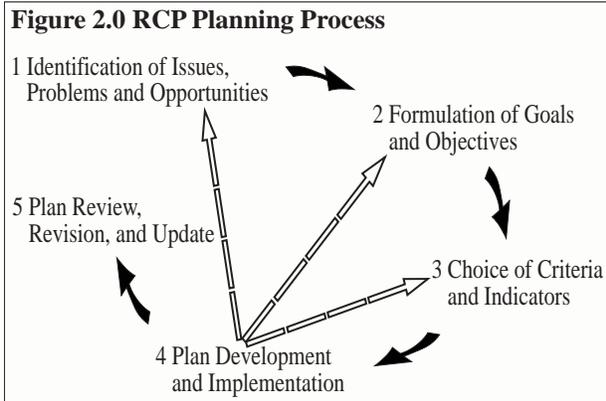


## 2 Making the RCP for Paxton Creek

The development of the RCP is a multifaceted endeavor involving a problem solving (planning) procedure, with various modes of public participation, professional reviews of plan components, and other activities.

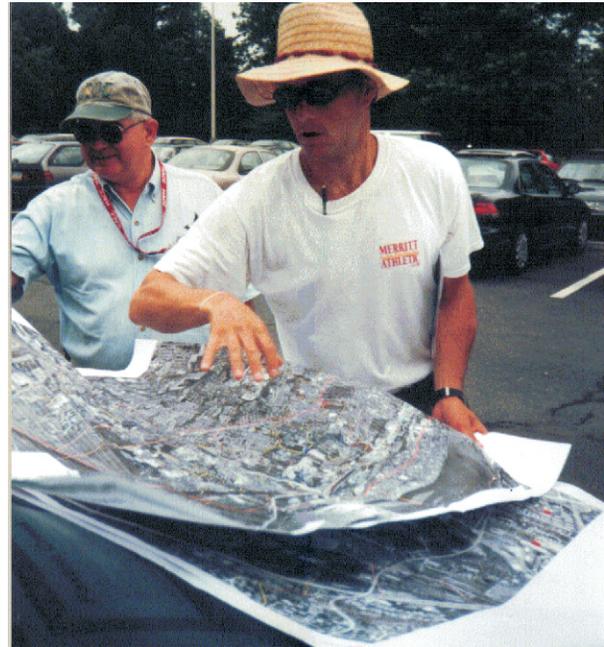


RCP planning follows a five-step problem solving procedure. (Figure 2.0)

- *Watershed problems, issues, and opportunities* are identified through visioning meetings, surveys, workshops, interviews, data evaluations, and other means. An information baseline with data on dozens of factors and maps for comparing factors (what conflicts, reinforces, cooperates) are compiled.
- *Plan goals* are determined based upon the problems, issues, and desires; the goals are different for various parts of the watershed (subwatersheds).
- *Criteria and indicators* the rules and measures for making plan decisions, and evaluating goal success are selected.
- The heart of the process, *plan development and implementation* involves: putting the information together, integrating upland and riparian projects, prioritizing potential rehabilitative efforts, and monitoring basically deciding what, when, where, and how for watershed improvement.
- *Reviews, revisions, and updates* will be necessary during the coming decades in response to changes in the watershed and RCP circumstances (funding, personnel, rehabilitative techniques).

### Planning Methods and Sources

The RCP uses a variety of methods. These approaches collect information, analyze data, perform other planning tasks throughout the planning process, and include input from stakeholders during all phases.



