

CONCORD AND SUDBURY RIVERS USER GUIDE

RESOURCE DESCRIPTION





United States Department of the Interior

NATIONAL PARK SERVICE

North Atlantic Region

15 State Street

Boston, Massachusetts 02109

IN REPLY REFER TO:

CONCORD AND SUDBURY RIVERS

USER GUIDE

--RESOURCE DESCRIPTION--

This project has been a joint undertaking of the major landowning agencies located along the Concord and Sudbury Rivers on cooperation with the principal environmental organizations dedicated to their protection. The North Atlantic Region of the National Park Service, with the support of the State and Local River Conservation Fund has served as the catalyst for the effort.

It is the intent of the project that the information contained in the Resource Description eventually be published as a practical guide for river users. The user guide should serve both recreationists and adjacent landowners by encouraging an improved appreciation of the resources along the rivers and a heightened sense of conservation stewardship among river users.

The principal participants in the project have been:

US National Park Service
North Atlantic Region
Minute Man National Historical Park
Lowell National Historical Park
US Fish and Wildlife Service
Great Meadows National Wildlife Refuge
MA Department of Environmental Management
Lowell State Heritage Park
Scenic Rivers Program
Bay Circuit Program
MA Department of Environmental Quality Engineering
SuAsCo Watershed Association
Sudbury Valley Trustees

A special note of appreciation is due Richard Walton of Concord who authored the canoe narrative and resource description.

Few rivers in America have enjoyed the wealth of historical and cultural events as the Concord and Sudbury. The banks of the rivers portray the continuum of our country's history. Undeveloped woodland and wetlands rich in wildlife, rocky agricultural lands bounded by stone walls, the forever famous site of "the shot heard 'round the world", remnants of the canals, dams and mills of the birth of the industrial revolution, and the superstructures of modern high technology industry are all to be seen by even the most casual of canoeists. In a region blessed with an abundance of natural and cultural resources, the Concord and Sudbury Rivers stand out and merit heightened appreciation, protection and use.

Steven Golden, Program Manager
Branch of River and Trail Conservation
March 17, 1987

CONCORD AND SUDBURY RIVERS

USER GUIDE

--RESOURCE DESCRIPTION--

CONTENTS

- I. USER CODE
- II. CANOE NARRATIVE
- III. RESOURCE DESCRIPTION: Plant List, Insects, Reptiles and Amphibians, Birds, Mammals, Fish, and River History
- IV. CANOE ACCESS INVENTORY
- V. COMMUNITY CONTACT REPORT
- VI. USER SURVEY

USER CODE

CONCORD/SUDBURY RIVERS USER'S CODE

All of us are the rivers' custodians. We urge you to follow the River User's Code.

1. **Enjoy the rivers and help protect their bountiful life.**
 - Avoid direct contact with animals.
 - Refrain from picking wildflowers, damaging plants, or collecting of any kind.
2. **Keep the river waters clean.**
 - Please do not pollute the water and report evidence of others polluting it.
3. **Respect private property along the river banks.**
 - Much of the land along the river is in private ownership and is closed to public use. If you wish to camp or picnic, you must obtain permission first from the property owner.
 - When portaging around waterfalls in Framingham, North Billerica, and Lowell take the least disruptive route to the next launch site.
4. **Respect public lands along the river banks.**
 - Great Meadows National Wildlife Refuge was established to protect wildlife in its natural habitat. Please think of yourselves as guests in the wildlife's home and behave as such.
 - Minute Man National Historical Park, Lowell National Historical Park, and Lowell Heritage State Park were established to protect and interpret important events in our nation's history. Please treat their cultural resources with the respect they deserve.
5. **Use designated public river access sites to reach the rivers.**
 - Park so you do not interfere with traffic or block others' access to the rivers.
 - Lock your car and protect all valuables.
 - If there is not a designated boat launch in your community, contact your local conservation commission and help establish one.
6. **Be cautious about fishing or swimming in the rivers.**
 - Due to pollution, fish caught in some sections of the rivers should not be eaten. Follow the instructions posted at access points regarding fishing.
 - Swimming is dangerous in most parts of the rivers and should only be done under close supervision.
7. **Plan your trips and be familiar with the section of the river you are using.**
 - Wind can overpower small boats. Do not underestimate the difficulty of paddling into the wind.
 - The upper reaches of the Sudbury River generally are too shallow for boating.
 - Be careful to take boats out of the water well above the dams in Framingham and North Billerica, and Lowell. **Extreme caution should be used at all waterfalls.**
8. **Comply with State and local laws governing boating, fishing, hunting and trapping along the rivers.**
 - All boaters, fisherman, hunters, and trappers must obtain the proper licenses.
 - Hunters and trappers should not hunt or trap in posted areas, including all federal lands.
 - All boaters must carry a Coast Guard approved life preserver for every person in the boat, and should avoid exceeding the boat's load capacity.
9. **Respect others use and enjoyment of the rivers.**
 - Rivers are one of the best places to escape the hustle and bustle of our busy world and to enjoy nature. Please help protect the peaceful qualities of the rivers. Powerboaters should recognize that a large wake can endanger small boats and keep wake to a minimum at all times.

CANOE NARRATIVE

I Cedar Swamp Pond

The high waters of early spring make it possible to canoe to the source of the Sudbury-Concord rivers. A good place to begin an upstream journey is at a launch site at the south end of the Fruit Street bridge on the Hopkinton - Westborough line. A dirt road adjacent to the entrance for the Southboro Rod & Gun Club leads down to the river. Although the straight line distance from the bridge to the pond is less than two miles, the sinuous path of the river, shallows, and occasional obstructions can make this a tough pull.

The headwaters of the Sudbury River snake back and forth through smartweed shoals, sedge meadows, and cattail stands, as well as passing along second growth woodlands composed mainly of red maples. The Black-winged Damsel fly, with his emerald-green body, is frequently seen along the river and you may encounter your first ones here. Stands of buttonbush grow around the perimeter of the Cedar Swamp Pond. Unfortunately the white cedars, for which the swamp is named, are all but gone. Thirty years ago a pair of Marsh Hawks (now called Northern Harriers) nested near the pond and their courtship antics were a highlight for bird watchers. Although these graceful hawks have not been reported there lately, this is still a good area to observe birds. Spring migrants include White-throated Sparrow, Ruby-crowned Kinglet, various warblers and Rusty Blackbird. The canoeist should also be on the lookout for nesting Yellow Warbler, Red-winged Blackbird, and various ducks. The trout fishing can be excellent along this stretch as annual stocking occurs here.

The area of the Cedar Swamp Pond also has an interesting cultural history. The last quarter century, in particular, has been eventful. The paddler starting off for the pond soon becomes aware of several man-made intrusions. While Route 495 and the Massachusetts Turnpike pass directly over the river just west of the Fruit Street bridge, the rails of Amtrak parallel the Sudbury on the north. These arteries of commerce not only increase the flow of traffic through the area, but also attract business. Two decades ago, as an increasing number of corporations built facilities in the area, the Cedar Swamp was threatened. Forces urging development cited increased tax revenue, jobs, and even the filling of the swamp itself as the positive benefits of such a program. Others pointed to the benefits of this important wetland: as a natural holding area for large volumes of water during potential flood periods, as a resource for wildlife, and as a natural area to be enjoyed by people. For a while the commercial interests held the upper hand. The Cumberland Farms project alone developed over ninety acres. In 1975, after considerable fighting, the Cedar Swamp was designated an Area of Critical Environmental Concern by the state. Subsequently, studies were initiated to determine how best to protect Cedar Swamp. One result was that twenty-eight acres were purchased for protection by the Sudbury Valley Trustees. There are, however, still pressures to develop the perimeter of the swamp. The effects of future events in this critical

DESCRIPTIVE CANOE NARRATIVE

area will be felt not only locally but also downstream along the entire length of the river.

II Southborough to Ashland

The Sudbury River flows east from the Fruit Street bridge through the communities of Westborough, Southville and Cordaville (both sections of Southborough) and on to Ashland. The distance from the Fruit Street bridge downstream to the Ashland-Framingham reservoir is a little over five miles. This section is not recommended for the flatwater canoeist since it contains many rapids, dams, shallows, narrows, and obstructions. Even at its best (periods of high water), canoeing the entire stretch involves repeated portages, wading, bushwacking, and plain hard work. For the incorrigible, and those wishing to do one or two sections on the upper Sudbury, the following description should be of help.

Below the Fruit Street bridge the Sudbury is a narrow stream passing through a heavily-wooded section. This area may be at its best in August when the cardinal flower and sweet pepperbush are in bloom, but this is normally a time of low water - making the paddle even more difficult. The Cedar Street bridge is approximately a mile downstream and below this bridge the stream widens a bit, eventually opening into a mill pond just above a dam. A portage is possible along the railroad tracks to River Street. Carry across the river and launch along Aiken Road on the south bank of the stream. The area of the mill pond, dam, and mill works is interesting to investigate. The mill was in operation during the Civil War, supplying cloth and yarns for uniforms and blankets. An attractive stone bridge spans the rushing water of the Sudbury below the dam. Farther downstream the Sudbury passes through a meadow area on the right and parallels the railroad tracks on the left. The stream is generally narrow and flat here, with occasional obstructions and rapids. Soon, the Sudbury passes under the railroad tracks and remains on the north side of the tracks for the remainder of this section. At a point marked roughly by Endicott Street in Ashland, the stream widens some as it continues east to the Cordaville Road bridge.

The section of a little over a mile, between the Cordaville Road bridge and Endicott Street is recommended for those who want to take a short paddle on the upper Sudbury. Put in above the Cordaville Road bridge and paddle upstream to Endicott Street, or to the point where obstructions make further progress difficult. At the bridge you will find large beds of pickerelweed, while alders and purple loosestrife are common farther upstream.

Below the Cordaville Road bridge the river widens into a pond just above a dam. Below the dam the Sudbury becomes very narrow and rocky with some shallow sections that are difficult (or impossible) to pass. Once through these narrows the stream opens up as it approaches the dam at Myrtle Street. It is possible to put a canoe in at the corner of Pine Hill Street and Myrtle Street and paddle upstream for a short distance through a pond-like section of the river.

Below the Myrtle Street bridge the Sudbury squeezes by overgrown banks, flats, and repeated obstructions as it passes along beneath the Concord Street and Fountain Street bridges. By the time the Sudbury reaches the Union Street bridge in Ashland the stream has widened a bit but there are many shallow areas to deal with. Below Union Street the river is joined from the south by Cold Spring Brook a short distance above the entrance to the reservoir. No boating is allowed on the reservoir.

For those who choose not to canoe this stretch, a hike or drive along the Sudbury over this section will be interesting. Investigations of the old mill works, bridges, and dams will add a touch of archeological mystery to the natural sights and sounds. From west to east, following the Southville Road, the Cordaville Road, and Pleasant Street will take you on a route that parallels the river's course. Fruit Street (Hopkinton), Bridge Street and River Street (Southborough), and Howe Street (Ashland) take you across the Sudbury at various points.

For the angler there is good reason to sample various spots along the upper section of the Sudbury River. This is a favored area for fishing because of the Rainbow, Brook, and Brown trout stocked by the Massachusetts Division of Fisheries and Wildlife. (see note on Advisory regarding mercury contamination in the Sudbury River)

III Reservoir #2 and Reservoir #1

Between Ashland and Framingham the Sudbury River has been dammed and impounded to form two reservoirs. No boating or fishing is allowed here. However, the historical background and present-day controversy surrounding these reservoirs is an important chapter in the river's story. In the third quarter of the nineteenth century an increase in Boston's population and industry prompted the city to seek alternate water sources. Ultimately, it was decided to impound the waters of the Sudbury at Framingham and transport them via aqueduct to Boston. In all, seven reservoirs were created in the Upper Sudbury River watershed. Two of these, Reservoir No. 2 and Reservoir No. 1 overflow the original course of the river. Between 1872 and 1931 the river was drawn down on a regular basis to fill the needs of the Metropolitan Boston area. In 1894, because of a malaria scare, the state board of health investigated the wetlands of the Sudbury River Valley. A combination of diversion and pollution was having devastating effects on the river system and the state began looking elsewhere for water. Fortunately, the Wachusett Reservoir was completed in 1898 and, together with the subsequent Quabbin system, provided relief for the Sudbury. Nevertheless, Boston continued to divert some Sudbury River water through 1931. Presently, in the 1980s, Boston is reconsidering its water needs and the Metropolitan District Commission (MDC) has reactivated plans to divert water from the Sudbury. Although the actual effects of such a diversion are disputed, the contemplated draw-downs would reduce the flow of the river and concentrate pollutants. Diversion would also affect important wildlife habitat and water resources downstream. The ultimate resolution of this

conflict of interests will have far-reaching effects on the Sudbury River Valley.

IV Reservoir No. 1 Outlet to Saxonville Dam

In Framingham at Winter Street the waters of the Sudbury are released over the dam of Reservoir No. 1 and recommence their natural flow north and east. The paddle from this outlet to the Saxonville Dam covers approximately four miles. A pull-off at the brick building provides a place to unload your canoe and supplies. Ample parking is available around the corner of Maple Street at Framingham State College parking lot. Launch on the northeast side of the bridge or from the field along the southwest bank of the river.

