The Rainbow Dam and the Lower Farmington River: Legal Status, History and Physical Condition

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When the English colonists settled the original thirteen colonies, they brought with them a set of legal principles called "the common law." The common law was not written down in one place as legislation is, but was instead distilled from the thousands of cases decided by English common law courts beginning in the 13th century. The common law covered the areas of contract, torts (civil wrongs), property and criminal law. The most well-known description of the common law was Blackstone's Commentaries on the Laws of England (1765).

One of the aspects of the common law of property concerns the rights held by owners of property along streams, rivers and other natural water bodies. These are called "riparian" rights. Riparian comes from the Latin word (ripa) for stream bank. Riparian rights are one of a bundle of the rights held by all owners of the fee interest

(the "fee" interest is the entire interest in the property). The bundle of rights includes among others, the rights to use the land, to exclude others, to rent the land to others, to occupy the land, and to sell or give the land to others. Riparian rights are a special case, since not all land borders water. Riparian rights, simply stated are the rights to withdraw and use the water. It also includes the right to use the bottom of the stream or lake, to harvest ice, and install a dock or pier, among other rights. These rights are subject to a duty not to infringe on the rights of other riparian owners to the water, either in quantity or quality, and to use the water reasonably. Riparian owners in general may use the water, but not impair the rights of the other riparian owners.

Like other rights in land under the common law, riparian rights in Connecticut can be conveyed (through sale, gift or lease) to others. In some states, this is either limited or prohibited. Water rights were the subject of frequent court disputes from colonial times, until the early 20th century, when legislatures began to regulate in the area of water rights. The Connecticut law reports of 18th and 19th centuries have many

reports of these disputes, and how the courts have decided them. Although Connecticut has been blessed with an abundance of fresh water, its court cases have proved the accuracy of Mark Twain's remark "Whiskey is for drinkin'; water is for fightin'."

But in modern times - at least since the legislature recognized the importance of a reliable system of clean water supply for cities - and modern engineering made large scale diversions by dams and reservoirs possible - riparian rights under the common law have dwindled in importance. The environment in the Eastern United States can be characterized as regulated riparianism, as all states have permitting systems of some sort, and most have limits on diversions without a permit (Connecticut's is 50,000 gallons in a 24-hour period).

Today, the rights to water flow in the lower Farmington River are almost entirely determined by a complex series of legislative special acts recognizing or ratifying agreements among municipalities, private corporations, and a single

specially-chartered municipal corporation, the Metropolitan District Commission. These legislative enactments began in the early years of the 20th century, and were all driven by the growing water needs of Hartford, which was then an important manufacturing center as well as by the need for flood control and hydropower.

The details of the history of the agreements and the legislation ratifying them in the law, which in effect asserted legislative control over the common law of riparian rights, is beyond the scope of this inquiry. (As a general legal principle, legislation can alter the common law, although a law is usually said to be construed strictly when it does so. They are discussed in more detail in "State of the Farmington River Watershed August 2003," Farmington Watershed Association (2003).)

The legislation authorized (and in some cases funded) a number of dams and impoundments.

In summary form, the major engineering and legislative events were these:

1. Before 1900 - The Farmington was already dammed in many places - Greenwoods Dam in New Hartford, two Collinsville Company dams in Collinsville, the Union Water Company Dam in Unionville (Farmington), the Gristmill dam in Farmington, the Spoonville Dam in Tariffville, and the Rainbow Dam in Windsor. (In contrast, the Massachusetts section of Farmington had (and still has) only two dams - Hayden Pond and one at the base of Otis Reservoir.

2. Otis Reservoir - originally built in 1865 to store water in times of low flow, to generate power by the Collins Company in Collinsville, and by the Farmington River Power Company in Windsor. It is now owned and operated by Mass DEP. The uses today are mostly recreational.

3. Proceeding downsteam, the next structure is the Colebrook Dam in Colebrook. It was built from 1965 - 1969 and is maintained by the U.S. Army Corps of Engineers (ACOE). A three megawatt hydropower facility was finished in

1989, which is operated by the MDC. Its primary purpose is flood control, and releases are controlled by ACOE.