Stormwater Retrofit Survey

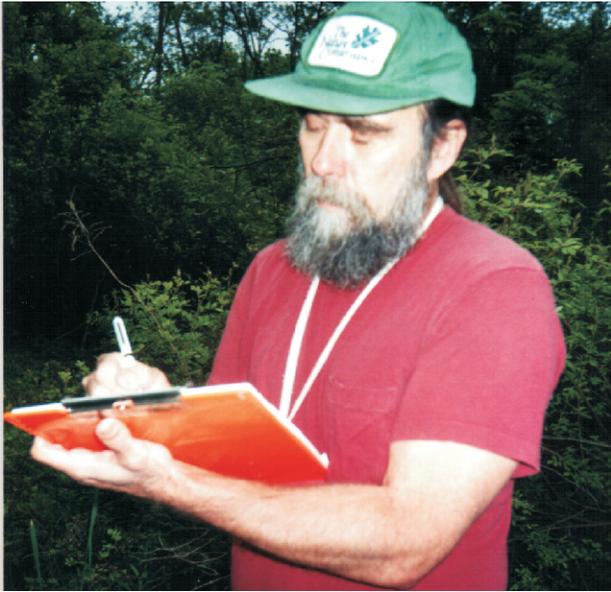
Existing information includes data files, records, reports, books, maps (paper and digital format), project blueprints, diagrams, drawings, and photographs. Particularly useful (with a few examples) are original data files (Paxton Creek water quality monitoring data), primary study reports (*Paxton Creek Stream Corridor and Watershed Assessment, Paxton Creek Roundtable*); secondary reports based upon primary and secondary information (*Dauphin County Draft Comprehensive Plan*). The main procedure was to review existing information, get additional explanations or clarifications, as necessary, and make integrative evaluations.

New studies were performed in subject areas with insufficient data. These studies by PCWEA and partners using standard scientific procedures were of the following types -- primary data collected directly from the watershed: terrestrial vegetation;

**“Mowing lawns to creek banks just love them to death!”**

# Making the RCP for Paxton Creek

landowner and stakeholder issues, practices, and preferences; comprehensive riparian habitat assessment, vegetation, water chemistry, macroinvertebrate abundance and diversity; land cover and impervious surface maps; stormwater detention pond inspections; codes and ordinances evaluation; *Paxton Creek Baseline and Stormwater Retrofit Assessment* study; *Paxton Creek North Subwatershed Restoration Plan*; primary and secondary data compiled and reworked for watershed focus (Census 2000 Summary 3, GIS maps, stormwater infiltration). Most work was performed by professionals. Some was achieved by college students under professional guidance. Studies on two subjects (creek flows and pollutant loads) were started during the planning period.



Vegetation Inventory

Part of this RCP, and as a precursor for ongoing and future activities, is a plan for the Paxton Creek North (PCN) subwatershed. This work involved a review of existing hydrologic, biological, water quality, and geomorphologic (creek processes) data, followed by making maps from remote sensing images, locating sites of potential problems and opportunities on the maps, performing a subwatershed delineation which established precise water flow boundaries, and making an analysis of impervious cover. Field methods involved an inventory of stormwater retrofit facilities, and teams performing stream and upland assessments with techniques called the Unified Stream Assessment (USA), the Unified Subwatershed and Site Reconnaissance (USSR).

The USA is a comprehensive stream walk for evaluating the physical, riparian, and floodplain conditions in small urban watersheds. The USSR assesses potential subwatershed pollution sources, and restoration opportunities in areas outside the stream corridor. (CWP, 2004) Together, the stream, subwatershed, and inventory methods were used to identify sites for 10 categories of watershed rehabilitation and enhancement projects: pollution source controls, on-site stormwater facility retrofits, riparian reforestation, creek rehabilitation, septic wastewater discharge prevention, upland reforestation, flood controls, trails installation, education, and recreation with economic redevelopment. Following prioritization of the projects by the Watershed Restoration Template (CVI and DEP, 2004), the RCP implementation costs were estimated using unit cost figures for subwatershed planning compiled by the Center for Watershed Protection (1998). Late in the process subwatershed modeling flow estimates became available (DCCD, 2005). Although this information was too late for incorporation in the choice of projects, it can be used in future project prioritizations, and applications with the Watershed Treatment Model (Center for Watershed Protection, 2002), a desktop spreadsheet approach for estimating pollution load reductions (sediment, nutrients) from various treatment options associated with different projects. An RCP objective was the formation of an implementation matrix integrating project and program activities (Table 8.4). This matrix shows: the types of activities; associated goals, objectives, strategies, and tactics; evaluation indicators; required costs and resources; participants and responsible parties; schedule.



Stakeholders Meeting

# Making the RCP for Paxton Creek

## Public Involvement

Plan analyses and findings were submitted to agencies for review and comment, and to watershed stakeholders and the public at workshops, meetings, website interactions, and library displays. Planning materials were supplied to an advisory group and technical committee for deriving input into the plan. The PCWEA quarterly newsletter contained stories issue by issue about particular planning studies, and plan status updates. A special newsletter issue accompanied the release of the draft plan.