The upper reaches of this section has its share of obstacles, mostly downed trees, but these can be negotiated without much difficulty. Farther along, beside and beyond (north of) the Massachusetts Turnpike the river widens and provides plenty of room for maneuvering. Two dams should be anticipated. A small (2-3') structure crosses the river towards the end of the easterly traverse of the Massachusetts Turnpike. A large sign on the left bank (north) warns of a whirlpool and undertow; a short (10 yards) portage (left bank) can be made in the vicinity of the sign. Upon reaching Saxonville, you will see the brick factories, smoke stacks, and the "Roxbury Carpet" sign, and need to take out on the right bank before the substantial dam (25'+).

As you launch your canoe at Winter Street check the pool beside the bridge for ducks. Heading downstream you will find yourself in a fairly narrow portion of the river overhung with various deciduous trees and shrubs. Red maples and dogwood are common species along the banks and in several places wild grapes cling to the shrubs. Common Grackles nest in the thickets. Also watch for bluegills swimming beside your canoe. Soon after passing under a railroad bridge you will see a large, brick building on the right. Chimney Swifts and Rock Doves (Common Pigeons) seem to be the main occupants of this old Framingham incinerator building. The next two bridges are at Franklin Street and Union Street.

One of the most abundant aquatic plants along the rivers is coontail or hornwort. In fact, as you paddle along, there will be places where this plant forms thick beds which will impede your progress. Coontail grows to eight feet in length and is composed of a main stem with whorls of forked leaves at intervals along the stem. At times it trails downstream in thick clusters with the upper section floating on the surface. In quiet, deeper waters, numerous coontail plants form attractive shoals that look like coral. Once out of water, however, the plant collapses into a disappointing stringy mass. Some coontail is eaten by muskrats and ducks are said to eat the fruits.

Soon after the Route 9 bridge, which noisily reminds the paddler that one is never far from civilization on the Sudbury, the river swings right and then quickly left. Here, at the bend, a picturesque cove with a rock-lined shore and beds of white water lilies make this a

pleasant place to pause. Eastern Kingbirds are usually in summer residence here; you might take some time to watch the birds "flycatching." Large willows also occur along the stream here, particularly in the areas where there are homes. After the Central Street bridge the river swings in an easterly direction and follows the Massachusetts Turnpike. Alder and some birch line the shores and yellow pond lily grows in abundance. The river broadens briefly and this is where the first dam is located (portage on the left).

The area of the foot bridge, located just downstream of the small dam, is an alternate launch and takeout site. As you pass under the Massachusetts Turnpike bridge note the Barn Swallow nests and their occupants. These forked-tail swallows seem to have adapted well to the rush of traffic above their abodes. Barn Swallows also help to keep insect populations in check. Shortly after the turnpike the river opens into the impoundment created by the Saxonville Dam. This is a good area to paddle along the banks and enjoy the birdlife. Species found regularly here in summer are Great Blue Heron, Northern Oriole, and Cedar Waxwing. On the logs along the banks, if the day is sunny, there are usually a few painted turtles.

Be sure to take out well before the dam upstream on the right bank. The dam itself and the brick factory buildings have an interesting history. The earliest mills along the Sudbury and Concord rivers were concentrated in three places: at Southborough where the upper portion of the river drops rapidly, at Saxonville, and on the lower portion of river at various falls in Billerica and Lowell. At Saxonville, the eighteenth-century colonial grist mill was replaced by a woolen mill in 1823. By 1837 this mill began to manufacture carpet yarns.

V Saxonville to Route 27

This section of the river covers a little less than six miles. A portage around the Saxonville Dam is necessary if you are continuing a paddle from up river. Take out well before the dam (see previous section) and carry across Central Street and down Purchase Street where it is necessary to negotiate a rather steep bank to the river's edge. If you are beginning your trip on this portion of the river, consider launching at the end of Little Farm Road. Although this omits a small section of the river, the convenience (easy access and parking) of the launch site makes it worthwhile.

With Saxonville at your back, you won't have to concern yourself with dams or other man-made obstructions until the portion of the river at Billerica. This section, between Saxonville and Route 27, provides a good sample of the various habitats along the river. Starting out in an urban setting, the river moves through deciduous woodlands on its way to extensive river meadows. Here too, the characteristically flat gradient of the lower Sudbury becomes apparent as relatively straight reaches of the river are interrupted by occasional meanders.

Directly below the Saxonville Dam, the fairly swift waters of the Sudbury squeeze through an urbanized area. Paved banks, retaining

walls, and submerged shopping carts may remind the paddler of the negative effects our cities can have on rivers. Flood control projects are apparent in the area of the dam. Gradually, as one paddles downstream, the current slows and the Sudbury moves on to a quiet wooded section. By the time you reach the oxbow at Little Farm Road the scene is decidedly more rural. At high water you may want to explore the oxbow itself. This older portion of the river's bed was cut off in the late 1950s when a shorter, straighter course replaced the large meander. Pod Meadow, at the eastern end of the oxbow, is a good place to search for marsh birds and muskrats.

Continuing down river from the oxbow will soon bring you beneath a foot bridge and steel aqueduct which arches over the Sudbury. The aqueduct carries a steady flow of water to Metropolitan Boston from the Wachusett Reservoir. Much more attractive is the stone bridge immediately downstream from the aqueduct and the new automobile bridge. Officially Stone's Bridge, four arches of this nineteenth-century structure remain stretched part way across the Sudbury. Although legend had it that the sixty cannon dragged from Fort Ticonderoga to Boston to aid George Washington in the siege of Boston came across this very bridge, Edwin Way Teale's persistent digging uncovered a date for the stone bridge which was inconsistent with the legend. Thoreau, in 1859, mentioned that the bridge was constructed in 1857; no doubt the cannon were brought across the river on an earlier bridge at the same location.

Not far down river from the Stone's Bridge you will begin to notice the National Wildlife Refuge signs. From this point, north along the river for twelve miles, most of the river's edge and adjacent marsh are within the boundaries of the Great Meadows National Wildlife Refuge (GMNWR). The refuge encompasses some 3000 acres of wetland and second-growth woodland. The primary purpose of the refuge is to provide and protect habitat for wildlife, especially migratory waterfowl. Hunting and trapping are not allowed in the refuge, or on those portions of the Sudbury and Concord rivers that lie within refuge boundaries.

The river's path in this southern portion of the refuge passes through a wooded section (some sassafras and swamp white oak) where Red-eyed Vireo, Scarlet Tanager, and Northern Oriole nest. At the point where the Sudbury swings right (east) there is a high bluff on the left and a more open view to the right. The transition along this portion of the river is significant. Gradually the woodlands are left behind and are replaced by the river meadow and marsh which dominate the riverscape for many miles to the north. Soon after passing beneath the power lines you will enter a series of switchbacks or meanders. Besides thick beds of coontail growing in the river, you will notice stands of grasses, sedges, buttonbush, and cattails along the banks. Just north of the meanders is Heard's Pond.

Heard's Pond and the adjacent Heard Farm is an interesting place to stop and explore. Two landing sites can be used: one on the south side of Heard Farm where a tree line comes down to the river (just before the river swings north); and another on the east side of the

farm (approximately one-third of a mile after the river swings north). Pre-colonial artifacts indicate that Indians frequented this area. The land was originally granted to Herbert Pelham (hence the use of the name Pelham Island for the immediate vicinity) in the seventeenth century. By the end of the eighteenth century Richard Heard had purchased controlling interest in Pelham Island. Heard deeded the land to his four sons who each worked his own farm. Portions of the land have, in fact, been farmed continuously since that time. In 1970 when proposed developments threatened to end this tradition, the Sudbury Valley Trustees purchased Heard Farm. Subsequently the town of Wayland bought the land from SVT and established the Heard Farm Conservation Area. Trails wind around the property through woodlands and along fields. During the spring and fall migration this is an excellent place to look for birds. The conservation area also has an interesting variety of wildflowers, shrubs, and trees. Another birding "hotspot" is the wooded section north of Heard's Pond. A trail system here is maintained by the GMNWR. Heard's Pond is also a favored spot for anglers as bass, pickerel, perch, and sunfish are abundant here. Ice fishing in winter extends the season, although mid-winter anglers have to share the ice with skaters.

Back on the river, the section of the Sudbury which passes south and east of Heard Farm is enclosed by sedge meadows and stands of buttonbush. Wayland High School is on the right just before the river swings north. The stream becomes wider and deeper along this segment and the coontail shoals thin out. Thick colonies of smartweed grow out from the banks, but seldom hinder your progress. The next bridge you will come to is the Pelham Island bridge. A short distance beyond you pass under a railroad bridge (another fishing "hotspot") and then the Route 20 (Boston Post Road) bridge. On the left is Wash Brook Marsh, one of the finest freshwater marshes in the state. During times of extreme high water you can paddle up Wash Brook. An alternative way to have a good look at the marsh is to land (just north of Rt. 20 bridge) and walk west on the old railroad bed. In summer, Least and American bitterns, Common Gallinule, Marsh Wren, and Willow Flycatchers are in residence here. The railroad bridge area, where Wash Brook enters the Sudbury, is also a productive area to fish. The section of the river meadow between Route 20 and Route 27 is dominated by buttonbush. There are often numerous crows patrolling the meadows at this spot. Gulls also are common here as the Wayland and Sudbury landfills (dumps!) are just to the west. Two good access points are available near Route 27. One is south of the bridge on the left (west) bank of the river on River Road. Another is just past the Route 27 bridge on the right (east) bank.

VI Route 27 to Route 117

This section of the Sudbury River covers a little less than six miles and passes through extensive river meadows. For a majority of this stretch the river acts as the boundary between Wayland on the east and Sudbury on the west. Just below Lee's Bridge (Route 117) the river separates Lincoln (east) from Concord (west).

If you are beginning your trip here (Rt. 27), a spur road beside the entrance to the Wayland Golf Course leads to a launching area. A parking area is on the left just before you cross the old bridge. The history of the old bridge site is told on a granite monument on the side of the spur road. On one side of the monument is a list of Concord residents, including such locally well known names as Hosmer, Buttrick, and Wheeler, who died in a battle with the Indians when they went to assist the settlers of Wayland (then Sudbury) in 1676. On another face the monument tells the evolution of the bridge from foot bridge to cart bridge (1643) to frame bridge to four-arch stone bridge (the first in Massachusetts). Finally, the monument recounts that Washington passed this way on a visit to Wayland. The present-day causeway bridge is just upstream from this historic site.

As you walk out the spur road listen and look for the Warbling Vireos that nest here. The male Warbling Vireo has the rather unusual habit of singing from the nest as he shares in the incubation duties. Once on the river you will have a broad view of the meadows. Sedge Meadow will be on your right and the Sudbury meadows on your left. This is the widest area of river meadow on the Sudbury and affords an excellent panorama of the river valley as well as an unobstructed view of the sky. Look for hawks here as there is almost always a single Red-tailed Hawk in the area and often a family. A plant that you will soon encounter along this portion of the river is water chestnut. This introduced species has become a problem along those segments of the river where its growth remains unchecked. Water chestnut grows in thick, floating, carpet-like masses along the banks of the river. At places it may even cover the stream. A contemporary of Thoreau, Minot Pratt, is said to have introduced this plant and unfortunately, as is the case with so many alien species, there are few natural checks to its growth. Besides the floating mats of plant itself, you may come across its spiked seedcases.

Less than a mile below the Route 27 bridge the Sudbury begins a series of meanders that take the canoeist back and forth over what, at times, seems like the same ground. Although straight line progress is slow here, there is much to enjoy along this wandering course. Set amongst the stands of sedges, cattails, and buttonbush are delightful islands of willows. These willow isles provide a place to pause and survey the broad meadows. Tree Swallows, Red-winged Blackbirds, Great Blue Heron, and Wood Ducks are commonly seen in this area. Around the cattail stands listen for the chatter of the Marsh Wrens. From late July through October this is a good place to observe the migratory groups of blackbirds which move up the river valley. Listen also for the distinctive "pink, pink" notes of the southbound Bobolinks. At

the end of the meanders, where the river straightens and heads northwest, you will come to Sherman's Bridge.

The wood construction of Sherman's Bridge is unique among the bridges still in use on the Sudbury. The area around the bridge has a relatively heavy forest cover in comparison to other sections along this stretch of the river. Not far below the bridge the meadows open up once again. As you paddle downstream keep an eye out for a large building on the left bank. This is the headquarters for the GMNWR. Shortly after seeing the headquarters you will come to the boat ramp. This is an excellent place to stop and visit. Besides a mile-long trail through deciduous woodlands, the Great Meadows headquarters has educational displays explaining the river and its wildlife, books for sale, and personnel on duty to answer your questions. Public restrooms are available here. (Visitors Center and restrooms are closed on weekends from November 1 through March 31)

Less than half a mile downstream of the GMNWR center you will see a knoll on the left bank of the river with a house and various out buildings. Just before this area look for Pantry Brook entering the Sudbury from the west. Pantry Brook is now managed by the Commonwealth as a Wildlife Management Area and plans are being considered to improve the habitat for wildfowl. In colonial days Pantry Brook was the source of bog iron. A short distance past Pantry Brook is an extensive stand of meadow grasses. Reed canary grass and other grasses and sedges were at one time of great value to the farmers. These plants were harvested and fed to draft animals. A large portion of these river meadow grasses have been replaced by buttonbush and cattail which are more tolerant of the relatively higher water levels.

