Setting Measurable Goals

One Watershed One Plan

Supporting information for Section II.3 of the 1W1P Plan Content Requirements

Good watershed management – and the ability to demonstrate progress– relies on setting measurable goals that relate to your watershed's priority areas and issues. Your ability to set truly measurable goals may be constrained by available data and a suite of uncertainties. During the planning process, it's important to have robust discussions about how to strive for the most measurable plan possible. This document provides definitions, examples, and considerations for setting measurable goals.

Definitions

Desired future condition (a.k.a. long-term goal) - the attributes (water quality, water availability, habitat quality) you are striving to attain, regardless of time frame. The desired future condition (DFC) sets the direction for planning and future management. It should be described for priority water resources and should reflect stakeholder interests.

- Average summer water clarity of 10 feet in Round Lake
- All wells in Sand Township have nitrate levels of 3 ppm or less.

Measurable goal (a.k.a. mid-term goal) – the quantifiable change in resource condition you expect after you implement the 10-year plan. The measurable goal should relate to the desired future condition, and express what percent of progress toward the DFC you will make during the plan period. As you evaluate progress, measurable goals can be predicted through modeling the results of your outputs/outcomes or they can be measured directly via monitoring.

- Improve the water clarity in Round Lake from 4 to 7 feet in 10 years (50% toward DFC).
- Reduce the number of contaminated wells with more than 3 ppm nitrate in Sand Township from 30 to 20 in 10 years (33% toward DFC).

> It's difficult to demonstrate progress if you don't know your starting point. Having a baseline measurement is essential to setting a truly measurable goal. If you lack the necessary data, consider using a surrogate goal that would allow you to measure based on what you do know, or include an action item in your plan to fill information gaps.

Outcome (a.k.a. short-term goal) – what, specifically, will happen as a result of the project you installed or the service you provided? Outcomes can directly contribute to measurable goals (e.g. pollution reduction) or they may express changes in knowledge or behavior which lead to actions that contribute towards measurable goals.

- Installing an infiltration basin will treat a 147 acre subwatershed and infiltrate 0.5 inches of runoff, reducing total phosphorus by 118 pounds annually.
- 50 land owners will attend a workshop about cover crops. Sixty percent will report an increase in knowledge, and 40% will ask for additional information about our cover crop cost share program.

- 20% of workshop attendees will plant cover crops (5,000 acres) which will collectively reduce total phosphorus losses by 2,017 lbs/year and nitrate losses by 22,750 lbs/year.

Output (a.k.a. widget) – countable projects, activities, services, or products. Counting outputs is useful for tracking the steps towards achieving your goals, but outputs are not goals in and of themselves.
- We installed one regional infiltration basin.
- We sealed 10 wells in a drinking water supply management area.
- We hosted 5 workshops (45 people total in attendance), conducted 6 site visits, and established a cost share program.

Indicator (a.k.a. metric, benchmark) – the "measuring stick" you use to determine progress toward achieving your goal as you implement your plan (change in resource). Indicators can measure the number or quality of your inputs, outputs, or outcomes.
- Secchi disk readings
- Nitrate concentrations in private wells
- Number of people participating in a cost share program

Organizing your goal-setting discussions

In planning, it is important to differentiate between measurable goals, outcomes, and outputs. While counting outputs is useful for tracking the steps taken towards achieving your goals, **outputs are not goals** because they do not describe the change in resource condition.

Logic models can be a useful framework for thinking about and establishing measurable goals, relating your outputs and outcomes to your desired future condition, measuring your progress as you implement your plan.

As of August 2017, BWSR is in the process of creating a short video about logic models (to be posted on our website) that gives examples of desired future conditions, measurable goals, outcomes, and outputs from watershed plans. This will be a good resource for your group as you plan.

Logic models encourage you to ask a series of questions throughout the planning process:
- Can we state the **issue** in a way that links to what people care about?
- What is the **desired future condition**? **What** needs to change, and **by how much**, in order to get there?
- How much of that change can we make during the 10-year plan period? (**measurable goal**)
- What will we do to work toward our goal (**output**), and what, specifically, do we expect to accomplish (**outcome**)? Can our outcomes be measured directly?
- Who else needs to be involved, what is their role, and what can we do to motivate them?
- What other **assumptions** are we making about the results of our work? What **evidence** (e.g. existing data, models, literature values, anecdotes) leads us to believe our collective actions will lead to the desired results? How **confident** are we?
- Do people **care** enough about the issue to make the **required investments** to reach the goal?

What makes a goal measurable?