Planning Workshop

Planning workshops began the process (RCP launch), occurred near the end of data gathering phase (PCN Stakeholders Gathering, and State of the Watershed Report), and accompanied the preparation of the draft plan (RCP Projects Prioritization Workshop). The initial and final workshops, guided by planning professionals, featured proposed plan inputs and GIS maps. RCP small group discussions focused upon select plan themes (water resource management, recreation, economic development). The website contained a plan summary with links to the Appendix sections,

and invited comments from participants. During February, 2005 library displays designed by college students at the East Shore Area Library featured monitoring, and the planning process with inputs into the RCP. The educational materials for follow up and implementation include the brochure *Are You Loving Paxton Creek to Death? (AYLPCTD?)*, slide shows on Paxton Creek and a subwatershed, and 7 fact sheets on practices specific to residential, municipal, land development, and business behaviors that can improve the watershed. A copy of the education brochure *AYLPCTD?* is attached (RCP-1).

The RCP brings a new era to the watershed: projects. Although past public involvement was extensive, the public involvement program will need new emphases better attuned to the needs of specific stakeholders. Examples: PCWEA sponsorship of tours to proposed project sites, neighborhood and subwatershed focus groups formed for local advisory and facilitation roles, frequent meetings at regular times, and continuing partnerships with local people will be necessary so people can understand better, participate more meaningfully, and even lead projects in their communities.



Creek Habitat Education

# Making the RCP for Paxton Creek

## Community Context: Concerns and Practices

Even before the RCP process was officially underway, the public pulse of the watershed was being taken. At 4 visioning gatherings conducted by PCWEA throughout the watershed, 4 main sets of frequent concerns were found to dominate 91% of the stakeholder interests: floods, stormwater runoff; water quality, and related issues; sprawl and open space; vegetative habitat and wildlife. Forty concerns were expressed by 124 persons at the visioning meetings. (Figure 2.1) Additional insights about watershed concerns were gathered by surveys, interviews, participative workshops, and other means involving hundreds more stakeholders.

Some people came to visioning sessions looking for immediate assistance with specific problems (particularly flooding), not merely to respond with their opinions. Some never attended other watershed association events. This experience points to a central tenet: a Paxton Creek RCP stands little chance of being implemented unless the people have a shared image. This requires the RCP coordinators to take actions that help stakeholders share common goals, understand what is involved, agree on what to do, have clear expectations, enjoy widespread participation, and exercise patience. PCWEA must help stakeholders give input, and enjoy their accomplishments in implementing the RCP and subwatershed plans:

**Broad consensus on goals.** Actively share data and maps, make evaluations, select planning criteria and indicators, and customize subwatershed management tools.

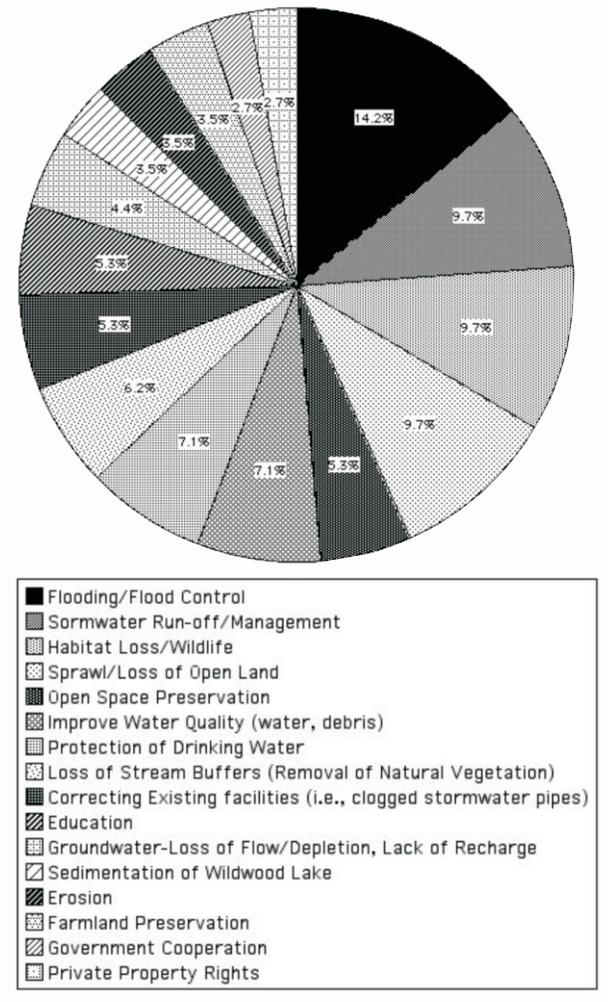
**Watershed understanding.** Increase watershed awareness and stewardship involving intergenerational educational activities, and technical training.