On the right before the Route 117 bridge, surrounded by a grove of willows, is the outlet for Farrar Pond. Just ahead are the Loosestrife Meadows. Purple loosestrife is another introduced plant that, although attractive when in bloom, is displacing large areas of indigenous plants. Purple loosestrife was first recorded in Concord in 1958. Over the last quarter century it has spread rapidly and is now abundant along many sections of the river. Interestingly, Charles Darwin wrote a book which deals with the three different forms of flowers of purple loosestrife. This plant is likely to continue its colonization of the river meadows and may present serious problems in the future. Just before Lee's Bridge (Rt. 117) several irrigation cuts go back into the agricultural fields to the west. This has proved to be a good area to fish for carp. A short distance downstream from the bridge a channel cuts to the right and leads to a public boat landing and launch area.

VII Route 117 to Route 225

This section of the river covers approximately 9.5 miles. There are no dams or other obstructions although boat traffic increases as one moves downstream. The river passes through meadows, deciduous woodlands, a large lake-like stretch called Fairhaven Bay, the

75
historic district of Concord, and an area where the river widens significantly in Bedford.

A convenient parking and canoe launch area east of Lee's Bridge on Route 117 is maintained by the town of Lincoln. Because this section of the river is popular with anglers, canoeists, and others, the limited parking facilities often fill early. Additional parking is available at the Mount Misery Conservation Area (east on Rt. 117) and the field west of the launch area (on the north side of Rt. 117). The Mount Misery Conservation Area has an extensive trail system passing through wooded hillsides and fields. Because of the excellent river access to the area you may want to plan a hike here to complement your paddle. A trail map is available from the town of Lincoln.

The banks of the Sudbury River just below the boat launch are lined with buttonbushes. In late July, when these shrubs come into bloom, the blossoms provide nectar for a host of insects. Some butterflies are attracted to this energy source and this may give you an opportunity to enjoy these attractive insects. The open, hillside meadows to the north give the paddler an idea of what this area looked like in the last century. While our region now has forest cover on a majority of the land, in the 1850s barely ten percent of the land was tree-covered. The open, rolling meadows so typical of the nineteenth century are now a rare sight. In fact, the miles of stone walls which bounded the many open fields are now mainly in the woods.

A half a mile below Lee's Bridge you will come to Fairhaven Bay. This wide, tree-lined bay provides a pleasant change in scenery. Fairhaven Bay is a good area to fish (bass and pickerel) or just to poke along the shoreline exploring the various nooks and crannies. There is a picturesque stone boathouse at the north end and an island on the west side of the bay. The island provides a good place to picnic or even to camp overnight, but permission needs to be arranged with the Concord Land Trust (see References). A jumping fish may remind you of the many insects that make their living on the surface of the bay. Keep an eye out for fleets of tiny waterboatmen or water striders. The bay also provides a nesting spot for migratory waterfowl.

Below Fairhaven on the left bank you will come to an outcropping of rock at Martha's Point. This is one of the few limestone areas along the river and as a result has some interesting plants. Skirt the shore to look for ferns and wildflowers, but stay on the river as the riverbank is privately owned. Downstream of Martha's Point you will pass beds of white water lily before coming to Heath's Bridge. You may also notice below the surface of the water eggmass-like clusters attached to roots and branches. No doubt some of these will be bryozoans (Pectinatella is the local variety), colonies of invertebrates that live together within an oval jello-like structure. Although bryozoans don't provide much excitement for the observer, they are one of the many components of the river system that often pass unnoticed or unrecognized.

Between Heath's Bridge and Route 2 buttonbush meadows predominate. Red-tailed and Broad-winged hawks are summer residents in this area.

Just before the Route 2 bridge, below Emerson Hospital is Clamshell Bluff. This area, before the hospital parking lot was built, was a choice area to botanize and hunt for Indian artifacts. Apparently the Pawtucket Indians often camped here and enjoyed a meal of freshwater clams. Below the Route 2 bridge you will pass another section of river meadow where the meadow grasses are still in evidence. Listen and look for Yellow Warblers along the banks. Shortly, you will come to a railroad bridge and South Bridge. The South Bridge Boat House is the center of boating activity on this section of the river.

The South Bridge Boat House (SBBH) rents and sells canoes and boats as well as boating equipment. A map is available here (no charge) that shows historical sites in Concord. Cold drinks and snacks can be purchased here. Because SBBH attracts many paddlers, most of whom make the trip from the South Bridge to the Old North Bridge and back, you can expect plenty of company on this stretch of the river. The next bridge downriver is the Elm Street bridge. Where the river swings east around Nashawtuc Hill you will find several stately, old Concord homes with lawns running down to the river. When the gardens are in bloom the plantings add an attractive touch of color to the streamside view. Nashawtuc Hill was an important Indian site as it commanded a view of the three rivers (Sudbury, Concord, and Assabet). Flotillas of resident ducks (mostly Mallards) commonly paddle out to greet the canoeist here - no doubt looking for a handout. After passing under Nashawtuc Bridge you will come to a grassy river meadow on your left and Concord Academy on your right. Another bend to the left and one to the right, past beds of pickerel weed and stands of swamp white oak, brings you to Egg Rock and the Old Calf Pasture.

Egg Rock marks the confluence of the Sudbury and Assabet rivers. Both rivers rise in the area of the Cedar Swamp but the Assabet takes a more northerly course to Concord. From this point to the Merrimack the stream is called the Concord River. During the last thirty years of the nineteenth century a boating boom swept Concord, and Egg Rock was the rallying point for races, picnic cruises, moonlight floats, and canoe parades. The social secretary for many of these events was George Bartlett. Bartlett's activities are commemorated by a plaque placed at the "Hemlocks," a short distance up the Assabet on the left. Just below Egg Rock is the Old Calf Pasture Conservation Area. Besides being a good launch and landing spot, this is an ideal place to enjoy a picnic. The Lowell Road bridge is directly below the boat access area.

A short way below the Lowell Street bridge you will come to the Minute Man National Historical Park. You will find a landing site and picnic area (concrete embankment) above the Old North Bridge. Besides a replica of the famous bridge (used only for pedestrian traffic), Daniel Chester French's statue of the Minute Man stands on the left bank near the bridge. There are many historic sites in the immediate area including the Old Manse, the Elisha Jones House ("Bullet Hole House"), and the Buttrick Mansion. Pathways lead around the park and one going up the hillside on the left bank of the river leads to the National Park Service Visitor's Center in the Buttrick mansion. In addition to the displays, films, and books available here, park

5
personnel are on duty at the center ready to answer your questions. Although it is easy to become blasé about this site, a quiet, early morning paddle along the river gives one a chance to ponder that momentous April day in 1775.

The next bridge is at Monument Street. The Concord has a wooded shore along this stretch and silver maples are common. Look for painted turtles sunning on streamside logs and cardinal flowers which bloom along the dark, muddy banks in August. Approximately a mile below the Monument Street bridge look for a canoe landing on the right bank. This is the riverside entrance to the GMNWR impoundments. Several miles of walking trails will take you around the dikes which enclose two pools as well as through second-growth upland forest. This is one of the best birding spots along the rivers, and in fall you can expect to see a good variety of shorebirds, waders, and waterfowl. The rare Blandings turtle is seen here regularly, also in springtime look for muskrat plying back and forth in the pools as they set up housekeeping. Display boards, a map, and observation tower are located at the east end of the main dike trail. Restrooms (open seasonally) are located next to the main parking area. Fishing, boating, and swimming are not permitted in the impoundments.

Below the Great Meadows boat ramp the river makes one loop to the northwest, heads back to the east, and then loops around Ball's Hill before heading north. The riverside habitat alternates between areas of river meadow and deciduous woodlands. William Brewster, a famous Concord ornithologist, built a boathouse and cabin on the west bank of the river at Ball's Hill. His journal accounts of local natural history were published after his death in October Farm and Concord River.

North of Ball's Hill the river becomes relatively straight and wide where it divides Concord (west) from Bedford (east). There are extensive buttonbush meadows along this section with a treeline of maples (red and silver) and white pines on the highlands. Look for Green-backed Herons nesting amongst the shrubs. Because of the lake-like quality of this stretch more power boats are likely to be encountered. Less than half a mile above the Route 225 bridge is the Carlisle (north) and Concord (south) line. There are landing sites on both banks of the river (right side preferable) on the north side of the Carlisle bridge (Rt. 225).

VIII Route 225 to Talbot Mills

This section of the Concord River covers a little less than six miles and passes through river meadow and deciduous woodlands, with an increasing proportion of urban landscape as one moves north. The canoeist should anticipate the dam at Talbot Mills (1/2 mi. after the Pollard St. bridge) and plan to take out well above this point.

There is good access to the river and plenty of parking on the east side of the Rt. 225 bridge in Carlisle. As you head downstream the relatively wide river channel is flanked by buttonbush and loosestrife

INSERT AFTER PARAGRAPH STARTING WITH "EGG ROCK MARKS..."

One of the most important events in the history of our country occurred at North Bridge on April 19, 1775. On that morning, the discontent that had been smoldering in the American Colonies erupted across the North Bridge. By mid-morning, the British soldiers in Concord's center had begun burning colonial supplies discovered in a house by house search. Meanwhile, the colonials had been joined by militia and minute companies from several surrounding towns and had moved from nearby Punkatasset Hill to Muster Field on the west bank of the Concord, downstream of North Bridge. Smoke from the fire in the center of Town broke the uneasy stalemate at the bridge; the Minute and Militia men could not see what was burning, but the volume of smoke led them to believe that the Town was being burned as punishment for hiding stores. The Americans marched down the road to save their homes, and the British took up a defensive position to hold the Bridge. As the Americans approached, the British fired into the Concord River. As the Americans continued to advance, a volley was fired, this time into the advancing column.

Major John Buttrick of the Acton Minute Men immediately gave the order for the colonials to return the fire, marking the first effective forcible resistance to the British rule in America. On the east side of the North Bridge is the Daniel French Smith Minute Man statue commemorating the "shot heard 'round the world".

Minute Man National Historical Park was established to preserve some of the sites where the events of April 19, 1775 occurred. Take time to stop and feel the history; visit North Bridge Visitor Center; talk to the rangers on duty and walk the grounds. Remember also that people from all over the world visit North Bridge to explore our American history, so make your impact on their day polite and inconspicuous.

The North Bridge Visitor Center is the imposing brick structure on the hill overlooking the site of North Bridge. It was built as a private residence by Stedman Buttrick in 1911 and was purchased by the National Park Service in the early 1960's. Today it houses several rooms of exhibits, rest rooms and the park headquarters. The Visitor Center is open year round from 8:30 to 5:00 seven days a week.

The North Bridge is the fourth commemorative bridge to stand on the site since the Centennial fight. The Bridge of 1775 was removed in 1793, and the road rerouted over the Flint bridge 1/2 mile downstream. The current Flint Bridge was built in 1887; note the keystone with the date as you pass by. There is an exhibit showing the other commemorative bridges in the Visitor Center.

Another important historical site near the river is the Old Manse, just upstream of the North Bridge set back on the east side of the River. It was built in 1770 as the minister's residence and it was from there that William Emerson, the Concord minister and Ralph Waldo Emerson's grandfather, watched the fight over the Bridge. In the 19th century, Nathaniel Hawthorne lived in the Old Manse for several years. He later wrote Mosses from an Old Manse" based on the stories he learned while living there.

3

meadows with maples and willows in various spots. Gradually, as you approach the Route 4 bridge, the meadows narrow and the treeline moves closer to the river's banks. This upper section is a good place to fish as there is ample space to maneuver your canoe. With luck you may land one of the northern pike stocked in this area. In the late summer and fall there are often a number of Great Blue Herons in this section which provide ideal subjects for the photographer. Just upstream of the Rt. 4 bridge, on the west side of the river, you will find the Center Harbor Marine. This facility rents canoes and other boats and equipment and there is an adjoining restaurant and bathrooms.

Below the Route 4 bridge, the river meadows are left behind as you enter a wooded portion of the Concord River. Silver maples, swamp white oaks, and some white pines occur along the banks. You will also notice an increasing number of homes whose backyards run down to the river. Many of the residents have their own boat landings which are often patrolled by families of ducks. A sizable island in the middle of the river provides a good spot to take a break or enjoy a picnic. Barn Swallows are frequently seen in this area gliding back and forth over the river in search of insects. Bedrock outcroppings are another feature. Below the mid-stream island you will see the two spans of the Route 3 double-arched bridge.

Just downstream of the Route 3 bridge are several rocks in mid-channel. Above, on the right bank, high tech meets the river. Just as the mills typify nineteenth-century industry along the rivers, the twentieth-century producers of chips and circuit boards are the symbols for today's technology. Soon you will pass by the stone footings of an old bridge. Between the River Street bridge and the 3A (Boston Rd.) bridge there is an interesting contrast between the relatively wild right bank, flanked by a narrow band of river meadow and deciduous woodlands, and the left bank whose shores are largely urban-residential. Another group of stone bridge footings mark the location of an earlier structure just below the 3A bridge. The wide river is flanked by buttonbush and loosestrife meadows with numerous stands of emergent pickerelweed at the shoreline.

Downstream the muddy river passes through an attractive wooded section (willows, maples and swamp white oak) eventually coming to a residential neighborhood on the right bank just above the Pollard Street bridge in Billerica. Below the bridge is a rocky section of the river with several shallow areas. You will have to thread your way through this interesting stretch, but there is plenty of room to maneuver. Below the rocky area the Concord widens. Shortly, you will see the chimney stack and brick buildings of the Talbot Mill over the treeline and you should make your landfall on the left bank before the next bend in the river. The dam is directly below this area so make sure to take out and conduct your investigations of the old mills from terra firma. The right bank of the impounded water above the dam is usually choked with duckweed and water chestnut.

