

## *~V. Working and Living with Streams~*

### *STREAM STEWARDSHIP*

Once one understands the basic principles of stable, healthy streams and how human activities affect those streams, the question of “What next?” usually arises. This section will outline some general principles of stream stewardship that can be adopted at the personal, municipal, or regional agency level.

- Work toward the protection and/or restoration of
  - the environmental services provided by streams and floodplains
  - the health of stream and floodplain ecosystems
  - the naturally effective channel form and function of streams
  - floodplains as part of the natural stream system
  - riparian buffers
- In the process of managing streams to protect public safety and infrastructure, avoid threatening
  - stream health upstream or downstream
  - the upland ecosystem through which the stream runs
  - the streambank stability of neighboring properties

Many stewardship and/or management practices require permits from regulatory agencies. Permitting is further described as follows:

### *PERMIT REQUIREMENTS<sup>12</sup>*

If you plan to alter a stream or floodplain, it is important to understand the applicable regulations and what permits, if any, are required. A proposed project that does not conform with environmental regulations will probably be rejected by the regulatory agencies. Rather than fight a losing battle, ask the county Soil and Water Conservation District (SWCD) to help develop a project that meets your stream management objectives without an adverse impact on the stream system. Once you’ve got a good design, the SWCD can assist with obtaining any necessary permits. A stream project may require approval by one or more of the following agencies:

**NYSDEC:** The NYS Department of Environmental Conservation (NYSDEC) is responsible for preserving and protecting lakes, rivers, streams, and wetlands in New York State. Activities that may require a permit include:

- Disturbance of the bed or banks of a ‘protected stream’ or other watercourse.
- Construction and maintenance of dams.
- Excavation or filling or both in ‘navigable waters.’
- Disturbance within or adjacent to a ‘state regulated wetland.’

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<sup>12</sup> Reprinted from “Stream Processes: A Guide to Living in Harmony with Streams” with permission by Janet Thigpen, Southern Tier Central Regional Planning and Development Board.

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To determine if a state permit is required, it is recommended that you contact the NYSDEC early in the planning process. More information can be found in Section 8 of Volume 2.

**U.S. Army Corps of Engineers:** Under the Clean Water Act, the Corps of Engineers is responsible for ensuring that projects in the ‘waters of the United States’ do not adversely affect such waters. In addition, activities ‘in, under, or over a navigable water or wetlands adjacent to navigable waters of the United States’ are regulated under the Rivers and Harbors Act. Examples of regulated activities include but are not limited to: dredging, filling, excavating, land clearing using mechanized equipment, ditching, stream channelization and relocation, shore protection, and dock construction. It is recommended that you consult with the Corps of Engineers regarding federal permit requirements for any project in or near a river, stream, or wetland. If the project also requires a permit from NYSDEC, a joint application process can be used to obtain the state and federal permits. More information can be found in **Section 8 of Volume 2**.

**Floodplain development permit:** Most municipalities regulate development within the area mapped as the 100-year floodplain according to the standards established by the National Flood Insurance Program. These regulations apply to in-stream activities, as well as those in adjacent floodplains. The requirements for floodplain development are intended to ensure that new development in flood-prone areas is adequately protected from flood damages and does not cause damage to other properties. This permit may require engineering analysis to determine if a project will result in an increase in the height of flooding during a 100-year flood event. Regulated floodplain areas are delineated on federally prepared floodplain maps. Permits for development activities within the designated floodplain are obtained from the city, village, or town.

**Local land use regulations:** In order to prevent the problems that inevitably arise when development interferes with streams, some municipalities have adopted additional land use regulations for stream corridors. These may take the form of stream setback provisions for buildings, site plan review requirements, or additional development standards within a stream corridor overlay district.

**Property owner:** Unless you are operating under an emergency authorization, landowner permission is required for any work on property that you do not own.

**Easement or Right-of-Way:** If a proposed stream project is located within an easement or highway right-of-way, additional permission may be required to insure that the proposed project does not interfere with highway safety or the purpose of the easement. Agencies that build or maintain flood control projects (U.S. Army Corps of Engineers or NYSDEC) generally hold easements requiring that any project on flood control lands obtain prior approval. The NYSDEC also holds easements for fishing access along some streams. Some property is protected by conservation easements.

Although the overlapping jurisdictions of various government agencies may be confusing and frustrating, keep in mind that the underlying regulations were enacted to protect public safety and the quality of the environment. A project that is consistent with these objectives should be

granted the necessary permits. The county Soil and Water Conservation District is a valuable resource in helping you to navigate the regulatory waters and obtain permit coverage.