Connecticut Special Act 444 of 1949 authorized the MDC to build a reservoir on the West Branch of the Farmington River and to divert water to its distribution system in the Hartford area. The Act also provided that only natural flows above 150 cfs can be stored in the Colebrook Reservoir. Also, minimum flows of 50 cfs must be maintained for recreation at all times. The Act gave legal force to an agreement among The Allied Towns, Inc. (Barkhamsted, Colebrook, Hartland, and New Hartford) and the MDC.

4. Goodwin Dam (originally called Hogback dam) is next downstream. It is just north of Riverton, in Hartland, and was finished in 1960, creating the West Branch Reservoir. It is a "run of the river" hydropower facility, which runs 24-7 so long as flows are adequate. It is a FERC-licensed dam.

The river then flows to the southeast through Barkhamsted and New Hartford where it joins the East Branch.

5. Upstream on the East Branch are two dams - Saville Dam, which forms Barkhamsted Reservoir (the largest drinking water reservoir in the state), and Richards Corner Dam, forming Lake McDonough. Saville was completed in 1940, and Richards Corner in 1920. Saville was the result of a 1931 agreement between the MDC and downstream riparian owners.

6. The Nepaug Reservoir was created as the result of a 1911 agreement between MDC's predecessor, the Board of Water Commissioners of Hartford, the Collins Company, the Union Water Power Company, and the Farmington River Power Company to allow a dam across the Nepaug River to divert water to Hartford for drinking water supplies.

7. A 1961 agreement between the MDC, the Farmington River Power Company, the Collins Company, and the Hartford Electric Light Company (HELCO) is

the most influential agreement in terms of water flows in the lower Farmington today. It obligated the MDC to an annual release of 21.7 billion gallons, for power generation and to satisfy riparian demands. The MDCs daily obligation was capped at 800 million gallons (about 1,212 cfs). The agreement also provided that if the MDC could not supply the water, it would have to compensate the other parties in cash, or in the equivalent of electricity. (The MDC was formed in 1929 by a special act of the Connecticut Legislature.)

8. Mad River Dam and Sucker Brook Dam form two small impoundments in Winchester, and are operated by the DEP for flood control.

9. Upper and Lower Collinsville Dams. Originally hydropower dams, neither are operational today. A FERC license would be required to operate either one. These two dams were closed in 1967 and given to the State of Connecticut. It is unclear whether either or both dams could operate at a profit, given their need for maintenance and repairs.

10. HELCO operated a hydropower facility at Spoonville (East Granby) beginning in 1899, but the dam was destroyed in the 1955 flood.

11. Rainbow Dam and Powerhouse were completed in 1925, by the Farmington River Power Company (FRPC). The Stanley Works today owns all the stock of FRPC, and has for many years.*

Rainbow Dam

By far the largest structure on the lower Farmington, the Rainbow Dam was built in 1925 by Stanley Works (a 20 feet high dam that was built by the Farmington Power Company in 1889 was breached). The Rainbow Dam has a concrete spillway which is 400 feet wide and 53 feet high with an additional six feet high flashboard system for a total dam height of 59 feet. It forms an impoundment of 234.5 acres. There is a 1050 feet concrete and earthen dike along the northern perimeter of the reservoir. When full, it covers over 300 acres. It is the only dam on the Lower

* The state of the title to Rainbow Dam has not been examined by the author. The land records may reflect transfers of riparian rights, or other agreements, which are not discussed here.

Farmington in Hazard Class C (high hazard potential if it were to fail, with loss of life and major destruction). The hydropower station enjoys the sole rights to the 21.7 billion gallons the MDC is obligated to release yearly under the 1961 agreement. According to the State of the Farmington River August 2003 report, it ". . . causes the most significant impacts to the flow regime because releases of water from the dam are erratic and fluctuations reduce the numbers of nearly all aquatic plants and insects." (at p. 25) The flows and releases at Rainbow Dam are not regulated, and according to FRWA's 2003 report cited above, "do not take into account conditions that might better mimic a natural flow regime important to the support of aquatic life." (id.)

In 1976 the CT DEP designed, constructed and operated a fish ladder to allow the passage of American shad, river herring and Atlantic salmon. The ladder was ineffective for the first two species, but Atlantic salmon were able to use the ladder

successfully. Fortunately, all three species were able to use the entryway, but only salmon were strong enough to ascend the ladder.