The Talbot Mill (south bank) and the Faulkner Mill (north bank) are over a century old. In fact, the Faulkner Mill, built in 1857, is

the oldest woollen manufactory in New England still producing at its original site." Adding to the historic interest of this area is the Middlesex Canal. It was at this location that the canal (Charlestown to Lowell) crossed the Concord River. A spit of land extending out from the east side of the pond was once the towpath for the Middlesex Canal. Opposite this, on the west bank of the pond, one can see the continuation of the canal's path. A short walk to the northwest along a paved street will bring you to a water-filled section of the Middlesex Canal. For Thoreau buffs, Henry left the Concord River at this point and continued his famous journey (A Week On The Concord and Merrimac Rivers) along the canal.

IX Talbot Mills to Lowell

This stretch of the Concord River covers approximately two and a half miles and passes through a short wooded section, extensive meadows, and some urban-residential areas. The canoeist should be aware of the potentially dangerous dam and rapids below the Lawrence Street bridge. Plan to take out shortly after passing the first railroad bridge.

The portage around the Talbot Mill involves some effort. After taking out on the west side of the mill pond, carry alongside the Talbot Mills to the Cambridge Tool Manufacturing parking area to a steep bank west of the buildings. An alternate access point is behind the fire station off Lowell Road. From the mills go west on Elm Street and turn right at the stop sign on to Lowell Road. In less than a quarter-mile you will see the fire station on your right. Behind the station, a dirt road traverses the 100 yards to the river's edge.

Directly below the Talbot and Faulkner milldam the river is relatively fast and narrow for a short distance. This initial stretch passes through woodlands, but soon emerges into a wider area flanked by loosestrife and buttonbush meadows. A residential section on the elevated right bank is paralleled by a meadow on the left. After passing under power lines you will come to another small neighborhood on the west (left) bank. An interesting and showy plant to look for on this portion of the river is swamp rose mallow. This shrub-like herb grows at various places along the banks and the large pink and white blossoms (late July and August) add a nice touch of color to the riverscape.

Farther along the river, above the Route 495 bridge, you will pass an industrial waste plant on the right. In the past, many towns along the rivers considered these streams an effective conduit for removing unwanted sewage. The inevitable consequences to the rivers and to the quality of the environment downstream gradually led to a rethinking of these policies. Mandates from the Massachusetts Division of Water Pollution Control and municipal efforts have led to less pollution resulting from untreated sewage. However, several communities along the Sudbury and Concord rivers continue to discharge treated wastewater into the rivers. Effects of such dumping include an elevation in nutrient levels and eutrophication (uncontrolled plant growth which depletes the water of oxygen and reduces animal

populations). Of even greater concern is the significant amount of untreated sewage which runs off into the rivers during periods when municipal sewage systems overflow.

This section of the river is a good place to look for ducks and other water birds. Canada Goose, Black Duck, and Black-crowned Night-Heron can be seen during the spring and fall migration and Green-backed Heron is a summer resident. Occasionally a Double-crested Cormorant (a large, dark loon-like bird) will be encountered as it rests on the surface or dives after a fish. Human anglers are also common here as they stalk the black crappie (calico bass), largemouth bass, and northern pike. The five-arch railroad bridge, below the Route 495 bridge, is your signal to look for a landfall. Pass under the railroad bridge via one of the two, left (west) arches where there are fewer obstructions. Below the bridge and just above a willow tree is a take-out spot on the right (east) bank. You may want to paddle down to investigate the next railroad bridge and the railroad trestle which sweeps out along the east bank of the river. Below this spot is the Lawrence Street bridge, dam and rapids. To be safe, stay well above the Lawrence Street bridge as the current can be a problem.

X Lawrence Street Bridge to Merrimack River

This section is definitely not recommended for the canoeist. Dangerous dams, rapids, and obstructions occur at various places and constitute nasty problems for even an expert whitewater enthusiast. Whitewater raft trips are conducted between the Lawrence Street bridge and the Merrimack River and those so inclined should contact Wilderness Plus in Wilmington (617-658-4725). Various bridges over the lower section of the Concord will give you glimpses of the river in this urban setting. These include the bridges at Lawrence Street, Rogers Street, Church Street, and Merrimack Street.

A tour of Lowell is also recommended. The story of the industrial revolution of the nineteenth century and its effect on the Concord is an important chapter in the river's history. In 1821, when the initial group of entrepreneurs visited here to plan their milltown community, the site was known as East Chelmsford. Within two decades this sleepy, agricultural community was transformed into a bustling milltown with numerous dams, power canals, and textile manufacturers. "Female operatives," young farm women, poured into Lowell to run the looms and other machinery. These women lived according to company regulations; they were housed, fed, educated, and sent to church by the bell. Immigrant laborers formed another significant component of the labor force and resulted in a rich ethnic diversity still apparent today. While the initial idea was to build a humanitarian industrial environment, by mid-century, long hours, low pay, and dangerous work conditions led to an increasing number of grievances. The latter half of the nineteenth-century and the first decades of the twentieth-century witnessed recurrent labor problems. While there were some victories for the laborers, ultimately both the Lowell

manufacturers and the workers lost the economic battle to other, modern textile centers.

To get an in-depth view of this important historic period visit the Lowell National Historical Park and the Lowell Heritage State Park (park headquarters and a visitor's center are located on Market Street).

RESOURCE DESCRIPTION

Plants/Insects/Fish & Reptiles/Birds/Mammals

RIVER HISTORY

Plant List

The following list of plants includes those species that are regularly encountered along the Sudbury and Concord rivers. While certain species are more or less evenly distributed along the rivers, others are common (or abundant) only in certain locales.

Trees and Shrubs

Maples:

- Red Maple (*Acer rubrum*)
- Silver Maple (*A. saccharinum*)

Swamp White Oak (*Quercus bicolor*)

Willows:

- Black Willow (*Salix nigra*)
- Shining Willow (*S. lucida*)
- Pussy Willow (*S. discolor*)

Alders:

- Speckled Alder (*Alnus rugosa*)
- Smooth Alder (*A. serrulata*)

Buckthorns:

- Glossy Buckthorn (*Rhamnus frangula*)
- Common Buckthorn (*R. cathartica*)

Dogwoods:

- Silky Dogwood (*Cornus amomum*)
- Gray Dogwood (*C. racemosa*)

Arrowwood (*Viburnum recognitum*)

Meadowsweets:

- Meadowsweet (*Spiraea latifolia*)
- Hardhack (*S. tomentosa*)

Shadbush (*Amelanchier canadensis*)

Common Greenbrier (*Smilax rotundifolia*)

Fox Grape (*Vitis labrusca*)

Common Winterberry (*Ilex verticillata*)

Sweet Pepperbush (*Clethra alnifolia*)

Sweet Gale (*Myrica gale*)

Highbush Blueberry (*Vaccinium corymbosum*)

Leatherleaf (*Chamaedaphne calyculata*)

Herbaceous Plants

aquatic

Coon's-tail (*Ceratophyllum demersum*)

Water-milfoil (*Myriophyllum humile*)

Duckweeds:

Duckweed (*Lemna minor*)

Water-meal (*Wolffia columbiana*)

Pondweeds (*Potamogeton* - spp.)

Pond Lily (*Nuphar variegatum*)

Water Lilies:

Tuberous Water Lily (*Nymphaea tuberosa*)

Fragrant Water Lily (*N. odorata*)

Water Shield (*Brasenia schreberi*)

Water Chestnut (*Trapa natans*)
Water-clover (*Marsilea quadrifolia*)
Water-celery (*Vallisneria americana*)

streamside

Water Hemlocks:

Water Hemlock (*Cicuta bulbifera*)
Spotted Cowbane (*C. maculata*)

Pickersweed (*Pontederia cordata*)

Arrow Arum (*Peltandra virginica*)

Arrowhead (*Sagittaria latifolia*)

Cattails:

Common Cattail (*Typha latifolia*)

Narrow-leaved Cattail (*T. angustifolia*)

Sweetflag (*Acorus calamus*)

Bur-reed (*Sparganium americanum*)

Soft Rush (*Juncus effusus*)

Grasses:

Reed Canary (*Phalaris arundinacea*)

Wild Rice (*Zizania aquatica*)

Slough Grass (*Spartina pectinata*)

Cutgrass (*Leersia oryzoides*)

Manna Grasses (*Glyceria* spp.)

Sedges and Bulrushes:

Tussock Sedge (*Carex stricta*)

Spike-rushes (*Eleocharis* spp.)

River Bulrush (*Scirpus fluviatilis*)

Softstem Bulrush (*S. validus*)

Threesquare (*S. americanus*)

Knotweeds & Smartweeds (*Polygonum* spp.)

river meadow

Jewelweed (*Impatiens capensis*)

Purple Loosestrife (*Lythrum salicaria*)

Ferns:

Royal (*Osmunda regalis*)

Cinnamon (*O. cinnamomea*)

Sensitive (*Onoclea sensibilis*)

Marsh (*Dryopteris thelypteris*)

Joe-pye-weed (*Eupatorium maculatum*)

Beggar's ticks (*Bidens* spp.)

Cardinal-flower (*Lobelia cardinalis*)

Iris:

Blue (*Iris versicolor*)

Yellow (*I. pseudacorus*)

Marsh Cinquefoil (*Potentilla palustris*)

Nightshade (*Solanum americanum*)

Mermaid weed (*Proserpinaca palustris*)

List compiled by R. K. Walton with suggestions by John Organ, U. S.
Fish and Wildlife Service

INSECTS

One of the most interesting and varied groups of animals along the rivers is the insects. While you will, no doubt, spend some time swatting away several of the more noxious species, there will also be opportunities to enjoy many of the more benign ones. The selection of insects described here presents only a few of the most common species.

(Damselflies and Dragonflies stand out among the insects likely to be seen by the canoeist. These beautiful creatures are often encountered as they dart back and forth over the river, hover beside your canoe, or even alight briefly on the bow. Damselflies are generally smaller than their dragonfly relatives. The former rest with wings folded over the back, the latter with wings outspread. The following species are common along the rivers.)

Damselflies:

Black-winged Damselfly This damselfly has dark wings with a metallic greenish-black body.

Blue damselflies This family of small damselflies includes over twenty species. Most can be recognized by the enamel-blue and black body color.

Common Forktail Males can be distinguished by a brilliant green section forward on the body, and blue on the aft tip. Females come in two forms: the first with an orange forebody, black behind, and another, largely blue-gray.

Violet Dancer A violet colored damselfly, common along some sections of the river.

Dragonflies:

Darners These large dragonflies, also known as mosquito hawks, come in many patterns - mostly in blue, green, and yellow. Migrant darners are frequently seen in late summer and fall. Contrary to folk lore they will not sew up your lips.

Amberwings This small (> 1") dragonfly can be recognized by its uniformly amber color.

Ten Spot A large dragonfly with 3 dark brown patches on each wing. Adult males also have two white patches per wing.

Whitetail Males with a white abdomen and a dark brown band across each wing.

Blue Pirate This common species has a powder-blue abdomen and clear wings.

Sympetrum Males are brilliant red, females are golden brown. Two common species can be distinguished by their leg color: internum has black legs, vicinum has yellow legs.

Butterflies:

Tiger Swallowtail A large yellow butterfly with black stripes across the wings and "tails" protruding from the hind wings. A strong flier.

Cabbage White This medium-sized white butterfly may be abundant - particularly along those sections of the river that are still farmed. Two other common members of the family are the Common Sulphur (largely yellow) and the Orange Sulphur (with orange above).

Painted Ladies Two species (Painted Lady & American Painted Lady) both with upper wing surfaces patterned with pinkish-orange and black; the hindwing beneath with various sized "eyespot."

Red Admiral A medium-sized, dark butterfly with and orange-red stripe across the upper surface of both pairs of wings.

Monarch This large, orange and black butterfly is certainly one of the best known insects. In fall you may see numbers of migrating Monarchs moving upstream as they follow the path of the river.

Mayfly Swarms of mating mayflies may be encountered by the canoeist along the rivers. Look for these delicate insects with translucent wings (held together over the back when at rest) and 2 or 3 fine "tails" attached to the abdomen. Subadult and adult mayflies often emerge from the water in impressive numbers, partake in a brief but frenzied mating period, and fall back on the surface to die.

Mosquito Many species, a few act as vectors for disease. In Massachusetts however, these familiar insects are more often a nuisance than a serious health risk. Larvae develop in stagnant water and free flying adults become most active at dusk and dawn. It is the female mosquito in her search for food (animal blood) that causes human and other animals such vexations. Repellents can be effective in warding off mosquitoes.

Black Flies These small flies, like the previous species, are known mainly for their nuisance value. Larvae develop in fast moving water after which the adult flies emerge and begin their search for food (mostly mammal blood). Adult black flies are active in spring and early

summer. Repellents help some but are less effective than with mosquitoes.

Giant Water Bugs Several species, the largest approximately two inches in length. These carnivorous bugs dwell among the emergent vegetation where they catch tadpoles and small fish. Giant water bugs grasp their prey with powerful, well developed forelegs. You may have first been introduced to this insect on your front porch as giant water bugs are attracted to electric lights and often collide with porch doors and screen windows in mid-summer.