**Even if no permit is required, you may still be responsible for any water quality violations that result from a stream project.** It is always a good idea to talk with your county Soil and Water Conservation District if you are unsure of how to proceed.

## ***FREQUENTLY ASKED QUESTIONS<sup>12</sup>***

### ***Who owns the streambed?***

New York State is the sovereign owner of the beds of “navigable waters” in the state. This ownership gives the state the right to control the bed and to ensure that navigable waterways shall forever remain public highways. A stream and any contiguous wetlands may be classified as “navigable” if it is large enough for operation of a canoe or larger boat. For information about state ownership of a waterway and the activities for which state approval is required, contact the Lands Underwater program of the NYS Office of General Services (<http://www.ogs.state.ny.us/realEstate/permits/luwfaq.html>, verified May 23, 2007).

As a general rule, the ownership and therefore control of the bed of non-navigable streams or other non-navigable bodies of water is vested in the proprietors of the adjoining uplands, unless their deed provides otherwise. In other words, if you own the bank of a non-navigable stream, you probably own the streambed and are referred to as a riparian owner.

Regardless of who owns a stream, various government entities retain police power over activities that may impact navigation, public safety, the environment, or the rights of other property owners. **Owning a stream does not give you the right to do whatever you please with it.**

### ***Who owns the water in a stream?***

In New York State, water in a stream is not “owned” by anyone. The relevant question is:

### ***Who has the right to use water in a stream?***

Water rights and water laws vary from state to state. New York follows the riparian rights doctrine developed under common law. Common law means that the rules were not enacted by the legislature, but were developed by the courts through the decisions they hand down. Riparian rights doctrine allows the owners of land bordering on a watercourse to withdraw a “reasonable” amount of water. The courts have generally held that domestic use or use on the land is “reasonable,” while removal of water from the riparian property is “unreasonable.” Because all landowners along a stream have “riparian rights,” none can use the water so as to deprive the others of their rights. If a water use interferes with the “reasonable” use of another riparian owner, the aggrieved party must go to court to protect his/her rights.

***Do river basin commissions grant water rights?***

In some New York watersheds (such as the Susquehanna, Delaware, and Great Lakes Basins), multi-state commissions may have the authority to regulate water use. These agencies can protect other water users and the environment by reviewing and approving a proposed water withdrawal. Although there may be fees associated with water withdrawal permits, this approval is a police power function and does not confer a property right or “ownership.”

***Who is responsible for the stream?***

Restoration of stream problems is **generally the responsibility of the private landowner**. Although various government agencies have regulatory jurisdiction over how a stream is managed, it is not their job to come and “fix” your stream. Government highway departments are limited in the extent of their stream work to that needed for protection of roads, bridges, and culverts. Other government resources are more likely to be available to assist with a project that restores a degraded stream system, rather than one designed for localized protection of private property. For information about stream maintenance and restoration assistance, contact the county Soil and Water Conservation District.

**Responsibility for a stream does not give you the right to do whatever you consider necessary to “fix” its problems. Assume that every stream is regulated unless you determine otherwise.**

***If flooding occurs or gets worse after a stream has been modified (by diverting flow, modifying the channel, constructing a bridge, etc.), is the person who made the modification liable for damages?***

**Yes, quite possibly.** Courts have, according to common law, followed the adage “use your own property in such a manner as not to injure that of another.” This means that no landowner, public or private, has a right to use his/her land in a way that substantially increases flood or erosion damages on adjacent lands. A municipality or property owner may thus be liable for construction, improvements, or modifications that they should reasonably have anticipated to cause property damage to adjacent property. The lack of proper planning, design, and execution thereof, may be considered a clear indication of the lack of good faith and hence negligence with regard to damages that subsequently occurred.

***May someone be held liable for failing to remedy a natural hazard that damages adjacent property?***

**Sometimes.** Courts have generally not held governmental units and private individuals responsible for naturally occurring hazards such as stream flooding or bank erosion that damage adjacent lands. In keeping with this principle, a municipality would not be liable for failure to restrain waters between banks of a stream or failure to keep a channel free from obstruction that it did not cause. However, a small number of courts have held that government entities may need to remedy hazards on public lands that threaten adjacent lands. In addition, land owners and governments are liable if they take actions that increase the hazards.

***Can liability arise from failure to reasonably operate and maintain a bridge, drainage structure, dam, or flood control structure?***

**Possibly.** The owner of a dam or other water control structure is responsible for inspecting and maintaining it. Where there is a duty to act and the risk of not acting is reasonably perceived, then failure to take appropriate actions may be considered negligent conduct.

