioned, the initial group of eight Como neighbors grew over time and now the CACN includes 108 households located throughout the Como neighborhood. By collaborating across households, across blocks, and with local partners, CACN is experimenting with a new form of *collaborative watershed governance* – collaboration between residents in a watershed and between residents and government agencies already working on the issue. A goal for the CACN is for Como residents to see themselves as accountable for pollution source reduction inside Como Lake’s watershed and for their efforts to have measurable impact.

1.2a: The leadership team

CACN is led by a team of five Como neighbors. Each was invited to join the team by the founding neighbor, Janna, because of their qualities in 3 important areas:

- Interest in community life and in playing a role to address community issues
- Able (or willing to learn how) to organize and lead fellow neighbors in collaborative learning and collective action
- Possess (or are willing to develop) one or more skills needed to lead a growing network of neighbors (i.e., communications, research, project management, cross-sector partnering, strategic planning, community deliberation, and neighborhood organizing)

The most important role of the lead team is to organize other neighbors into the CACN collaborating base. The team also leads communications with the network, distills research and learning into novice-friendly language, manages a simple website, and leads ongoing learning, issue framing, strategy development and strategy implementation.

1.2b: The demonstration house (DH)

The heart of the CACN and its most fundamental unit is the demonstration house (DH). A DH is a Como household – an individual, a couple, or a family - who owns or rents a small (less than one acre) private property within the Como neighborhood. Typically, a DH is invited to join the CACN by the lead team or by a neighbor from the broader CACN base, or they join because they heard about CACN through neighborhood e-communications.

As a member of the CACN a DH agrees to lead by example and demonstrate (model to neighbors on their block) household decisions and practices that help solve the community issue of focus for the CACN. Because the current issue is Como Lake’s water quality and because the CACN has developed the Como Curb Cleanup as the primary strategy for reducing Como watershed phosphorus sources, they agree to remove leaves from the street in front of their home throughout leaf drop season.

More specifically, to demonstrate resident-led phosphorus source reduction a DH will:

- Place a lawn sign (provided by CACN) in front of their home declaring themselves a DH – this is primarily for the benefit of other DHs to “see” one another in the community.
- Monitor the accumulation of leaf litter along the curb (street gutter) that borders their property during the months of October and November.
- Remove any leaf litter accumulation at least once a week.
- Compost collected leaves in their backyard or take them to a county yard waste site.
- Respond to the online survey (sent via email by the CACN lead team) at the end of leaf drop season to report how much curb footage they were able to take responsibility for that year.

This is where the actual practice of phosphorus source reduction takes place – at the household-level. The practice is self-led: DHs use their own tools, do the work on their own schedule, and compost the material collected on their own. For neighbors who are not that keen on group activities this is especially attractive, as they don’t have to talk with anyone if they don’t want to and can still be part of a collective solution strategy – a nice advantage if we want to expand beyond the choir of traditional neighborhood activists and include other civically minded neighbors.

1.2c: DHs are networked together to maximize their phosphorus reduction impact

What makes this individual household practice strategic, scalable, and sustainable is the fact all DHs are connected via an organized, neighbor-network structure – the CACN. By joining with other neighbors in a collaborating network a DH is able to do a number of things that would be harder individually:

- Synchronize their phosphorus source reduction with other property owners/renters in Como
- Sustain this practice and stay motivated, knowing they're not doing this work in isolation
- Maximize their impact by doing this work collectively
- Publicly declare themselves – by display of the lawn sign – to be a household that values local waters and is willing to do their part to manage the health of community assets
- Expand their awareness and interest in employing other watershed-friendly practices on their home property and home block
- Develop a stronger sense of ownership and accountability for shared community assets
- Influence and organize other neighbors to be part of collective solution strategies

1.2d: CACN partners across sectors in collaborative watershed governance

What makes the CACN and the Como Curb Cleanup strategy an example of *collaborative watershed governance* is the partnerships developed with local organizations. Examples of local organizations the CACN has developed ongoing, cooperative partnerships with include:

- *Capitol Region Watershed District*
- *City of St. Paul Parks Department*
- *Ramsey County Environmental Health*
- *District 10 Como Community Council*
- *University of MN Stormwater Scientists*
- *Citizens League*
- *Two churches: Bethel Lutheran and Mission Presbyterian*

In these partnerships, the CACN defines the resident role in solving the shared challenge of Como Lake's water quality condition and each partner defines their sector role. Working together, the roles are coordinated for maximum impact. Without exception, each organization has discussed with the CACN lead team ideas for how they can further leverage their organizational resources to advance even more the shared goal of a cleaner, healthier Como Lake and Mississippi River. This is the beauty of collaborative watershed governance – each sector is able to play a unique role, make impactful decisions within their sphere of authority, and leverage unique resources and relationships. The result is maximized impact when applied in strategic cooperation with one another.