Backswimmers These 1/2 inch long insects scull along the river on their back. The hind pair of legs is much longer than the other two and serve as oars. Also called "water bees" because of their ability to inflict a painful bite if handled carelessly.

Water Boatman Like the previous species but usually a little larger (to 3/4 inch) with two pair of legs elongated and used as oars, while the forelegs are short and scoop-like.

Water Striders Less than 1/2 inch long and also known as "Jesus Bugs", these graceful insects glide on the surface of the water. Two long pairs of legs distribute their weight while the shorter front pair is used for grasping prey.

Whirligig Beetles The whirling dervish of the beetle world. Fleets of these small (1/3 inch) insects are frequently observed on the surface of the river engaged in their curious gyrations. Whirligig beetles are dark, oval shaped insects with "two pairs" of eyes. As might be expected, one set of eyes peers into the water, the other keeps watch above the surface.

Cicadas During the hot days of July and August the canoeist is likely to hear the drawn-out "buzz" of the cicada coming from the treetops. These large (1-2") black and green insects are seldom seen but often heard.

List compiled by R. K. Walton with suggestions by Christopher Leahy, Massachusetts Audubon Society.

Reptiles & Amphibians

Although many reptiles and amphibians have a poor public image, this is mostly undeserved. The patient canoeist should find many opportunities to observe and enjoy the various "herps" along the rivers.

REPTILES

Snapping Turtle This turtle has a large head, long tail, and relatively small, bumpy carapace (top shell). Although rumors of "snappers as big as a boat" abound, the Massachusetts record is something over 60 pounds. This species is often observed just below the surface with part of the head above water. Look but do not touch - the powerful jaws of the snapper can inflict major injury.

Eastern Painted Turtle This is the common basking turtle of the river system. The canoeist will often observe these reptiles hauled out on logs taking the sun. The carapace is dark with yellow lines forward. The neck and head have yellow stripes while the plastron (bottom shell) is yellow. On sunning turtles you will notice some red and black markings on the edge of the shell. Average adult length is 6 inches.

Blandings Turtle A rare reptile with only a few widely separated populations in the United States. These turtles can be found in and around the GMNWR impoundments at Concord. The adults of this species are larger than the painted turtle, have a dark carapace, and solid yellow throat and chin.

Northern Water Snake This is the common aquatic snake of our river system. This snake has a dark background color and, depending on the light and the individual, shows varying amounts of banding (red to brown); may grow to over four feet in length. Often seen swimming in the rivers or sunning along the banks. Although not poisonous, this snake (like most wild animals) will bite if harassed.

Eastern Garter Snake A variable species but usually dark with three yellow stripes. Grows to 2 feet in length. Although the garter snake is largely terrestrial, it is sometimes found in wetland areas.

AMPHIBIANS

Spring Peeper This small (1"), beige treefrog with a dark "x" on the back is more likely to be heard than seen. A repeated "peep... peep... peep..." song, or a chorus of the same is often heard coming from the wetlands along the rivers.

Bullfrog The call of this amphibian is the familiar "jug-a-rum..."

jug-a-rum...". The bullfrog is green with a smooth back (see Green Frog) and grows to 8 inches in length.

Green Frog In appearance much like the bull frog but with a pair of ridges running down the back. The green frog also has a characteristic call which sounds much like the plucking of a bass banjo.

Pickereel Frog A smallish (3") green frog with dark, squarish markings, and bright yellow or orange on the undersides of the legs. The call of this species is similar to two long, drawnout burps.

Leopard Frog Similar to the pickereel frog but with dark markings more roundish in shape. The leopard frog's call sounds like two balloons being rubbed together.

List compiled by R. K. Walton.

BIRDS

The following list of birds includes species that are likely to be encountered on or around the Sudbury and Concord rivers. Each description gives the bird's common name, seasonal occurrence, relative abundance, and page reference to Roger Tory Peterson's *A Field Guide to the Birds* (4th edition, "Eastern and Central North America"). Numeric descriptions refer to overall body length.

Pied-billed Grebe - Spring and Fall - Uncommon - P. 34
Similar to a small duck, this grebe feeds by diving below the surface. Look for a plain brown bird with a white rump and smallish bill.

American Bittern - Spring thru Fall - Uncommon - P. 104
A little bigger than a crow, this brown heron has a yellowish bill and streaked underparts. Look for a two-tone (brown/black) wing in flight.

Least Bittern - Spring and Summer - Rare - P. 104
The smallest heron (12") of our area displays buff wing patches in flight. This secretive bird may be found along the river banks.

Great Blue Heron - Spring thru Fall - Common - P. 100
The largest (48") heron of our area. A gray-blue heron with a long yellowish bill. May be seen wading or perched in streamside trees.

Snowy Egret - Late Summer and Fall - Uncommon - P. 102
A medium sized (24") wader with a black bill and all-white plumage. Adults with black legs and yellow feet.

Green-backed Heron - Spring thru Fall - Fairly Common - P. 104
A dark, crow-sized heron with a gray-green back and deep maroon neck and head feathers. Often perches in shrubs or trees along river.

Black-crowned Night-Heron - Summer - Uncommon - P. 104
Chunky heron (24") active at dusk. Adult: black, gray, and white; immature brown. Listen for "quock" call in flight.

Canada Goose - Year Round - Common - P.44
Black neck and head with white "chinstrap"; body largely brown. Look for Vs flying overhead and local birds in ponds and impoundments.

Wood Duck - Spring thru Fall - Fairly Common - P. 50
Nests in duck boxes placed on poles along rivers. Male highly patterned with iridescent colors, female more subtle with eye patch.

Green-winged Teal - Spring and Fall - Fairly Common - P. 52
Small duck; male with rusty head, green eye patch, female brownish, both with green speculum in flight. A few nest along rivers, more in migration.

American Black Duck - Spring and Fall - Fairly Common - P. 48
Mainly dark brown with purplish speculum. In flight look for silvery underwing. A few nest in river marshes, more during migration.

Mallard - Spring thru Fall - Common - P. 48
Male with green head, female largely brown, both with blue speculum.
A few tame individuals may approach your canoe for a handout.

Blue-winged Teal - Spring and Fall - Uncommon - P. 52
Smallish duck; male with white crescent on face, female brownish. Look for sky-blue wing patch in flight.

Ring-necked Duck - Spring - Common - P. 58
Medium sized diving duck. Males, overall dark with gray sides and white slash in front of folded wing, females brown.

Common Merganser - Spring - Common - P. 62
Large diving duck. Male, white with green head and red bill, female grayish with orange head. Seen in small flocks feeding in river.

Osprey - Spring and Fall - Fairly Common - P. 158
White below dark above with dark patches at bend of wing. Look for the "fish hawk" hovering over the river and diving after fish.

Northern Harrier - Spring and Fall - Uncommon - P. 152
Previously called marsh hawk, males gray, females and young brownish. Look for the harrier's white rump as it courses over meadow and marsh on uptilted wings.

Red-tailed Hawk - Year Round - Common - P. 154
Dark above, light below with salmon-red tail (adults) and dark breast band. The red-tail is the common resident hawk of this area.

American Kestrel - Year Round - Fairly Common - P. 162
A small (10") falcon with pointed wings. The "sparrow hawk" has a rusty back and patterned face. Hovers over fields while hunting.

Ring-necked Pheasant - Year Round - Common - P. 144
This introduced game bird is often heard calling from the fields along the river. A loud, double squawk with wing whir is typical.

Virginia Rail - Spring thru Fall - Uncommon - P. 112
A small (9") dark marsh bird. Gray on face with rusty portions to the wings. Listen for this secretive species calling from the dense vegetation along the river bank ("kidick, kidick" and "wakah, wakah").

Sora - Spring thru Fall - Uncommon - P. 115
A small (8"), buffy, chunky rail with a short yellow bill. Adults have some black on throat and chin. Edges of marsh and river banks.

Spotted Sandpiper - Spring thru Fall - Uncommon - P. 132
This medium sized sandpiper is tawny above, white below (often with spots). Look for characteristic bobbing walk or stiff-winged flight.

Common Snipe - Spring and Fall - Uncommon - P. 124
Long billed shorebird with vertical stripes on back and head. Flushes from river bank with erratic flight and raspy alarm notes.

American Woodcock - Spring thru Fall - Uncommon - P. 124
Long billed, chunky shorebird with horizontal stripes on head.
Woodcock nest in drier portions of the river meadows.

Herring Gull - Spring and Fall - Common - P. 86
A large (24") gray and white gull with black on wing tips and red spot on yellow bill. Immature birds mostly brown with dark tail feathers.

Great Black-backed Gull - Spring and Fall - Common - P. 86
The largest (30") gull to visit our area. White with black on back and upper wing surface, heavy yellow bill.

Rock Dove - Year Round - Common - P. 180
The common domestic pigeon found around towns and farms. Usually gray and white but often with variations including blacks and browns.
Nests under bridges along the rivers.

Mourning Dove - Year Round - Common - P. 180
Brown dove with long tail showing white outer feathers in flight. In fall, migrant Mourning Doves congregate in agricultural fields.

Eastern Screech-Owl - Year Round - Uncommon - P. 172
This small (8") owl is actually fairly common but seldom seen. Two phases: gray or red, with "ear" tufts. Listen for tremolo song.

Great Horned Owl - Year Round - Uncommon - P. 172
A large (24") brown owl with "ear" tufts. More likely to be heard (5 hoots) than seen. At dusk perches in treetops by river edge.

Common Nighthawk - Spring and Fall - Fairly Common - P. 184
Slim, hawk-like bird with white patches on outer portion of wing. Migrants are often seen overhead during late May and late August.

Chimney Swift - Spring thru Fall - Common - P. 204
Swallowlike, small (5") uniformly dark bird ("a cigar with wings"). Seen flying above river in search of insects (see also swallows).

Belted Kingfisher - Spring thru Fall - Fairly Common - P. 186
Chunky, blue-gray and white bird with breast band and heavy bill. Listen for rattle call; look for these birds hovering and diving.

Downy Woodpecker - Year Round - Common - P. 192
The common, small (6") black and white woodpecker of our area; males with red spots on back of head. Hairy Woodpecker is larger version.

Northern Flicker - Spring thru Fall - Common - P. 190
Large (13") brownish woodpecker with black bib, showing yellow underwing in flight. Listen for loud "wick, wick, wick" call.

Willow Flycatcher - Spring and Summer - Common - P. 198
A small (5") olive-colored songbird with white wing bars. The canoeist may hear its persistent "fitz-bew" along the river meadow.

Eastern Phoebe - Spring thru Fall - Fairly Common - P. 196

A rather nondescript songbird (7") dark above, light below. Wags its tail and is commonly found around bridges. Song, a sneezed "phee-bee."

Eastern Kingbird - Spring thru Fall - Common - P. 194
Black above and white below with white tip to tail. Defends its nest area energetically, often giving a series of sharp, scolding notes.

Tree Swallow - Spring thru Fall - Common - P. 204
Often seen gliding over the river searching for insects. Adults are dark green-blue above, white below; immatures brown above.

Northern Rough-winged Swallow - Spring and Summer - Uncommon - P. 204
Brown above, white below with diffuse brown shading on chin and throat. Feeds with other swallows along the river.

Bank Swallow - Spring thru Fall - Fairly Common - P. 204
Brown above, white below with brown breast band. Colonies of these swallows nest in burrows in steep banks and come to the river to feed.

Barn Swallow - Spring thru Fall - Common - P. 202
A split-tailed swallow, dark above and orange below.

Blue Jay - Year Round - Common - P. 208
This vociferous songbird is blue above, grayish-white below. Look for its crest and black neckband. Flocks of migrants may be seen in fall.

American Crow - Year Round - Common - P. 206
A large (18") all black songbird. Listen for its familiar "caw." If you hear a nasal variation in winter or spring it is probably a Fish Crow.

Black-capped Chickadee - Year Round - Common - P. 210
Small (5"), gray and white bird with black cap and throat. Listen for its whistled "phee-bee" or "chic-a-dee-dee-dee."

Tufted Titmouse - Year Round - Common - P. 210
Shaped like a small (6") Blue Jay. The titmouse is gray above, white below with faded orange on sides. In wooded sections of riverside.

White-breasted Nuthatch - Year Round - Common - P. 212
Blue-gray above, white below with a black cap and collar. Look for this small (5") songbird climbing down trees headfirst.

House Wren - Spring thru Fall - Fairly Common - P. 214
This wren and the next are small (5"), energetic songbirds. This species has a plain brown back, and a subtle eye-ring.

Marsh Wren - Spring thru Fall - Fairly Common - P. 214
Look for this wren in cattail stands. The marsh wren has a white stripe over the eye and stripes on the back. Song is rapid and reedy.

Wood Thrush - Spring thru Fall - Fairly Common - P. 222

Shaped like a robin but smaller (8"), this thrush is brown above and white below with spots on breast. Crown is rust colored.

American Robin - Year Round - Common - P. 220

This familiar thrush is gray above with a yellow bill and orange-red breast.

Gray Catbird - Spring thru Fall - Common - P. 218

A gray songbird with a black cap and rusty undertail feathers. Listen for its cat-like whine from shrubs along the rivers edge.

Northern Mockingbird - Year Round - Common - P. 218

This gray, long-tailed bird shows patches of white on the wings and the sides of the tail in flight. An accomplished mimic; phrases sung three times or more.