In order to address the fish ladder's shortcomings, the DEP has completed a feasibility and alternative analysis and has selected a fish lift (or elevator) as the preferred alternative. Funding ($400,000) is available to pay for a final design. It is estimated that the design phase will take 18-24 months. The present cost estimate for the fish lift is $4 Million. Funding for construction has not been put in place, so the future of a fish lift is somewhat uncertain. However, the fish lift is the number one priority for the DEP's inland fisheries program. The objective is to reintroduce American shad and river herring to the river.[**] There is a fish elevator on the Connecticut River in Holyoke, which in 2004 enabled 500,000 fish to clear the 52-foot dam.

[**] The information in this paragraph and the prior paragraph is based on a conversation with CT DEP's Rick Jacobson, on March 11, 2008.

That Rainbow Dam is unregulated by FERC is result of the fact that in 1925, the river was not considered "navigable" under principles of federal law, and was not required to obtain a license from The Federal Power Commission (the predecessor agency of FERC). FERC tried in 1972 to force FRPC, as the owner of Rainbow Dam, to obtain a license. This attempt failed, as the Second Circuit U.S. Court of Appeals held that FERC had no authority to license a dam that was built before any licensing requirement existed.

Later, in 1988, FERC sought to impose headwater benefit charges on FRPC pursuant to the Federal Water Power Act of 1920. The Act required licensed and unlicensed power projects receiving headwater benefits to pay upstream providers equitable charges as determined by the Federal Power Commission. The Commission sought to asses FRPC $943,835 for those headwater benefits.

FRPC defended on several grounds, but the only one relevant here is its claim that it had a vested right under state law to the water (including the headwater

benefits). Relying on the history discussed earlier, particularly the 1949 special act and the 1961 Riparian Agreement with the MDC (which reaffirmed the 50 cfs minimum flow), the D.C. Circuit Court of Appeals held in 1997 that the FRPC had a vested right in the water from Goodwin Dam.

Since 1997, there have been no further attempts by state or federal agencies to bring Rainbow Dam under any license or other regulatory controls.

Could the FRPC's rights be transferred? Provided two assumptions are true, the riparian and contract rights enjoyed by the owners of Rainbow Dam could be transferred to another entity. The first assumption is that the Agreements defining those rights permit assignment. To the extent those rights are riparian rights not covered by the Agreements, there is no barrier in Connecticut common law, and such rights could be transferred without transferring the underlying land. However, contracts frequently contain explicit prohibitions against assignment. And if assigned, the same contractual rights owed to the other contract parties would have to be fulfilled by the assignee.

The second assumption is that the Connecticut legislature would assent, or at least not interfere. Because water is a scarce resource, and because the state has a specific interest in the subject matters (of water supply, power, recreation, and flood control), legislative acquiescence to transfer ought not be assumed. At a bare minimum, any plan to alter or remove the dam, or drain the impoundment would require a permit from the DEP. The DEP has clear statutory authority over repair and removal of dams and improvements.

Possible Effect of Public Trust Doctrine

The Connecticut Environmental Protection Act (CEPA) protects "natural resources" from "unreasonable" pollution, impairment or destruction. Air and water are "natural resources" under the Act. (The Act is codified at Conn. Gen. Stat. § 22a-14 et seq.)

The Act grants standing to sue for injunction or declaratory relief to any person to protect the public trust in the state's air, water, and other natural resources. It does not provide for a damages remedy. Under the cases decided under the Act,

particularly Waterbury v. Washington 260 Conn. 518, (2003)[***], regulated or permitted uses enjoy a considerable degree of protection. Since the Rainbow Dam's releases and flow regime are not regulated (by FERC), the dam arguably has missed an opportunity to avail itself of the potent argument that compliance with FERC license conditions regulating flows and releases are presumptively reasonable under CEPA.

[***] The Connecticut Supreme Court held that Waterbury's diversion of the Shepaug River for its drinking water did not violate CEPA because Waterbury complied with the DEP's minimum stream flow regulations under Conn. Gen. Stat. § 26-141b. The Town of Washington and other plaintiffs had argued that the stream flow regulations protected only fish, and not other aspects of the river's environmental health. The Connecticut Supreme Court rejected this argument, and added that if the DEP thought its regulations did not adequately address the river's overall health, it was free to amend them. The DEP has not amended its regulations in this respect, nor has the legislature taken any action to overrule the results in Waterbury v. Washington.