Goals should be specific and clearly defined. **Goals that start with words like "encourage" or "promote" are usually not measurable**. Goals that starts with "improve" or "reduce" may be measurable, but progress toward that goal can only be evaluated if it has a quantifiable element.

When designing your goals, ask the following question: "will we be able to show that we have been successful in achieving this goal when we assess our implementation of the plan in the future?" Think about what you want to accomplish, who will be involved, how long it will take, the location, and the purpose. To be able to report success, your goals must ultimately be specific enough to answer five W's (What? Who? When? Where? and Why?).

Example 1: *"Restore/rehabilitate and protect self–sustaining Brook Trout populations in as many of the original, native habitats as is practical."*

1. Specify *what* "restored" means for the Brook Trout population
2. Clarify *where* the population will be restored
3. Determine *when* your goal will be achieved

More measurable: *Restore Brook Trout populations to a minimum of 100 individuals per mile[1] (or increase populations by 25%) in Amity, Chester, and Keene Creeks[2] by 2026[3].*

Example 2: *"Educate the public on how to conserve and protect our surface water resources."*

1. Specify in *what* way you will educate the public
2. Determine *when* your goal will be achieved
3. Clarify *why* you want to educate the public

More measurable: *Host two cover crop workshops for landowners[1] per year[2], with 40% of workshop attendees enrolling in our cost-share program[3].*

Considerations for Establishing Measurable Goals

BWSR acknowledges that there are constraints and limitations to setting and achieving goals. Natural systems are complex, and there are variables outside your control. You may lack necessary data, information, or models. Understanding and identifying what you can *control*, what you can *influence*, and what is truly *outside your control* will help you clarify your goals and the actions you will take. Some goals will be more measurable than others. You might include a small number of "aspirational" goals, but the vast majority should have a measurable component. The following points describe factors to consider and discuss while setting goals.

Uncertainty

- Despite your best efforts, external factors (e.g., land conversion, drain tile installation, changing precipitation patterns) may undo or negate the effects of your good work. You may want to consider adding an action item in your plan to track those factors if possible so you can evaluate whether your management actions were ineffective or if they prevented more severe degradation.
- In some situations, you may need to use a surrogate to quantify the effects of your actions. For example, you may not be able to directly measure a reduction in nitrates in a groundwater aquifer because

groundwater systems are complex, but you can measure (or predict) a reduction in nitrogen-based fertilizer application that results from your work with agricultural producers.

- Often, success hinges on the willingness of landowners and citizens to modify their behaviors. A variety of social science techniques (e.g., surveys, focus groups) are available to measure the effectiveness of your education, outreach, and marketing activities.

Scale

- Measurable goals can be set for any scale in the watershed. While some actions in the plan will apply watershed-wide, **your plan should also identify priority water resources or sub-watersheds where you will focus your efforts**. Setting measurable goals for targeted lakes, stream reaches, or drinking water supply management areas will increase your chances for demonstrating success.

Achievability

- Consider what types of activities can be implemented with local resources versus what additional goals could be achieved given outside funding.
- The 1W1P approach encourages goal setting that **stretches and challenges** your group, but not to the extent that the goals feel demotivating or impossible. Take the time to understand the range of skills and resources present in your partnership, and where you will need to grow in order to achieve your goals.
- Not all water bodies have the potential to be restored to meet water quality standards or public expectations. Each water body must be evaluated for **realistic expectations for measurable improvement** within the limitations of science and funding.

> Challenge your group to set a goal that is as measurable as possible, but **be realistic and take a balanced approach.**
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> Widgets and metrics are certainly countable, but how meaningful are they when it comes to your ultimate goal? Is the number that's easy to collect a distraction from the **hard work** of watershed management?
>
> Don't get so caught up with what you will *measure* that you lose sight of what you hope to *accomplish.*

Protection

- If your goal is protection, the long-term goal may be no change in resource condition. Instead, you may be able to quantify risk of negative change (e.g. acres of forest that could get developed or converted to cropland), determine the level of change the resource can withstand while still achieving the desired future condition (e.g. no less than 75% forest cover), and **set a measurable goal for prevention** (e.g. maintain forest cover on the needed portion of at-risk acres via private forest management, zoning, or easements).

Getting to a quality plan

At the end of this process, you should have **a set of quantifiable goals that clearly conveys expected changes in water resources during the 10-year timeframe of your watershed plan**. Your goals should be a balance of broad versus focused, and shorter-term versus longer-term, relating directly to your prioritized issue statements. Your goals should indicate an intended pace of progress for addressing your watershed's priority issues, and will ultimately allow you to demonstrate your progress to the public, key stakeholders, and potential funders.

CLEAN WATER LAND & LEGACY AMENDMENT