Brown Thrasher - Spring thru Fall - Uncommon - P. 218

Rusty version of the mockingbird, with streaks below and largish yellow bill. Another mimic; phrases whistled, often in pairs.

Cedar Waxwing - Year Round - Fairly Common - P. 224

Largely warm brown with yellow tip to tail and displaying a crest. Listen for its high pitched "zeee" call note.

European Starling - Year Round - Common - P. 256

Summer starlings are largely black with iridescent highlights; winter birds are speckled with white. Starlings give a variety of calls; also a mimic.

Warbling Vireo - Spring thru Fall - Fairly Common - P. 226

A drab-gray, small (5") songbird that often nests along the river. The canoeist may hear its subtle warble when passing near a nest.

Red-eyed Vireo - Spring thru Fall - Common - P. 226

Slightly larger than previous species, also gray, with white stripe over the eye bordered in black. Sings short, repetitious phrase ("see me, I see you").

Yellow Warbler - Spring thru Fall - Common - P. 238

Common nester along the river meadow; male yellow with reddish streaks on breast. Song a rapid "sweet, sweet, sweet, littlemoresweet."

Common Yellowthroat - Spring thru Fall - Common - P. 246

Tan above and yellow below, the male with a black mask. This diminutive (4") species sings "witchity, witchity, witchity."

Scarlet Tanager - Spring thru Fall - Fairly Common - P. 260

Slightly smaller than a robin, male brilliant red with black tail and wings, female olive above yellow below.

Northern Cardinal - Year Round - Common - P. 268

Both sexes have a thick bill with black facial markings; male is red, female is tan-orange. Song, a loud "cheer, cheer, cheer."

Rose-breasted Grosbeak - Spring thru Fall - Fairly Common - P. 276

Male black above, white below with a red bib, female is sparrow-like with brown and white streaks. Listen for metallic "check" note.

Song Sparrow - Year Round - Common - P. 284

Basically brown and white with streaking on breast and dark central "stick-pin" spot. One of the commoner species of the river meadow.

Swamp Sparrow - Spring thru Fall - Fairly Common - P. 280

Look for a sparrow with rusty cap and wings, with gray face and neck. Song is a loose trill often given from cattail perch.

Bobolink - Spring and Fall - Fairly Common - P. 256

Male in spring black below, with some white above. In fall, both sexes resemble large sparrows with dark stripes on crown.

Red-winged Blackbird - Spring thru Fall - Common - P. 252

Male black with red shoulder patches, female sparrow-like combination of brown and white streaking. Listen for "conker-ree" song.

Common Grackle - Spring thru Fall - Common - P. 254

Long-tailed, long-billed, blackbird with many iridescent highlights. Listen for harsh, raspy song and loud call notes.

Brown-headed Cowbird - Spring thru Fall - Common - P. 252

Male glossy black with brown head, female mouse brown. Lays its eggs in other birds' nests. Song a high-pitched bubbly jumble.

Northern Oriole - Spring and Summer - Fairly Common - P. 258

Male orange and black, female olive and yellow. Look for pendulous nest hanging from deciduous trees. Song contains whistle notes.

American Goldfinch - Year Round - Common - P. 272

Bright yellow, the male with a black cap and wings; often nest building in mid-July. Whiney notes and roller-coaster flight.

House Sparrow - Year Round - Common - P. 262

Male with gray crown, brown back and black chin and throat markings, female mouse brown with yellow bill. Song a dry chirp.

List compiled by R. K. Walton with suggestions by Richard Forster, Massachusetts Audubon Society.

Mammals

Most mammals are seldom seen by human observers. Even abundant species such as shrews and voles often pass unnoticed. The nocturnal habits and secretive nature of many mammal species partially explains their unfamiliarity. However, knowing what to look for can increase the possibilities for the patient observer. A quiet paddle at dusk or dawn provides an excellent opportunity to observe a variety of mammals.

Short-tailed Shrew Barely 4 inches long, including tail, this slate-colored shrew is common in our area. Shrews have pointed snouts and tiny eyes and spend much time scurrying amongst the leaf litter in search of insects.

Star-nosed Mole This mole averages 7 inches long. The unique bundle of 22 short, pink tentacles around the nose make it unmistakable. This species is fond of wetlands and uses its flattened front feet for swimming as well as burrowing.

Little Brown Bat Although other bat species occur along the rivers, this is the most common one and is often encountered at dusk as it flies up and down the river catching airborne insects.

Eastern Cottontail An introduced species that has gradually inter-bred with the native New England Cottontail. This rabbit is sometimes found on the edges of wetlands.

Eastern Chipmunk This small (9 inches including tail), familiar member of the squirrel family is tan colored with a series of dark and light stripes on its back. The canoeist may hear the chipmunk's "chuck-chuck-chuck..." call along wooded sections of the rivers.

Woodchuck This large member of the squirrel family is normally at home in field and meadows. However, they are good swimmers and are occasionally seen crossing the river.

Gray Squirrel This common woodland species builds a leafy nest knitted together with a generous supply of sticks. Although primarily an arboreal species, the gray squirrel is also an excellent swimmer.

Red Squirrel About half the size of the previous species, this squirrel is rust-red above and light below. They prefer areas with conifers, especially hemlocks. Often highly vocal, the red squirrel gives forth a variety of chirps, chatter, and chortles.

Flying Squirrel Two species (Northern and Southern) occur in our area and the canoeist may see one of these at dusk along wooded stretches of the rivers.

Beaver Once a common species in the Sudbury River Valley, the beaver is now small and seldom encouraged by its human neighbors. This large

aquatic mammal may grow to 4 feet and weigh over sixty pounds. Look for its wide, flat tail (see Muskrat).

Meadow Vole Probably the most common mammal of our area. Also known as field mice, these voles are brown above, light below and measure approximately 6 inches including tail. Meadow voles are chunky with small, black eyes, and rounded ears. They are at home in a variety of habitats including river meadows and marshes.

Muskrat A fairly common aquatic mammal; sometimes confused with the beaver. Adults are approximately 2 feet long and weigh up to 4 pounds. The muskrat is often encountered by canoeists as it plies back and forth along the rivers. Look for its relatively thin tail which is flattened vertically. Muskrat dens, mounds of mud and cattail, can be seen at various locations along the banks. Populations fluctuate on a cyclical basis.

Meadow Jumping Mouse A mouse with long hind legs and feet and a 4-6 inch tail. This species is a strong hopper and, like a kangaroo, uses its tail for balance. They prefer the sedge meadows along the river.

Red Fox The red fox is well adapted to suburban areas and is fairly common in the Sudbury River Valley. Similar to a small dog, this fox has a bushy red and black tail with a white tip. Sometimes seen napping or sunning in a quiet spot along the river. The red fox is a strong swimmer. Silver and cross fox color phases of this species have been seen in the river valley.

Gray Fox Smaller than the previous species, the gray fox is largely grizzled gray with some areas of white and reddish brown hairs. The tail is dark above and at the tip and reddish brown beneath. The gray fox is known for its abilities as a tree climber. Less likely to be seen than the red fox.

Raccoon Like most mammals, the raccoon is primarily a nocturnal animal. The raccoon can be identified by its mask and ringed tail. The raccoons continued success in our area can be accounted for by its adaptability to a range of habitats and a generalized appetite.

Long-tailed Weasel This agile and active carnivore is between 12 and 18 inches long including tail. The long-tailed weasel is dark brown above and light below; the tail is tipped with black. The short-tailed weasel, or ermine, is a smaller version (8-12 inches) and also lives in our area. Most short-tails and some long-tails have white coats in winter.

Mink This mammal is larger (24 inches) than the weasels described above and is dark brown with a white chin patch. Mink are at home in wetlands where they actively range over their relatively large territories.

River Otter The recent record for otter in the Sudbury River Valley is decidedly scant. However, because otters wander over large areas, there is always the possibility that one will show up in the local

rivers. This species averages 4 feet in length and weighs 20 pounds. The otter has a prominent flat nose and long, rounded tail.

White-tailed Deer A few deer still live along the rivers. Unfortunately, urban development and dogs make their existence here difficult. The canoeist may come across a deer coming down to the river to drink.

List compiled by R. K. Walton with suggestions by Charles Roth, Massachusetts Audubon Society.

Fish

The following annotated list includes those species that are common in the Sudbury and Concord rivers.

American Eel Only female eels are found in freshwater rivers. Their stay here is related to a fascinating life history that includes annual round-trip journeys of thousands of miles to the Sargasso Sea in the South Atlantic. This green to yellowish-brown species is recognized by its elongate shape and continuous fin on the posterior portion of the body. Adult females may reach 4 feet, most in the rivers are much shorter.

Brown Bullhead This is a member of the catfish family and is recognized by barbels, fleshy protuberances, around the face. The brown bullhead is dark above and light below with a squarish tail fin. Normally between 9 and 12 inches long. When handling be careful of sharp spines on fins.

White Sucker An abundant species with bony flesh not favored by anglers. This species has the sucking mouth parts characteristic of the family and a blunt head without scales. May reach 24 inches.

Carp An introduced species that tolerates polluted water. Recognized by its hump-backed appearance and sucker-like mouth with two barbels on each side. The carp is golden-olive above, yellowish on the sides and belly. May reach 3 feet in length and 30 pounds.

Golden Shiner The young are often used as bait by anglers. This minnow can be identified by its lack of scales between the two fins on the underside. The back is greenish and the sides silvery with golden highlights. Adults to 12 inches.

Chain Pickerel A member of the pike family with the characteristic long, slender snout. Dark olive above with chain-like markings on the lighter sides. Look for the teardrop marking under the eye. Adults are normally between 12 and 24 inches long.

Yellow Perch This abundant species has a dark back with greenish-golden, yellow sides. Dark v-shaped markings run from the back down the sides. The front fins below are often orange. Look also for a saw-tooth structure between the mouth and gill cover. Adults to 16 inches.

White Perch Somewhat like largemouth bass but with no dark band along the side. The back is olive-gray with iridescent highlights, the sides silvery, and the belly white. Adults to 16 inches, more commonly to 12 inches.

Largemouth Bass Dark above with greenish-bronze sides and whitish belly. This bass has a broken band of dark blotches along the sides. Adults may grow to 2 feet in length and weigh up to 10 pounds; commonly between 10 and 15 inches. The largemouth bass is a favorite of anglers.

Pumpkinseed This sunfish is recognized by the scarlet spot on the black flap behind the eye. Dark above, yellowish on the sides and belly; often with blue and orange blotches. Adults to 7 ". Look for sunfish nests in shallow water. The nest is a shallow depression about a foot in diameter and often lined with gravel. Males patrol the vicinity protecting the nest and surrounding territory.

Bluegill Like the previous species but with a squared, blue-black flap behind eye and with a black blotch on hind part of back fin. Dark blueish-green on back, sides silvery with some dark barring, belly reddish-orange. Adults usually to 7 inches.

Black Crappie This species is olive above with silver sides uniformly mottled in black. Much blue iridescent coloring throughout and two dark spots on flap behind eye. This introduced species grows to 16 inches.

Stocked Fish

The Massachusetts Division of Fisheries and Wildlife have annually stocked the Sudbury River above the Fruit Street bridge in Hopkington with rainbow, brook, and brown trout. Because of the recent (1986) advisory regarding mercury contamination in the Sudbury, this policy will likely be reviewed. Northern pike have been stocked in the Concord River at Concord, Carlisle, and Billerica; shad has also been stocked at Concord.

List compiled by R. K. Walton with suggestions by John Lindenberg and Pete Jackson of the Massachusetts Division of Fisheries and Wildlife.

RIVER HISTORY

The canoeist on the river is likely to be preoccupied, and naturally so, with the sights and sounds of the fluvial passage. We go to the river for many reasons: companionship or solitude, a chance to look outward at natural curiosities or the opportunity for introspection, and oftentimes just to get away from the everyday humdrum. We seldom go to the river for a history lesson. Yet following the river, not along its present course, but through the meanderings of its past can enrich our present-day journey. Perhaps this section is best read at home or in some quiet backwater so that the images of the past will occasionally perk to the surface on this voyage or that.

Fifteen thousand years ago the great ice sheets of the Pleistocene era were gradually succumbing to the moderating temperature. As they began to disintegrate, they left in their wake a barren, tundra-like environment flooded with great lakes and pockmarked with ponds. Glacial Lake Sudbury and Lake Concord were two of these large, inland bodies of water. The drainage of the lakes was not in its present northerly course but in an easterly direction. As the centuries passed and more ice melted, glacial Lake Concord began to drain northward. It may have been the breakup of massive ice dams in the Fairhaven Bay area that finally allowed Lake Sudbury to yield to the gradual northward gradient and take up its present-day course. When these great lakes were ultimately drained-down, they left expansive, flat lake bottoms covered with sand and silt. The original erosional channel of the Sudbury and Concord rivers cut through these flats on their way to the Merrimack.

If the twentieth century canoeist were transported back to a period twelve thousand years ago, he or she might suspect they were in northern Canada. Such habitat and climatic details, however, would seem relatively inconsequential to our canoeist as he gazed at the herds of mastodon and mammoth or followed a family of giant bears across the tundra. With luck, our time-paddler might even catch a glimpse of a small band of nomadic-hunters; these Indians were the true pioneers of what we now call the Sudbury-Concord River Valley. Over the next eleven millenia several Indian cultures would call this river valley home.