1.3: Describing the Como Curb Cleanup solution strategy

As discussed, the CACN is the organizing structure that brings neighbors and other sectors into ongoing collaboration with each other. The particular solution strategy that the CACN developed to reduce phosphorus sources from Como neighborhood streets is the Como Curb Cleanup. The CACN structure is arguably the more important element as this provides the means for the people who do the actual work to organize themselves and align their practices strategically. Many different strategies beyond the Como Curb Cleanup could be developed and employed by the network. But this particular strategy has many aspects that make it an excellent *first* strategy, one that builds capacity for designing and implementing other future strategies.

1.3a: Why focus on Como Lake's watershed?

As mentioned, the primary nonpoint source pollution problem plaguing Como Lake is excessive phosphorus (and more recently excessive chloride – a new problem to be taken up by CACN soon!). Although the so called “legacy” phosphorus that’s already in Como Lake is contributing significantly to the overgrowth of algae that are seriously impacting the lake’s health, solving *that* problem will require more technical solutions developed by water resource scientists and engineers. The problem of “new” phosphorus that flows into Como Lake each year from the surrounding communities is a problem that will not truly be solved until residents develop their role in leading source reduction strategies inside the watershed. It also will be an easier argument to make to taxpayers that investing in expensive in-lake treatment is wise if incoming phosphorus is curtailed. Otherwise the impact of in-lake strategies will be short lived if the influx continues unabated.

1.3b: Solution strategy basics

The Como Curb Cleanup is referred to as a *solution strategy* to reinforce the idea that this resident-led effort is an important aspect of Como Lake’s restoration. The way it works is this:

- CACN demonstration houses (DHs) are called into action in the fall by CACN’s lead team
- Each DH monitors the curb (street gutter) that borders their home property during all of leaf drop season, usually October through November
- Once a week, if there is any accumulation of leaf litter along their swath of curb, they remove it, thereby separating a major phosphorus source from stormwater flows
- Collected leaves are composted in DH’s backyard or taken to a Ramsey County yard waste site.

Logistically, this is what goes into coordinating the Como Curb Cleanup:

Email call to action. Beginning in early October, the CACN lead team calls into action via email the network of DHs. This initial email details dates for the effort, any new adjustments to the strategy, and provides a link to the updated website.

Website. CACN’s lead team has developed a simple website with information about the CACN, Como Lake’s water quality challenges, the Como Curb Cleanup strategy, and the DH role. The website provides a convenient, online space for info sharing, photos and maps (map of DHs, map of the watershed), and for CACN lead team contact info.

Lawn signs. DHs are given a lawn sign to mark their home as a demonstration house. What they are demonstrating is the household practice of removing leaves from the street gutter. The primary purpose of the lawn sign is to allow DHs to see each other scattered throughout the neighborhood. But the CACN URL is also on the sign, for the benefit of neighbors who are curious what these DH neighbors are up to.

Leaf bags. For DHs who would like it, the lead team can order a large, reusable leaf bag (135 gallon capacity) at a discount from a partnering distributor. The bags make it easier to manage leaves in the street and on their property. In the past, both CRWD and District 10 Community Council have funded the bags. Going forward, CACN will conduct neighborhood fundraising to cover the cost of the bags and the lawn signs, or will ask DHs to pay for the bags themselves.

Composting. Over the years, CACN has experimented with different tactics to help network members compost collected curb leaves. This particular aspect of the initiative – what to do with leaves once collected - remains a challenge. For a time, CACN coordinated a community dumpster and then later the

“service” of curbside leaf pickup. Both were discontinued due to capacity limitations of the lead team and because this was setting up a consumer/service provider relationship between lead team neighbors and the broader network of DHs. Today the lead team strongly promotes backyard composting and helps connect DHs to other DHs who can help with transporting of leaves to the county yard waste site.