***May a regulatory agency be liable for issuing a regulatory permit for an activity that damages other private property?***

**Yes, quite possibly.** In fact a careful analysis of hundreds of cases in which the lawsuit involved permitting indicates that a municipality is vastly more likely to be sued for issuing a permit for development that causes harm than for denying a permit based on hazard prevention regulations. The likelihood of a successful lawsuit against a municipality for issuing a permit increases if the permitted activity results in substantial flood, erosion or physical damage to other private property owners.

***How safe is safe enough?***

Municipalities regularly issue permits for activities that are in compliance with existing laws, but might still be at risk of damage. For example, floodplain development regulations generally apply only to areas mapped as the 100-year floodplain. Yet significant flooding and erosion damages can and do occur outside of these regulated flood-prone areas. Some municipalities address this additional risk by attaching conditions to their approvals for those projects with identified risks. These conditions can clearly state that the municipality is **not obligated** to fix personal property in the event of damage. One Town granted approval for a driveway bridge that met all applicable standards, but attached material clearly warning the applicant about the hazards of driving through floodwaters, the risk that emergency vehicles may be unable to reach the house during floods, the potentially high maintenance costs, and the potential liability for the owner if the project results in damage to other property.

***May governmental units be held liable for refusing to issue permits in floodways or high-risk erosion areas because the proposed activities could damage other lands?***

**No.** In general, landowners have no right to make a “nuisance” of themselves. Courts have broadly and consistently upheld regulations that prevent one landowner from causing a nuisance or threatening public safety.

***What precautions can be taken to avoid liability?***

**Be “reasonable.”** The overall issue, in most instances, is the “reasonableness” of an action by the community or property owner. Due to advances in technology and products, there is an increasingly high standard of care for “reasonable conduct.” The “act of God” defense is seldom successful because even rare flood events are now predictable. As a precaution, technical assistance from stream professionals should be obtained prior to implementing any stream project. Because a well-designed project is less likely to damage other lands, this reduces the

potential basis for legal action. And if you are sued, the best defense is a well-documented record showing “due diligence.” That is, that you have done sufficient analysis and design to demonstrate the adequacy of the project with “a reasonable degree of certainty.”

## ***SELF-ASSESSMENT***<sup>12</sup>

**Q: “That gravel bar takes up most of the stream channel—that’s why the stream floods. If we could only remove that gravel bar, then this stream would stay in its banks.”**

- (a) All of the gravel deposited above the low water level should be removed to solve the flooding problem.
- (b) The gravel should be removed to a level below the low water level so that the stream channel is deeper and wider.
- (c) Although gravel bar removal may provide temporary relief in some situations, the gravel bar is likely to return during the next high flow event.
- (d) The gravel bar is part of the stream system and should be planted with vegetation to stabilize it.

**A:** (c) *In many streams, gravel bars are an integral part of the stream and floodplain system. They are comprised of sediment that will be carried farther downstream during the next high flow event and replaced by a fresh supply of gravel. If the gravel is stabilized, as recommended in answer (d), then the stream is likely to erode somewhere else to obtain the necessary sediment load and flooding at the site will continue.*

**Q: “If they would dredge this stream, it would be deeper and we wouldn’t have all of these problems with flooding and erosion.”**

- (a) A larger stream channel would hold all of the water and solve the flooding problems.
- (b) Dredging results in increased erosion.
- (c) Dredging results in increased sediment build up, which may make flooding problems even worse.
- (d) Dredging can result in increased erosion and/or increased sediment deposition, so both (b) and (c) may be correct.

**A:** (d) *Because dredging alters the shape and slope of the channel and disconnects the stream from its floodplain, it destroys those features that naturally dissipate the stream’s energy. This frequently results in severe erosion problems. In addition, the shape of the dredged channel is generally not conducive to sediment transport, resulting in a buildup of eroded sediment within the channel. Past disturbance of stream channels has resulted in some of the stream problems we see today.*

**Q: “We need to straighten the stream to keep it from washing out that bank. And if the water flows through here faster, it won’t flood my neighbor’s house.”**

- (a) Straightening a channel may temporarily solve a localized bank erosion or flooding problem.
- (b) When a stream is straightened, it becomes steeper and faster, which results in a greater potential for erosion of streambanks and streambeds.

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- (c) After a channel is straightened, water will get to downstream areas faster and increase the risk of flooding.
- (d) All of the above.