By eight thousand years ago a moderating climate had resulted in significant changes to the landscape. Gone were the Pleistocene herds, tundra, and boreal forest, and in their place were plant and animal communities more familiar to today's paddler. A mixed deciduous forest covered the uplands, while the rivers were bordered by extensive growths of meadow grasses. At this time, Indians began to establish more permanent settlements along the rivers. It is probable that seasonal hunting and fishing sites were regularly visited by the various bands of Indians. Archeological evidence of cemeteries and fish weirs in eastern Massachusetts (from 4500 years ago) indicate a growing reliance on specific areas. Gradually, as the Indians became more efficient in their use of seasonal food crops, the bands' movements took on a more or less regular routine. By 1000 years ago the agricultural revolution, whose roots were in the

7
southwest, had spread to the northeast. Corn, squash, and bean crops were planted, tended, and harvested yearly. This provided a regular food source as well as encouraging territorial ties for the Indian groups. Rivers like the Musketaquid, the Indian name for the Sudbury-Concord, were important to local tribes for several reasons. The river became the Indians' "highway" for their seasonal movements back and forth to different camps and to the coast. Dug-out and probably birch-bark-type canoes provided transportation. Excavations along the rivers, as well as early first-hand accounts, record important Indian sites at Saxonville, Wayland, Sudbury, and Lowell (Wamesit). Gookin, an early explorer-writer, witnessed a gathering of 12,000 Indians at Wamesit at a spring fishing village. The Musketaquid yielded a rich harvest of fish much of the year. Besides seasonal catches of alewife, eel, and salmon, local tribes relied on such species as trout, perch, and pickerel. Freshwater clams and mussels were also a specialty of the Musketaquid. From the river banks, the Indians harvested root crops including arrowhead, water lilies, and cattails. The river meadows provided wild rice and cranberries. It was often in the drier portions of these meadows that the Indian women planted crops. The relatively small Indian populations as well as their annual movements resulted in few negative effects to the land. This harmonious, if not idyllic, lifestyle was to come to an abrupt halt in the sixteen hundreds.

Early in the seventeenth century, as the Puritan merchant-colonists gradually occupied all the land along the coast, many European settlers began to take notice of the resources available at inland river valley sites. The valley of the Musketaquid was to become the first inland settlement in Massachusetts. A devastating series of diseases, most likely brought by the Europeans, had severely reduced Indian populations in the early 1600s and cleared the way for colonization. The initial band of European pioneers settled in Concord in 1635. The river meadows, Indian agricultural clearings, and abundant supply of game were all put to good use in the early years. By 1637 the colonial community at Concord had struck a deal with the remnant band of Pawtucket Indians. Although the deed is missing, eye witness accounts tell of the exchange of wampum, tools, and linens for the "plantation at Musketaquid." Squaw Sachem, Wibbacowett, and Tahattawan represented the Pawtucket, while Simon Willard and Peter Bulkeley spoke for the colonists. Willard in particular was well aware of the value of the local river and wetland resources. For many years he alone held the right to trade with the Pawtucket for such items as fish and beaver pelts. Other towns were settled along the rivers during the seventeenth century including Sudbury (which then included Wayland) in 1639 and Billerica and Chelmsford in 1655.

For the early colonist, the choice land included riverfront acreage. The farmer valued it as a source of river meadow grasses and sedges. The annual hay harvest, like that of salt marsh grasses at coastal locales, provided fodder for oxen; and it was oxen-power that allowed the farmer to clear and plow his fields. As early as 1636 Concord's landowners expressed concern that the annual spring flooding prevented them from working the meadows and they proposed to "abate the Falls"

2
downriver to increase the rate of drain-off. The colonist also looked to the river and river meadow for many of the same food and fur resources the Pawtucket found there. The fish crop in particular was of such value that for many years the right to set weirs at various locations along the river was granted by town officials to a privileged few.

Because of the flat gradient of the Sudbury-Concord rivers along most of their length, relatively few dams and mills were constructed in the section between Framingham and Billerica. However, during colonial times, grist mills and saw mills were established at various sites along feeder streams as well as at Southborough, Saxonville, and East Chelmsford (now Lowell). The farmers' dilemma created by the seasonal flooding of the river meadows was gradually exacerbated by these man-made structures. Between 1798 and 1803 a canal was constructed between Charlestown and Chelmsford which intersected the Concord River at North Billerica. Water from the Concord was used to flood this canal. As a result of the canal, freight, including iron ore, wood, and bricks, was rafted up and down the rivers. As part of the canal project, the height of colonial mill dams downriver at Billerica was increased. This provided more power for the mills and made the Sudbury-Concord a navigable waterway, but it also caused a certain portion of the river meadows to become permanently flooded. By the middle of the nineteenth century, reservoirs were created upstream in Framingham to provide for the municipal water needs of Boston. The mill owners were now able to control the river level (by releasing water from the holding reservoirs when necessary); their needs for high water levels to provide power conflicted with the farmers needs for dry meadows to allow for the hay harvest. The mill owners and the farmers eventually went to court with the farmers ending up on the short end of the deliberations. These changes in the water level of the Sudbury-Concord also resulted in alterations to the river meadow plant community. While historically the growth of river meadow grasses and sedges had been encouraged by the seasonal flooding and draining of edge areas, it is likely that the relatively higher year-round water levels created conditions more conducive to such water tolerant species as button-bush, bur-reed, and cattail.

During the nineteenth century large woolen mills were built on the Sudbury at Ashland and Saxonville and along the Concord at North Billerica and Lowell. These mills together with a growing industrial economy caused the first significant pollution of the rivers. During the nineteenth century increasing amounts of waste products and sewage were discharged into the rivers by tanneries, textile manufacturers, and municipal users. Towards the end of the century as Boston diverted large amounts of water from the reservoir system at the head of the rivers, the pollutants became more and more concentrated. Twentieth century industry also had left its mark on the Sudbury-Concord. Even more serious than the continued dumping of waste materials has been the ground water contamination at several localities. The Nyanza site on the upper Sudbury in Ashland has been identified as the source of various toxic waste materials, including mercury, that slowly seep into the river system.

The history of the river meadows, from the colonial era to the period of urbanization in the present century, is one of change. As we have seen, the early agricultural importance of the meadows gradually gave way to the mill interests. By the mid-nineteenth century, the farmers were looking for alternate ways to get their river meadow acreage back into production. One popular answer was land reclamation. Owners of river meadows began to drain portions of these and other wetlands. Henry F. French, a Concord resident, characterized the nineteenth century attitude towards wetlands in his book *Farm Drainage*.

Frogs and snakes find in these swamps an agreeable residence, and wild beasts a safe retreat from their common foe. Notoriously, such lands are unhealthful, producing fevers and agues in their neighborhood, often traceable to tracts no larger than a very few acres.

Although it is difficult to quantify the exact amount of river meadow lost to these nineteenth century reclamation efforts, it is safe to say that many acres along the Sudbury-Concord were ditched and drained in order to increase acreage under cultivation. A century later in the 1950s and 1960s, a further decrease in river meadow habitat occurred as land reclamation once more became popular. This twentieth century venture was motivated not by agriculture but by a real estate boom. During the period of suburbanization the first choice of the developers was the farmland. The level fields made ideal sites for neighborhoods and shopping malls. As the promoters ran out of cheap agricultural properties they turned to the river meadows. The following excerpt of a letter from Allen Morgan to C. Russell Mason, Executive Secretary of the Massachusetts Audubon Society, summarizes these activities.

January 7, 1955

The towns in the Sudbury Valley are expanding so rapidly that I am sure that the marshes will be destroyed in my lifetime if prompt action is not taken. Already, marsh land is being bull-dozed out and filled with gravel in order to build more houses.

Fortunately, important efforts were begun at that time to protect and conserve large portions of the river meadow habitat.

The story of conservation along the Sudbury and Concord rivers is a relatively recent one. One of the earliest environmental studies that included our area was the 1929 Bay Circuit Report. This report pointed out the scenic and habitat values of the Sudbury River. A 1950 state document, the *Report of the Sudbury Valley Commission*, took a detailed look at the natural and hydrographic characteristics of the river system. This report made specific recommendations for the protection and preservation of the habitat along the rivers. Suggestions were also made for major physical alterations to the rivers in order to control flooding. In 1955, Hurricane Diane revitalized interest in creating artificial control systems. The proposed dredging, channelizing, and control systems found favor with some riverfront

property owners who saw this as a way to create more farmland and buildable acreage. Another point of view was being expressed by the Sudbury Valley Trustees (SVT). Founded in 1953, the SVT was initially comprised of a handful of local citizens dedicated to the cause of conservation in the Sudbury River Valley. They pointed out that the natural wetlands system on the periphery of the rivers was the best protection against flooding. As Allen Morgan, one of the founders, explained, "disastrous floods... are the direct result of this sort of land reclamation where marshes and ponds were drained to create more farmlands, and where forests were destroyed at the same time." The 1958 SUASCO (SudburyAssabetConcord) Watershed Work Plan reflected many of the views and positions that the SVT was espousing. In the early 1960s the SVT and the Massachusetts Audubon Society worked with the state commissioner of natural resources to develop a comprehensive "Plan for the Preservation of the Wetlands in the Sudbury and Concord Rivers." After intensive efforts on the part of several local groups enabling legislation for the "Wetlands Plan" was passed in 1961. This made it possible for local, state, and federal agencies to acquire land along the rivers for conservation purposes. In 1963, the original 250-acre Federal Wildlife Preserve in Concord (given by Samuel Hoar in 1944) was expanded through the creation of the Great Meadows National Wildlife Refuge (GMNWR). At that time SVT sold over 200 acres to the federal government for inclusion in the refuge. A series of subsequent land purchases by private conservation organizations, towns, the state of Massachusetts, and federal agencies has resulted in additional areas along the rivers coming under protection. The closing years of the twentieth century find a good portion of the local river and river meadows put aside for conservation purposes. However, the Sudbury-Concord is still at risk. Local threats including real estate development, ground water contamination, and diversion projects continue to have negative effects on the river. National policies bearing on such issues as acid rain and water quality legislation also impact on the river valley.

The history of the use, misuse, and conservation of the Sudbury and Concord rivers is an ongoing one. The efforts of this generation are critical to any assurance that future paddlers on our rivers will be able to enjoy the natural world of the Sudbury-Concord River Valley. Those interested in becoming a part of this important work are invited to contact one or more of the conservation organizations listed in the appendix.

6

References

- Blancke, Shirley and Barbara Robinson. 1985. From Musketaquid To Concord - The Native and European Experience. Concord Antiquarian Museum. Concord, Massachusetts.
- French, Henry. 1859. Farm Drainage.
- Koteff, Carl. ----. Surficial Geology of the Concord Quadrangle, Massachusetts: U. S. Geol. Survey Geol. Quad. Map GQ-331.
- Myer, Mary Eugenia. 1978. History of the Sudbury Valley Trustees, Inc. 1953-1978. Sudbury Valley Trustees, Inc. Wayland, Massachusetts.
- Richardson, Laurence. 1964. Concord River.
- Shattuck, Lemuel. 1835. A History of the Town of Concord. Cambridge, Massachusetts.
- Teal, Edwin Way and Ann Zwinger. 1982. A Conscious Stillness. Harper & Row, Publishers. New York, New York.
- Walton, Richard. 1984. Birds of the Sudbury River Valley - An Historical Perspective. Massachusetts Audubon Society. Lincoln, Massachusetts.