Communications. Periodic communications are sent to network members from the lead team during the fall, to keep momentum going, reinforce the feeling of being part of a group effort, and provide helpful information (such as rain alerts) as needed. At the end of the season a final message is sent with a link to a Survey Monkey questionnaire where DHs can report how many feet of curb they cleaned that year and provide feedback on the strategy itself.

Organizing. Bringing in new neighbors to join the network and the strategy is the priority activity of the lead team. A combination of tactics are used. Announcements on local social media help flush interested neighbors out of the bushes. Once identified, one-on-one conversations between lead team neighbors and interested neighbors begin the development of deeper relationships. Also, DHs themselves play an important role in organizing new neighbors, on their own block or through their own network of neighbor relationships.

Measuring impact. CACN works with scientists from the University of Minnesota who do research on stormwater runoff impacts to local water resources. Based on data such as known tree species in Como, amount of impervious surface, duration of leaf drop season, and typical rainfall patterns, a formula was developed to help CACN estimate how many pounds of phosphorus they are preventing from local waters by measuring how many feet of “curb” a DH takes responsibility for clearing once a week in October and November. (Details on the formula can be made available by CRWD upon request).

1.4: Highlights of changes and lessons learned

CACN neighbors developed the first iteration of the Como Curb Cleanup (CCC) strategy with the help of a model provided by Freshwater Society, called Community Cleanups for Water Quality. The model suggested a group cleanup be coordinated on a given day in a given place within the neighborhood and that nearby homes be given a flyer to encourage they remove leaves from the curb in front of their own home. This approach worked for a time and was a good starting place. CACN was able to compose a Como-specific brochure, grounded in recent science, to hang on doorknobs within a defined area. The project area and participating neighbors expanded each year. Soon, word of the project spread and volunteer groups began contacting CACN to ask if they could help with the effort.

The challenge that appeared and grew is that the small group of neighbors who launched the CACN soon found themselves spending all their time managing the Como Curb Cleanup strategy, which was increasing in complexity*. This left no time to organize a larger network of collaborating neighbors, which was the original purpose. Because the strategy was centrally planned and implemented most work was done by the original group of eight neighbors (which also was slowly shrinking – not everyone likes project management). This unintentionally put the CACN on an unsustainable path. The fast growth of the strategy quickly overwhelmed the group’s capacity. Thus, changes were made to course correct.

*Examples of increasing complexity of the strategy include: coordinating outside groups of volunteers to clean certain streets in the neighborhood; arranging with a trash hauler to drop off and remove a dumpster; arranging a parking lot for the dumpster; organizing a group to debag the bags of leaves put in the dumpster at the county yard waste site; arranging curbside pickup of leaves; developing

marketing materials; organizing a group to hand-distribute the materials neighborhood-wide; placing ads in local papers; doing presentations for neighborhood organizations – all of these things take up the limited time of the lead team.

1.4a: Structural and conceptual changes

Leadership training. CACN lead team neighbors received *civic leadership* training from the [Citizens League](#) and [Minnesota Active Citizenship Initiative](#) (graciously funded in part by CRWD). This helped the original neighbors (now only 2) reconnect with their original purpose – to develop the resident role in helping to solve a difficult water quality problem and grow a network of collaborating households. The training provided theory and practice in organizing through the lens of citizenship and in building a network infrastructure to organize across blocks and sectors and build collaboration capacity.

Focus shifted from strategy organizing to network organizing. Rather than think of the cleanup as an event, requiring recruitment of volunteers (including outside groups), the curb cleanup initiative was reframed as a *resident-led practice* carried out by households who are decision-makers on their own properties. This meant the organizing of demonstration houses was now the focus of the lead team and the actual activity of curb cleaning was self-led by DHs themselves. This was a deliberate move, to shift away from a centrally planned and coordinated event to organizing DHs who can synchronize (seasonally, not by their watches) the practice of curb cleaning. In this way, impact is increased by increasing the size of the network rather than the complexity of the strategy itself.

Message reframed as an invitation. CACN learned that the language used to describe the household practice of curb cleaning – on our website, in neighborhood online forums, in emails - was more appealing if it was framed as an invitation. Something like, “We are doing this. Does this interest you? We’d love for you to join with us!” This was a deliberate shift away from appearing to educate neighbors about what *they* should be doing without offering a collaborative mechanism for collective action. Now, we educate ourselves – those in our network – and we answer questions from other neighbors, but only if asked. We leave the “mass” educating to other organizations that do it much better than us.