**Agreement on tasks.** Promote ways and establish programs for accomplishing goals involving public private partnerships while building community cohesion.

**Widespread participation.** Encourage involvement by all stakeholders, so as to build upon the diversity and strengths of the entire watershed, while aiming for synergism.

**Realistic expectations and patience.** Help participants appreciate the benefits and take pride in their achievements, so as to avoid boredom and burnout.

Figure 2.1 Watershed Concerns



Digging Rain Garden

# Making the RCP for Paxton Creek

For the most part stakeholders are cooperative, agreeable, and have good intentions, but many of their current practices are harmful to the creek. (Table 2.0)

**Table 2.0 Practices Harming Paxton Creek**

- ☑ Careless use of substances (oils, fertilizers, cleaners) pollute the creek through stormwater runoff.
- ☑ Mowing lawns to the edge of creeks for a tidy appearance can greatly accelerate erosion, and allow pollutants to wash into the creek.
- ☑ Clearing creek side vegetation for a neat or landscaped appearance.
- ☑ Connecting drain pipes from basements, washing machines, and toilets (illegal discharges!) directly to the creek or wetlands.
- ☑ Separating and poorly coordinating pollution prevention, stormwater management, and watershed enhancement (recreation, economic redevelopment) by municipalities.
- ☑ Beginning conventional land development with complete, sometimes careless, land clearance (clearing and grubbing).
- ☑ Failure to recognize unique site aspects worth conserving or protecting before engineering plans for land development are begun.
- ☑ Stripping top soils (vastly diminishing stormwater infiltration, and productivity of gardens), at the start of land developments.
- ☑ Continued building of homes and other developments (roads, utilities) on the mountain and in headwater areas.
- ☑ Conventional land development ordinances focusing protection upon sites, but not downstream properties (causing erosion, floods).
- ☑ Running stormwater off streets into curbs, drains, and ponds, rather than simply soaking into swales and vegetation beds.
- ☑ Ordinance requirements for overly wide and long streets.
- ☑ Largely unnecessary parking areas, as for “once-in-a-century” commercial sales events (excess space even required by ordinances).
- ☑ Creek corridors with vegetative buffers too narrow and too sparse to keep polluted waters out of the creek.
- ☑ Landowners using the last inches of their properties by encroaching upon creek corridors with walls and outdoor storage piles.
- ☑ People who complain of upstream runoff causing them damage (floods, erosion), but who do little to reduce runoff on their own land.

- ☑ Rooftop and other runoff discharged onto driveways, sidewalks, and streets rather than local, onsite soaking into soils and vegetation.
- ☑ Loss of open space resulting in groundwater losses (dry wells, low creek flows, wildlife habitat loss, diminished recreation potential).
- ☑ Use of the creek almost entirely as a drain, without any consideration for other possibilities (creek-based recreation, wildlife habitat, trails/alternative transport, economic redevelopment).
- ☑ Participation in occasional, isolated rehabilitation events (creek cleanup, tree planting, trail maintenance), where ongoing, repetitive actions are really needed to make a big difference.

The list goes on.

The workshops and other public participation activities show limited public understanding of how a watershed works. Generally, citizens are more likely to be aware of crises—hazardous waste spills, floods, wet basements, and droughts and demonstrate less knowledge about the big picture of watershed health. Similarly, local government officials lack an understanding of watershed dynamics, but are becoming increasingly aware of the interconnections, and need to implement policy, programs, and regulations that best balance land use practices with the quality and quantity of water resources.



Lawn Mown to Creek Edges

