

## **1.1 Introduction: Why do we need a Stream Management Plan?**

The community process for local stream management planning is an emerging practice in the Catskills region that recognizes the stream's importance to our overall quality of life. The purpose is to coordinate decision-making around common goals we collectively identify for the stream. This stream management plan was created cooperatively by bringing together the Rondout watershed community, local leaders and area agency representatives, and identifies many common goals for the Rondout Creek and its adjacent floodplains, forests and wetlands.

The residents of the upper Rondout Creek valley – from the Peekamoose Gorge to the Rondout Reservoir-- know the awesome power of the Creek. Over the past several centuries they learned how to harness that power, but also to keep out of its way when floodwaters roared, tumbling boulders down the streambed, leaving foundations of homes and the people inside trembling on the stream banks.

Over generations, berms and revetment were installed, and in some reaches, the Creek was intentionally redirected. Abutments and numerous bridges – nine above the reservoir – were built to allow human settlement on both sides of the stream. Hardened road embankments edge in on the creek at many narrow points in the valley. Floodplains and streamside wetlands were filled in some places while diversions to sluice water into floodplain ponds were created in others, and pastures and lawns have frequently been cleared along creek banks and terraces. NYS DEC has historically supplemented the native fisheries by introducing sport fish for recreation. Trees in the powerline rights-of-way – which frequently run along the stream banks – are regularly cut or removed.

Each of these activities contributes to the overall picture of stream management in practice today on the Rondout Creek. Even with these human impacts, the stream remains relatively wild, and generally quite healthy. It shifts around within its floodplain during big floods, as those who remember the floods of 1928 or 1996 and many others will attest. The fishing is good, but local anglers will tell you it was better twenty years ago. The water quality is high for the most part, while recent landslides and ditch maintenance practices contribute to turbidity. Summer residents cool off during the dog days of July and August in the scour pools of the Rondout Creek; while old timers recall that the swimming holes were once deeper. The forests that have returned to the hillsides throughout the Catskills over the past century keep the water cooler and the banks more stable on many tributaries of the Rondout. So why does this Creek need a management plan?

In past years, most activities affecting the stream have been relatively uncoordinated. Landowners managed their own stream banks and floodplains; highway superintendents managed road embankments and bridges; power companies clear their rights-of-way. When there were major problems, federal agencies such as Natural Resources Conservation Service or the Federal Emergency Management Agency brought resources to address immediate needs. NYS Department of Environmental Conservation requires a permit for certain activities in or near streams. The U.S. Army Corps of Engineers also has a similar permitting program (see Section 2.11).

Each of these players in stream management has their own objectives, specific knowledge or area of expertise, and individual ideas about what needs to be done to keep their section of the stream healthy. No single force, however, holds responsibility for coordinating all of these isolated efforts. More importantly, as a group we can pay more attention to how one action on the stream may directly compromise the interests and efforts of others.

Streams are systems: what someone does on their own stream bank can create significant effects –good or bad– upstream or downstream. In this way, streams are in many ways a community resource, and might be better managed with a coordinated effort. We recognize the many benefits streams contribute to our community’s quality of life, and also the many risks they pose. Coordinating our decision-making around stream management goals we identify and hold together will contribute to the common good.

This coordination requires an ongoing commitment, and this Plan provides a framework and process to significantly improve those efforts. With a wealth of local knowledge about the Rondout Creek, many questions still remain:

How can we know whether the erosion we see along stream banks is just a natural part of the way streams evolve, or whether we are seeing excessive erosion and a stream system destabilized by the way we’ve managed it in the past?

Where there are problems, will the stream “fix” itself, and how long will that take? What further problems will likely result in the meantime?

Do we need to change our management strategies, and undertake proactive projects to restore or protect stream channel stability?

Large trees falling into the stream as a result of erosion can cause the stream to change course and act unpredictably, but will removing the wood destabilize the stream in a different way?

Where should we invest our limited resources for restoration or protection?

How can we know more reliably the condition of the fish community and the quality of the stream habitat?

What is the trend in the overall ecological health of the Rondout Creek?

In recent decades, advances have been made in the science of stream form and function (see Section 3.2 Introduction to Stream Processes). As part of the process of developing this plan, assessments and inventory of the condition of the stream were undertaken using state of the art methods, and the results of those assessments are described in this Plan. These baseline conditions in the upper Rondout Creek will help those faced with these challenging questions measure future conditions against the baseline to determine trends.

In late 2009, New York City Department of Environmental Protection (DEP) contracted Sullivan County Soil and Water Conservation District (SCSWCD) to develop and implement a stream

management plan for the Rondout Creek Watershed. This stream management plan represents the joint efforts of the Rondout streamside community, local leaders and representatives of agencies involved in different aspects of stream management. In addition to identifying our common goals, it identifies competing goals as well, and provides a road map for coordination among the many stakeholders - or those who rely on, work with, recreate in, and/or live by the waters of the Rondout Creek, including: local landowners concerned about erosion, flooding, the fishery and the beauty of the stream; the highway departments of the Towns of Denning and Neversink, Sullivan and Ulster Counties, who are responsible for managing the roads, bridges and culverts that residents and area emergency personnel use regularly; utilities that manage rights of way along the stream; anglers who enjoy the trout fishery; and the downstream communities of the lower Hudson Valley and the City of New York, nine million residents who ultimately drink some of the Rondout Creek's waters.

The Rondout Creek Stream Management Plan summarizes the benefits, problems and needs of the entire creek and watershed sub-basin. The plan provides recommendations for long-term stream stewardship and protection of water quality. This Plan also includes summaries of earlier investigations and historical data on the upper Rondout, as well as the results of inventories, assessments and analyses completed specifically for inclusion in the Plan. Based on this information, the Plan presents recommendations we can follow to individually and collectively reduce the risks of living in the Rondout Creek valley, improve the ecology of the stream and floodplain, and protect its many ways it is a valuable resource to everyone in the community.