Let go of funding from CRWD. In 2016, CACN made the decision to let go of funding from CRWD. For three reasons: 1). It was time consuming to apply for and report results for a grant; 2.) Costs had to be carried by CACN’s lead organizer until the following year when reimbursement was made; and 3). It did not seem fair that CRWD should continue funding what CACN wanted to be a resident role. As of 2017 CACN will do its own fundraising to cover costs.

1.4b: Procedural and logistical changes

Streamlined the practice. Because curb cleaning self-led by DHs was now the focus (no more coordinating of a centralized event), this allowed for streamlining of logistics. DHs provide their own tools, determine their own schedule for when to clean their curb, and compost leaves themselves.

Expanded to two months. One day of leaf cleaning was not nearly enough to impact the magnitude of the phosphorus source problem and was sometimes constrained by bad weather on “the” day. The initiative expanded to a full week and then to all of leaf drop season – about a six to eight-week period.

Discontinued curbside pickup of leaves for DHs. One of the biggest drains on capacity was coordinating the transport of collected leaves to the county yard waste site. This proved to be too time consuming, involved too many organizations, and had the unfortunate effect of setting up the perception that lead

team neighbors were there to serve other DHs.

Continue to seek a strategy for composting leaves. The question of what to do with the leaves once collected remains a challenge. Not all neighbors have the space to compost in their yards. And some don't like the idea of using compost with street pollutants in their gardens. Some also don't have the means to transport to the county yard waste site. We continue to work on creative ideas with our network of DHs and with our partners, especially our Ramsey County yard waste partners.

1.5: Looking ahead – Plans for the Como Active Citizen Network in 2017

In early Fall of 2017, the CACN will organize a “CACN Potluck and Summit.” The gathering, held in the yard of a lead team neighbor, will provide opportunity for DHs to meet each other, hang out as neighbors, and enjoy shared food. The summit also will provide info via posters to discuss proposed 2018 goals, make decisions on network trajectory, make a plan for learning about Como Lake's chloride impairment, agree on changes to the 2017 Como Curb Cleanup and divide up coordination tasks.

SECTION 2: A model for community-led, place-based, pollution source reduction to be shared with neighborhoods in Capitol Region Watershed District.

2.1: Model Overview

Drawing from what has worked (and what has not worked) in St. Paul's Como neighborhood in creating a resident-led, place-based, phosphorus-source-reduction strategy, we've developed the below model, which is divided into four phases:

- SMALL LEAD TEAM of 2 to 5 residents is identified, convened, and trained to gather facts and organize fellow residents to address local water quality challenges from inside the watershed.
- LOCALIZED LEARNING is defined, researched, and discussed by the lead team of residents to clearly articulate the particular water quality challenge impacting their particular place – the neighborhood where they live – and to define and develop the role played by residents in the community to advance the common good of cleaner, healthier local waters.
- PROBLEM IDENTIFICATION and SOLUTION STRATEGY is defined, designed and implemented by the lead team of residents. The solution strategy is collaborative, scalable to neighborhood-wide, and aligns with the larger Minnesota goal of tackling nonpoint source pollution.
- NETWORK STRUCTURE is created, expanded, and sustained by the lead team of residents so they can organize a broader base of fellow neighbors, strategically synchronize and maximize resident-led impact on their identified, local, water quality issue as they implement their strategy and build their neighborhood's capacity to act collectively.

The model phases, described in more detail below, should be considered a starting point. Ideally, this model and approach can be tested within different CRWD neighborhoods, residents can build on what

works for them, adjust what doesn't work, and adapt the model in ways that maximize their capacity to take the lead on water pollution source reduction practices inside their home watershed.

2.1a: SMALL LEAD TEAM

Most successful, grassroots efforts begin with a small group of thoughtful, committed people who believe in their own capacity to create positive change. Therefore, our model begins with organizing a small team of residents who live in the same neighborhood and preparing them to organize and lead their fellow neighbors. This lead team could begin with just one or two residents. The optimal number is five. The ideal residents for the lead team have (or can develop) these qualities:

- Open to a collaborative process – their role is to guide, not control
- Communicate clearly, with enthusiasm and inspiration
- Curious about the condition of local waters
- Curious about the role of residents in pollution reduction efforts
- Stay focused on building a coalition of the willing - not everyone will be willing
- Spend priority time organizing neighbors – leave the action to network households

As the team grows and a larger network of neighbors is organized, the team will want to develop additional skill sets:

- Knowing where and how to gather fact-based research
- Project management
- Cross-sector partnering
- Strategic planning
- Facilitation of community deliberation
- Deeper neighborhood organizing

Where to find the team

In most communities, there is a resident or a group of residents who are known for their interest in community life. They may be active in local groups or clubs, or simply may be a neighbor who is well known as someone with their finger on the pulse of neighborhood happenings. Begin with local organizations focused on community issues and ask to be introduced to neighbors who are active. Check neighborhood papers that report on people doing interesting projects in the community. Finding just one person to connect with is a great start. That person likely knows of other residents to reach out to. In some instances, starting with staff from a local organization might be the best group to connect with, if no obvious active residents can be found initially.

Begin working one-on-one

In the beginning, it's best to meet individually with each resident you identify or are connected with. Let them know why you are looking for residents in their neighborhood, what's known about the health of local waters (as revealed by CRWD's work in their part of the watershed), and the District's interest in developing capacity among neighborhood residents to define and develop their leadership role in working on the pollution prevention side. Also, give them space to discuss what their views are, what they are concerned with, if anything, what they value about local waters, how those waters are used, and their views on working with fellow neighbors in a collaborative, strategic effort to address local water quality challenges from inside the neighborhood.

Host a small group coffee chat

Once you've identified the one to five residents you'd like to begin working with, and you've summarized in writing what you've learned from the one-on-one conversations, invite them as a group to a coffee chat to explore the viability of forming a lead team of residents who can learn about and then organize and lead fellow neighbors in collaborative, resident-led, water pollution source reduction efforts within their neighborhood. Extend a personal invitation to each and share the written summary from the one-on-ones. Have a clear message for what the coffee chat will be about. For example:

"We are seeking to form a small team of (neighborhood name) residents who are interested in learning about the health of (local lake/river name), building a resident-led strategy to address local water quality challenges from within the neighborhood, and organizing fellow neighbors to join in the effort for maximized impact."

How to frame the conversation

Key to a successful community conversation is to prepare open-ended questions for discussion that are shared in advance of the conversation. This makes clear the purpose of the gathering and allows neighbors to think ahead about what they'd like to share and know. Examples might be:

- What questions and/or concerns do neighbors have about local waters?
- What does the resource mean to the neighborhood and how is it used?
- How connected is the neighborhood in general?

At the end of the discussion, ask if they'd be interested in forming a small team to further explore one particular aspect (identified by the group's conversation) of their lake or river's water quality health and develop a resident-led solution strategy to address it. And if they themselves are not, ask if they can suggest other neighbors to talk with who might be interested.

2.1b: LOCALIZED LEARNING

Host one or more learning sessions.

With a small lead team organized, one or more gatherings may be needed to educate the team in more detail about the water quality health of their local lake or river, what the challenges are, the sources of those challenges, and how this impacts their neighborhood. Ask the team to put together questions they have and share in advance – what else would they like to know? Based on their questions, set up one or more learning sessions, inviting staff from local government, other local experts, other neighbors, to discuss the questions with the team.

Example questions might include:

- What's known about the water quality health of (name of local lake or river)
- What's known about longer-term trends (is the health improving?)
- What's the cause of the condition?
- What is already being done by government, other organizations (including the local community council or neighborhood association), and fellow neighbors)?

Include learning about the role of citizens in water pollution source reduction

In addition to learning the science-based facts about local water quality health, it's also important for

the team to spend time learning about their particular role, as residents in a watershed, in addressing water quality challenges from inside the watershed where they live. It may be helpful for the team to learn from another community (such as Como in St. Paul) that's currently building their resident role in source reduction and how they've approached organizing a network of neighbors. This also would establish a collaborative relationship between neighborhoods for ongoing sharing of ideas.

Ground the issue in "place"

Framing of the local water quality challenge to be addressed should focus on the way that challenge is impacting the particular neighborhood where the lead team lives. Therefore the team's learning should be grounded in their particular "place." Neighbors within a neighborhood have an attachment to place because it's their *home* environment and therefore a shared interest in making that place healthy, including healthy water resources.

2.1c: PROBLEM IDENTIFICATION and SOLUTION STRATEGY

Agree on a problem statement

The team can review what they've learned and identify one aspect of their local lake or river's water quality challenges. Often residents begin with phosphorus as this is a pollutant impacting many lakes and rivers and residents are well positioned to lead prevention strategies. In small group settings, coming to agreement on the problem to be solved usually can be accomplished informally through conversation. Though the team should feel free to seek out deliberation processes that are more structured. Many *deliberative democracy* organizations offer such guides that can be found online.