**A:** *(d) Stream straightening or “channelization” can have adverse impacts and is not generally recommended. Because the bends in a stream channel dissipate energy, a straightened stream has more energy available to erode its channel. In addition, channelization may increase the downstream flood risks.*

**Q:** **“You should use a bulldozer to build up that streambank for flood protection.”**

- (a) Floodplain soil is usually poorly suited for levee construction.
- (b) Floodplain soil is usually ideal for levee construction.
- (c) By cutting off the stream’s access to its floodplain, an elevated streambank will increase the stream’s energy and thus the potential for erosion.
- (d) Both (a) and (c).

**A:** *(d) A berm made of local materials pushed up on a streambank is not true flood protection. Although it may withstand the forces of small flood events, these structures are prone to failure during major floods.*

**Q:** **“I’ve owned this land for 10 years and it’s never been flooded. But they say it’s floodplain, so I can’t build the house I’d planned.”**

- (a) No building is allowed in the mapped 100-year floodplain.
- (b) Floodplain development may be allowed if rules are followed to minimize the flood risk.
- (c) If the last flood didn’t touch the building site, it’s probably safe to build there.
- (d) Government has no authority to restrict what can be done on private property—whether it’s in the floodplain or not.

**A:** *(b) Courts at all levels have upheld the validity of floodplain regulations that prevent damage from hazardous development in locations where flooding is anticipated. Most municipalities have enacted standards that allow some development in the floodplain if it meets flood protection criteria and will not cause damage to adjacent properties. However, it is safer to locate new development outside of the floodplain.*

**Q:** **“I remember when you could step across this creek. Nobody has done anything to it, but now trees are falling in and the banks are over my head. What happened?”**

- (a) The speaker’s memory is faulty—the stream hasn’t changed.
- (b) The speaker forgot about the time that his neighbor bulldozed the creek to make it deeper.
- (c) It is likely that development or other changes in the watershed have increased stream flow, which triggered erosion of a larger channel.
- (d) It is natural for all streams to get bigger and deeper with time.

**A:** *(c) Although it is possible that the creek is adjusting to a channel disturbance, the reason for increased flooding or erosion can often be found in the watershed that drains into a stream. The general hydrologic symptoms of forest clearing, agriculture, and urbanization are increased peak flows and decreased base flows, resulting in more frequent flooding,*

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*increased bank erosion, sediment buildup, and other effects. Sometimes it only takes a few new houses or a new access road to cause problems in a stream.*

**Q: “This creek is eating away my property. I pay taxes. Who is going to fix it?”**

- (a) New York State regulates streams, so they are responsible for maintenance.
- (b) The County Soil and Water Conservation District takes care of the streams.
- (c) In New York, our home rule laws make municipalities responsible for stream maintenance.
- (d) The landowner is ultimately responsible for stream and water problems.

**A: (d)** The land along a stream belongs to the landowner and any necessary work, such as erosion or flood control, is therefore their responsibility. Landowners that have chosen to own land along a stream have assumed stream maintenance responsibilities, much the same as mowing the lawn or fixing the roof. However, responsibility for the stream does not allow a property owner to work in the stream without a permit. Nor does it protect them from liability if they cause damage to another property.

**Q: “This is my property. I own the creek. Nobody can tell me what I can or can’t do with it.”**

- (a) A permit from New York State is required for any disturbance within 50 feet of some streams.
- (b) A U.S. Army Corps of Engineers permit may be required for disturbance of “waters of the United States.”
- (c) A floodplain development permit must be obtained from the municipality for any development, including fill or grading, within the mapped floodplain.
- (d) All of the above.

**A: (d)** *Although the riparian property owner does own the stream, various government agencies have police powers regulating what can be done within and adjacent to the stream channel. This regulatory authority is based on public health and safety concerns, the potential for adverse impacts to other property, and potential impacts to aquatic habitat. In addition, irresponsible alteration of natural drainage patterns can result in a lawsuit if it results in damage to neighboring property.*

**Q: “My driveway bridge washed out. Who is going to pay for it?”**

- (a) Federal disaster assistance is available to pay for all flood damages, including washed out driveways.
- (b) Flood insurance on the house will cover bridge damage.
- (c) The Town or County will help me out.
- (d) All maintenance and repair costs for private stream crossings are the responsibility of the landowner.

**A: (d)** *Federal disaster assistance is not available unless the flood is declared a federal disaster, doesn’t cover all damages, and may be limited to a low interest loan. The National Flood Insurance Program only offers policies for buildings and building contents. Damage to bridges, culverts, driveways, lawns, etc. is not covered by flood insurance. While local governments may be helpful, your private property is not their responsibility.*