In most cases, residents will focus their attention on residential streets where pollution sources accumulate in the neighborhood. This is where residents spend a great deal of their time and where they have authority to make decisions and take action – on their own properties and home blocks. It is worth writing out a clear problem statement so there's no ambiguity around what the group is addressing (and what they are not addressing). This helps keep the work of the residents aligned with their intended purpose and goals, and within a manageable scope.

Agree on a solution strategy that addresses the problem statement

With the problem to be solved defined, the next step is to develop a solution strategy that has these characteristics:

- Matches the problem statement
- Is verified by local experts that the solution strategy will result in intended change
- Leverages local resources such as neighbor knowledge, energy, time, relationships, and proximity to the source
- Can be carried out by individual households on their own property and/or block
- Can be carried out at a time of a household's choosing
- Is in alignment with house and yard caretaking they're already doing
- Does not involve much, if any, investment in special equipment
- Can be easily synchronized with other neighbors
- Is easy to scale up simply by adding more households to the network

As new neighbors are organized to help advance the strategy, the strategy may grow over time. The lead team may decide to define specific project management roles for other neighbors willing to take on special tasks. But it's important to always keep capacity front of mind. The sophistication of the strategy should not drive the activities of the network of neighbors. Rather the purpose of the network should drive how strategies and projects evolve. (See 2.2 for an example solution strategy)

2.1d: NETWORK STRUCTURE

Once the lead team has developed a resident-led solution strategy to address the local water quality challenge they've identified, the next phase is to begin developing a broader network of neighbors to tackle the challenge collaboratively. If government agency staff have been leading the model phases thus far, this would be the point at which agency staff should shift from leading to supporting – the goal is for lead team residents to begin leading themselves as soon as is feasible.

In general, organizing and leading other neighbors in a collaborative effort requires these basic skills:

- Communicating well in writing (i.e., over email)
- Tracking and managing information (in a simple spreadsheet)
- Working with external groups/partners (mainly local government)
- Coordinating occasional gatherings (informal house parties or block parties)
- All lead team members should be comfortable talking with neighbors one-on-one

Would training be helpful?

The experience of leading other neighbors in a collaborative effort is itself a great opportunity to learn and build leadership skills. But if the lead team feels they are struggling it's a good idea to seek leadership training sooner rather than later. Referrals to training opportunities in neighbor network organizing and place-based leadership can be provided by Capitol Region Watershed District.

Begin organizing a network of collaborating households

Ideally, neighbors in a collaborating network see themselves as representing their home property and the decisions that are made on that home property. This is distinct from a neighbor joining a committee that works on an issue of interest. In the latter, the person is donating their time and energy as a volunteer for a given issue, usually through a project. Typically, project volunteers don't link their work to their role as decision makers on their home property or the impact of those decisions on the broader neighborhood. Our focus is on organizing neighbors who represent their household.

Organizing begins with lead team neighbors reaching out to households on their home block, one household at a time, explaining what the lead team is planning to do, and why, and inviting their household to join the effort if interested. The message is better received if it's framed as "We are doing this, here's why, would you like to join us?" The emphasis is on joining with fellow neighbors in a collective effort rather than extracting a commitment to engage in a particular practice independently.

In the beginning this may feel like slow work, but building up a network one household at a time will result in a network based on shared interest and neighborly relationships. Spending time talking with neighbors of a household one-on-one (or two-on-one if there is a couple who are head of household), is a great way to learn in depth about neighbors' interests, their perspective on the neighborhood, what they're good at, what resources or relationships they can contribute or leverage, and what ideas they

have to further expand the vision of the network. Having organizing be the primary role of the lead team makes it possible to spend this kind of quality time.

Stay focused on building the resident role

A note of caution: It's easy to be pulled into work by other organizations that are eager to have an organized network of households advance a program or project they've developed. Therefore, it's important to have a clear sense of the network's purpose and how the network's valuable time should be spent. Maybe a program of another organization is in fact a good fit for the network's goals. The lead team may decide to try that program, or a version of it. But residents should always be in the lead. Otherwise developing the resident role will easily fall to the wayside and residents will revert to consuming programs and letting other organizations and agencies assume accountability and responsibility for the problem being addressed.

2.2 Example Solution Strategy – Collaborative Curb Cleaning

If the problem to be solved is too many phosphorus sources accumulating on neighborhood streets AND a need to develop the resident role in taking the lead on pollution reduction, then collaborative curb cleaning during leaf drop season is an easy strategy to try.

2.2a: How it works:

The lead team develops a written description of the issue and the collaborative solution

Based on what they've learned about the impact of leaf litter in streets on local water resources the team can extend invitations to fellow neighbors to *join them* in a synchronized effort among households to remove any accumulated leaves, at least once a week, from the curb in front of their own home. This is done October through November.

How to invite neighbors

It's best for the lead team to start by inviting neighbors they know and have a good relationship with. To aid in inviting these neighbors, a simple postcard invitation can be developed and printed that explains what neighbors are invited to be part of. Similarly, a simple email message can be crafted and shared with neighbors. Interested neighbors will need to RSVP to the invitation. The lead team should compile a list of email addresses to begin the network list of collaborating households.

What is the primary message?

A brief description of the local problem to be solved should be prepared, but the larger message is to explain *why* the neighbors extending the invitation are taking on the "resident role" of removing leaves from street gutters in front of their home – they spend time daily on their home block and can therefore monitor leaf accumulations each week – just the small section of curb that borders their own property. This decentralizes the task of leaf removal, prevents leaves from sitting in gutters for weeks on end releasing nutrients each time it rains, and significantly augments the neighborhood-wide, once or twice-a-season street sweeping done by the municipality.

What are network households asked to do?

Monitor the leaf litter accumulation along the stretch of curb (street gutter) in front of their home. Once a week, if leaf litter has accumulated, remove it and add it to other yard waste to be composted.

Lead team can send occasional email messages to the network

Occasional e-communications to cheer neighbors on, to give rain alerts, or to share relevant information (such as announcing new neighbors who've joined the effort) helps reinforce the feeling of being part of a neighborhood-wide effort.

How to tally results

At the end of leaf drop season a simple online survey (such as a Survey Monkey questionnaire) can be emailed to network households asking them to report how many feet of curb they took responsibility for. CRWD has a formula that can be used to estimate how much phosphorus was prevented from local waters based on feet of curb cleaned, in the aggregate, by network households. The final community impact can be shared with all neighbors in the network and with the broader community.

Evaluate success

The same online survey that asks for feet of curb cleaned can also be used to solicit feedback for ideas to improve the strategy. Three simple questions work great: "What worked well?" "What did not work so well?" And "What ideas do you have for improvements?"

2.2b: Helpful Tools.

Sub-watershed Map

This can usually be provided by Capitol Region Watershed District. It's helpful for neighbors to locate their own house within the local watershed, so they know which local water body receives the stormwater runoff from their home block.

Lawn signs

Providing each network household with a lawn sign marking their home as a "Curb Cleaner" is a great way to motivate those who are taking part – they can "see" each other throughout the neighborhood by virtue of the signs. The signs also pique the curiosity of other neighbors, so lead team contact information should always be included. Lawn signs require funding if done through a printer, but don't hesitate to ask local printers or even online printers if they'd be willing to donate or provide a discount for their printing services and materials. Share the network's water quality and capacity building goals – this may align with their values or community give-back programs. Alternatively, participating households may opt to create their own lawn signs by hand, at least in the beginning, until a larger network of households makes it feasible to do neighborhood fundraising for supplies.

Lawn bags

For neighbors who need a large bag to manage their leaves, it can be helpful to find an inexpensive source for large, reusable yard waste bags. As with the lawn signs, don't hesitate to inquire with distributors of reusable lawn bags, local or online, and ask if they'd donate or offer a discount. Some suppliers are willing to charge only wholesale prices to groups with a community-building purpose. As

with the lawn signs, it might be necessary to do neighborhood fundraising.

Online space for information sharing

It's helpful to have a central place online where lead team members can share more in-depth information about the local water quality challenge they're addressing and about how other local households can join with the network in working on the problem. Something as simple as a Facebook page could be set up, or even a basic wordpress site—reserving a URL is not terribly expensive and free templates make content creation easy.

List of local organizations for potential partnerships

As the network size and area of the solution strategy grow it might be useful to team with local organizations who can provide supports for the resident-led effort. For example, the watershed district, the city, the county, any local community-oriented organizations, churches, schools, and businesses with property in the sub-watershed. This is the ultimate goal with any solution strategy – to figure out ways to collaborate with others working on the same problem, so positive impact can be maximized.

2.3: Pathways for Sharing the Model

There are two primary pathways CRWD could consider for sharing this model with other neighborhoods.

2.3a: Offer a post-program, training opportunity to Master Water Steward alumni to learn how to organize and lead fellow residents in their home community.

Master Water Stewards (a program of CRWD and Freshwater Society) are required to complete a capstone project in their home community and contribute annual service hours after graduation. Assuming a MWS engaged fellow neighbors in completing the capstone project, the MWS could continue the relationships forged. They could form a small leadership team from among these neighbors and explore organizing an ongoing, more permanent network of neighbors who work collaboratively in reducing pollution sources.

If this is of interest, the MWS could approach this in one of two ways. They could bring their neighbor group up to speed on the local issue on their own, and then begin implementing a strategy with the small team, slowly organizing more neighbors over time. Or, if they are more ambitious and know they are interested in organizing a neighborhood-wide network of households, CRWD could connect the MWS to organizing and training resources such as CACN and/or other resources.

2.3b: CRWD staff kick off the initial organizing

If CRWD has particular neighborhoods they've identified as priority areas in need of organized residents to work on pollution source reduction, then it may be more expedient for CRWD staff to pull together an initial team of residents to try out the model. There could still be a role for Master Water Stewards in this scenario. Perhaps they work with CRWD staff as an intern or apprentice.

2.3c: Other questions to consider

Which neighborhoods are a priority?

CRWD will want to give thought to which neighborhoods are the priority areas most in need of/could benefit from pollution source reduction led by residents. This will likely be based on heavy or acute pollutant loads known to be coming from a given area of the District. It may also be useful to consider which neighborhoods have some level of collaboration capacity already in place, such as existing groups or organizations that could serve as launch pads or supporters of a network of households.

Should seed money be invested by CRWD?

As a leadership team is organized in a neighborhood it may become apparent that training in neighborhood organizing, in leading fellow residents, and in setting up and managing a network structure is needed. Setting aside funds to assist with these needs would be prudent. Deciding how the funds should be allocated or what is appropriate to fund can take place as the rollout unfolds.

What's the larger vision?

As with most initiatives that involve public funds, it would be worthwhile to articulate how testing this model in other communities achieves the overarching mission of CRWD. Attaching this to the larger goal of tackling non-point source pollution statewide, appealing to notions of citizenship among residents, and the renewal of local capacity inside neighborhoods to address public issues impacting the community – these provide a vision for this work that is meaningful, aspirational, and pragmatic.

What's the return on investment?

A question that is always asked, and rightly so, articulating the ROI should be grounded in the larger context of what *could be* achieved collectively by residents if they have the capacity, competence, and knowledge needed to significantly reduce pollutants at the watershed-scale.

2.4: Final Thoughts

There is great potential in focusing attention and resources of CRWD and other watershed-based organizations on developing the role of residents to take the lead on water pollution source reduction inside watersheds. Not just through volunteer opportunities that are optional or have low accountability, but through more purposeful roles, attached to the role of resident and household, that include genuine governance responsibility, require capacity development, new social structures like neighbor networks, and collaboration with other local stakeholders.

Working with people in their home communities can seem daunting to organizations that have not had training in modern public involvement theories and methods. The relationship between communities and government agencies can be contentious at times, especially when residents see their relationship with government as one of consumer/service-provider. Viewed through this lens, residents tend to behave like customers and treat government staff as though they are there to serve the will of the people. This leaves government in an awkward spot – trying to reconcile the many different wants and demands of a fickle and unstable “public opinion,” while also responsibly managing public resources.

But the world is changing. As mentioned at the outset of this report, many communities today have a renewed interest in developing their own, local capacity to tackle issues that are impacting them, including issues that have traditionally been seen as government's job. Issues like water pollution can be incredibly complex, but watershed residents need not become experts in the science and technology of watersheds to have an impact on the problem. The expertise of residents is grounded in the role and

accountability of being a property owner, a neighbor in a community, and of having both a personal and public attachment to place. Residents have a vested interest in community assets like neighborhood lakes and rivers remaining or becoming healthy. And they can leverage their neighborly relationships to organize fellow residents to act collectively in the interest of the common good. Many are willing. They just need the right supports inside their home communities to make true collaboration possible.