CANOE ACCESS INVENTORY

Hopkinton

1. Fruit Street
2. Cedar Street

Ashland

1. Aiken's Road
2. Cordaville Road - Ashland Fish and Game
3. High Street / Cordaville Road
4. Cordaville Road - before Bridge
5. Howe Street
6. Johnson / Endicott Street
7. Pine Hill Road / Myrtle Street

Framingham

1. Winter St. Reservoir
2. Bowditch Field
3. Fenwick St. Dam
4. Central Street
5. Simpson Drive
6. Centennial Place
7. Purchase Street
8. Little Farms Road

Wayland

1. Shore Drive
2. Pelham Island
3. Boston Post Rd.
4. River Rd.
5. Old Rt. 27
6. Sherman's Bridge Road

Sudbury

1. Great Meadows Nat'l
Wildlife Refuge

Lincoln

1. Lee's Bridge - Rt. 117
2. Sudbury River Canoe
Landing - Rt. 117

Concord

1. Sudbury Road - Heath's Bridge
2. Concord Boat House
3. Main St. - Rt. 2A
4. Nashawtuc Rd. - Hurd's Bridge
5. Lowell Road
6. Old North Bridge
7. Monument Street - "Simmon's Landing Lane"
8. Monument St. - "Flint's Bridge"

Bedford

1. Bedford Boat Ramp

Carlisle

1. Rt. 225

Billerica

1. Rt. 4 - "Spinning Wheel" Restaurant
2. Riverview Rd.
3. Island St. - off Rio Vista Drive
4. Middlesex Turnpike - end of
5. Elsie Ave. - field across Kilsyth Rd.
6. River St. & Elsie Ave.
7. Rt. 3A - Boston Road
8. Salem St. / Darby Rd.
9. Lowell Street Fire Station
10. Faulkner St. - Cambridge Tool
11. Talbot Mills

Lowell

1. Billerica St. - 5 Arch Bridge
2. Billerica St.
3. Lawrence St. / Billerica St.
4. Lawrence St. Bridge

Hopkinton

1. Fruit Street
2. Cedar Street

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

6 Fruit Street Bridge

Hopkinton

LOCATION

TOWN

#15 - MDC; #1 - Southboro Rod & Gun Club

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

NOTES:

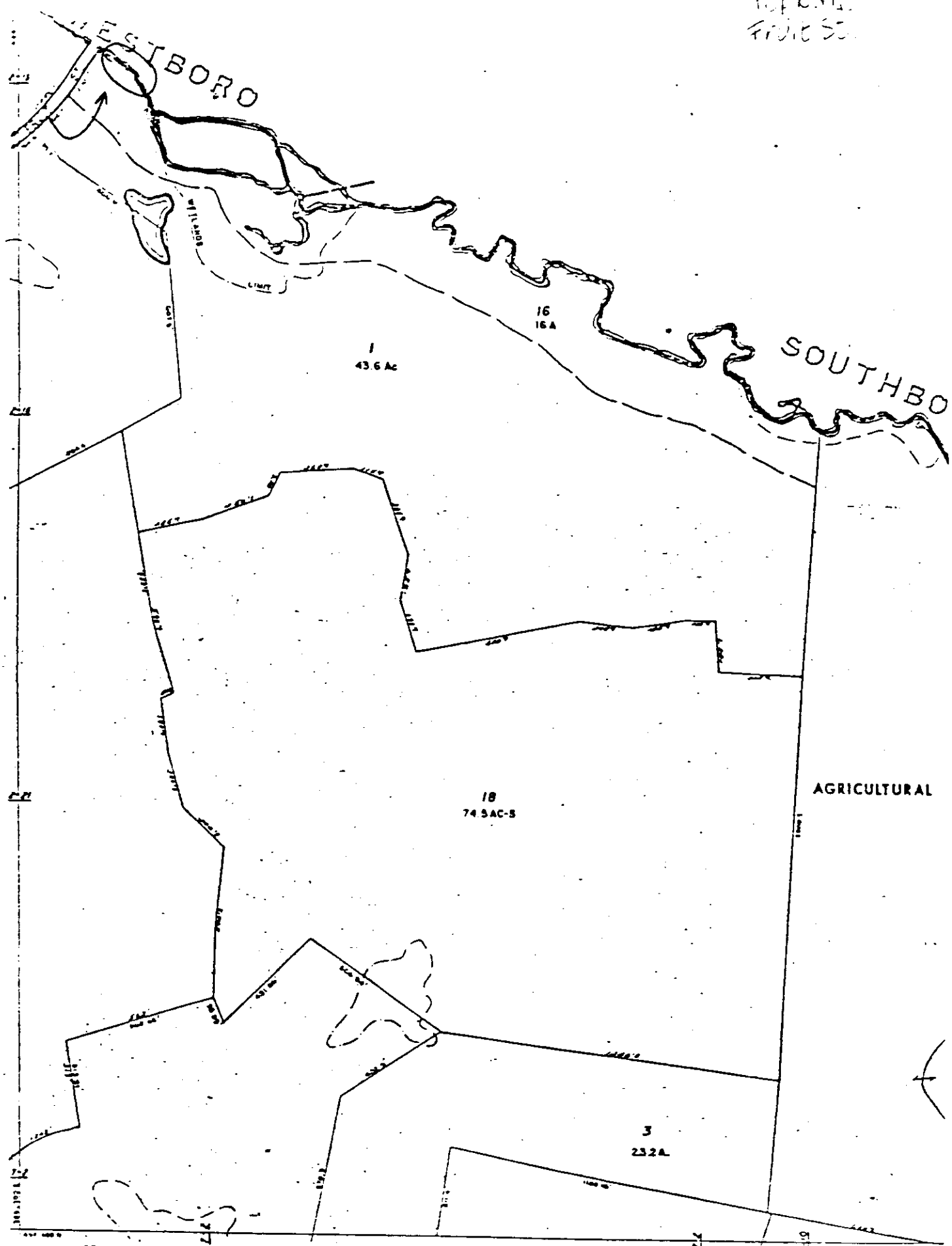
At end of dirt road next to Southborough Rod & Gun Club bear left. Access is clear, flat, easy.

NOTES: (# of cars)

Parking on dirt road, or at top before entrance to club.

This site is mentioned on page 3 of RKW's draft, but not as a direct access point.

REPLUG
FRUIT SO.



REVISION BY
JOHN E. O'DONNELL & ASSOCIATES
AUBURN, MAINE

COL-EAST INC.
BOSTON & PITTSFIELD

HOPKIN

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Cedar Street Bridge

Hopkinton

LOCATION

TOWN

#10 - Gallagher, John E. & Mary

#2 - Cedar Realty Trust, 1585 Center St., Roslindale

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

_____ Great

 X Okay

_____ Possible but difficult

_____ Impractical/Impossible

_____ Great

_____ Okay

 X Possible but difficult

_____ Impractical/Impossible

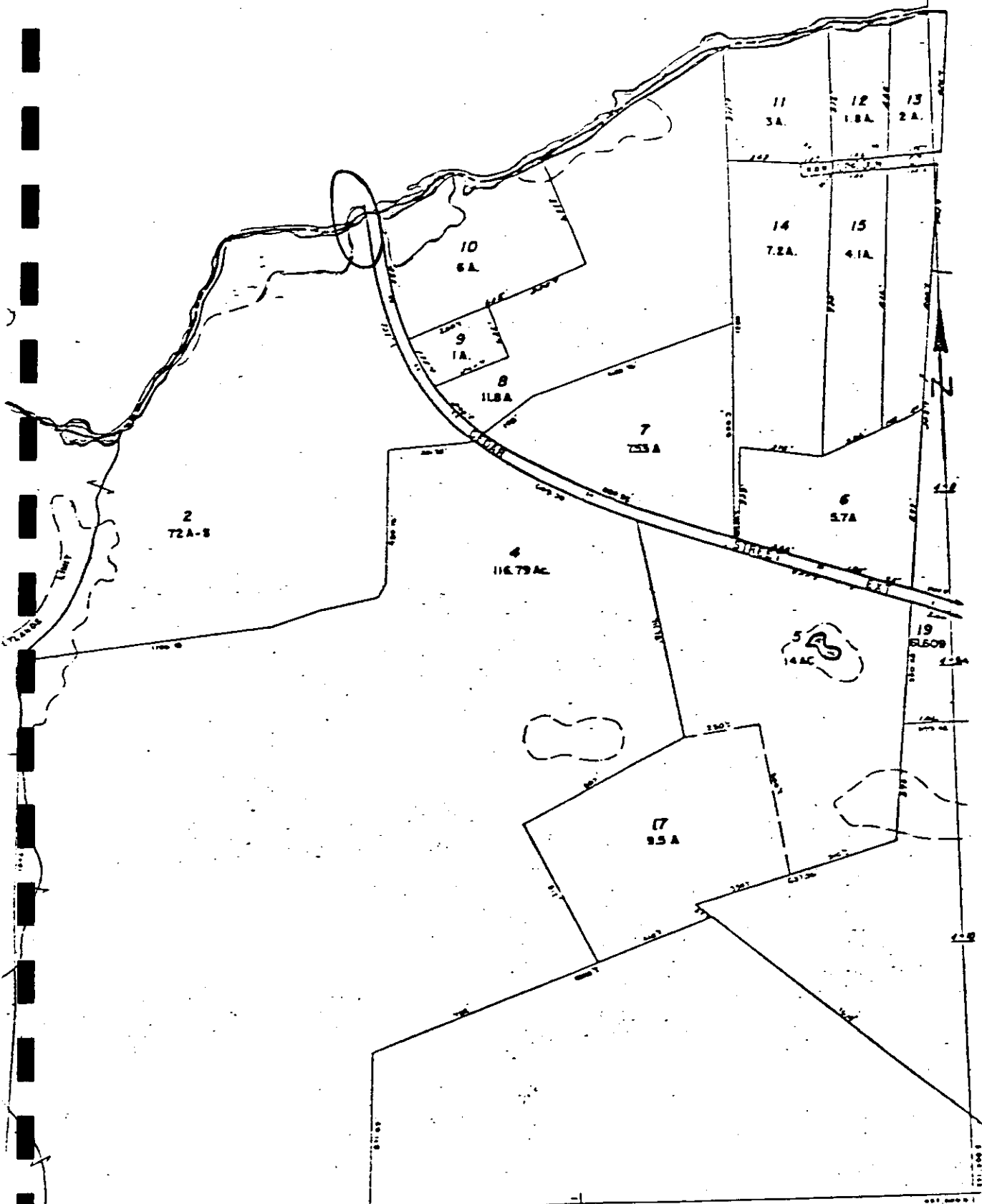
NOTES:

Short walk to river from pulloff, steep over some rocks, but once over these, access to river is easy.

NOTES: (# of cars)

Pulloff for 1 car, 2 if use pulloff farther along street. Right after bridge on right.

APPROXIMATE
BOUNDARY



TON

SCALE IN FEET

2	3	4
1	2	3

R-3

Ashland

1. Aiken's Road

2. Cordaville Road - Ashland Fish and Game

3. High St. / Cordaville Rd.

4. Cordaville Road - before Bridge

5. Howe Street

6. Johnson / Endicott St.

7. Pine Hill Road / Myrtle Street

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Aiken's Road

Ashland

LOCATION

TOWN

#8 - Aikens, Andrew J.

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 X Okay

 X Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Access to river is down slightly steep path through a short wooded area.

No access to river across the street, as bank is built up with concrete.

NOTES: (# of cars)

Parking only along the single lane dirt road with a small pulloff for 1 car. Street dead ends into a private home.

Across street, dirt space available for 3-4 cars.

This site is mentioned as an access point on page 3 of RKW's draft.

SOUTH BORO

Sudbury River

TOWN CORNER W.M.

593860
461403

9
6.5A.

AIKENS

ROAD

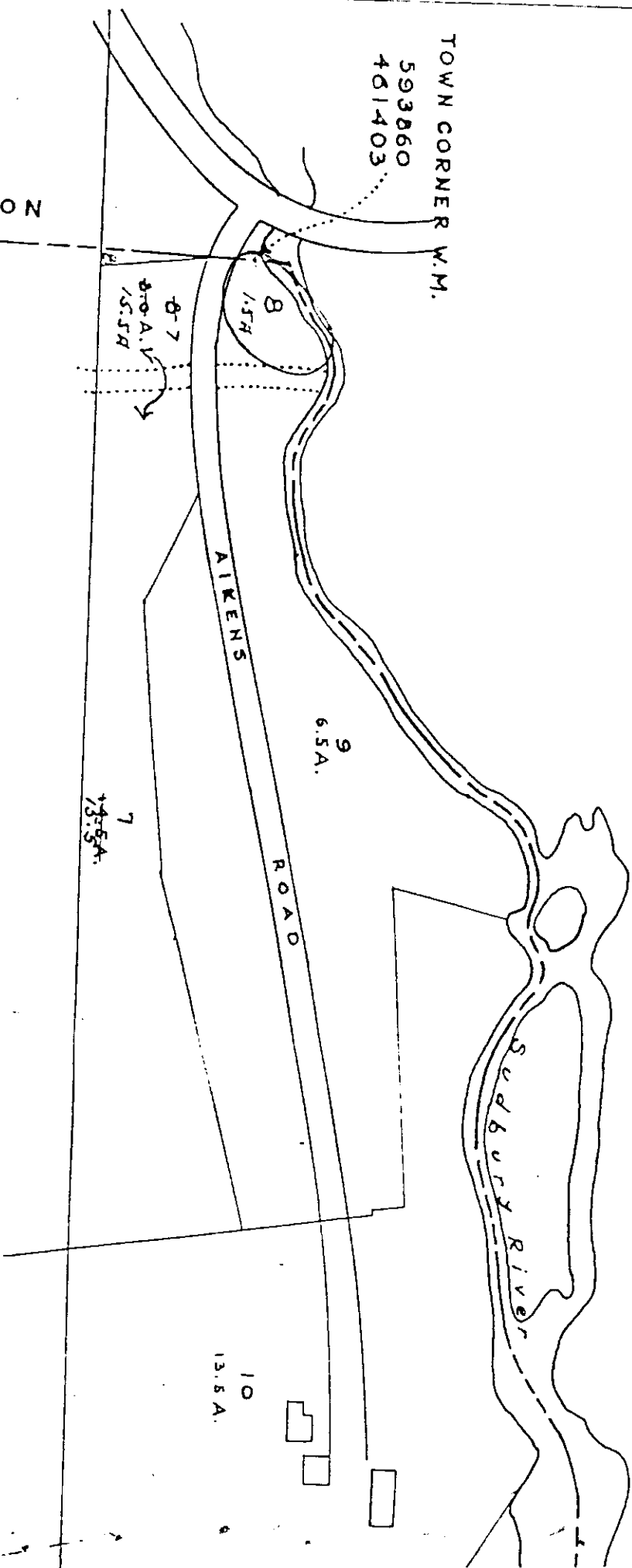
10
13.5A.

8
1.5A
8-7
8-0 A.V.
15.5A

7
13.5A.

HOPKINTON

Ashland



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Cordaville Road - down dirt road with
"Ashland Fish & Game Club" sign

Ashland

LOCATION

TOWN

#13 - Ashland Fish & Game Club, Inc.

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

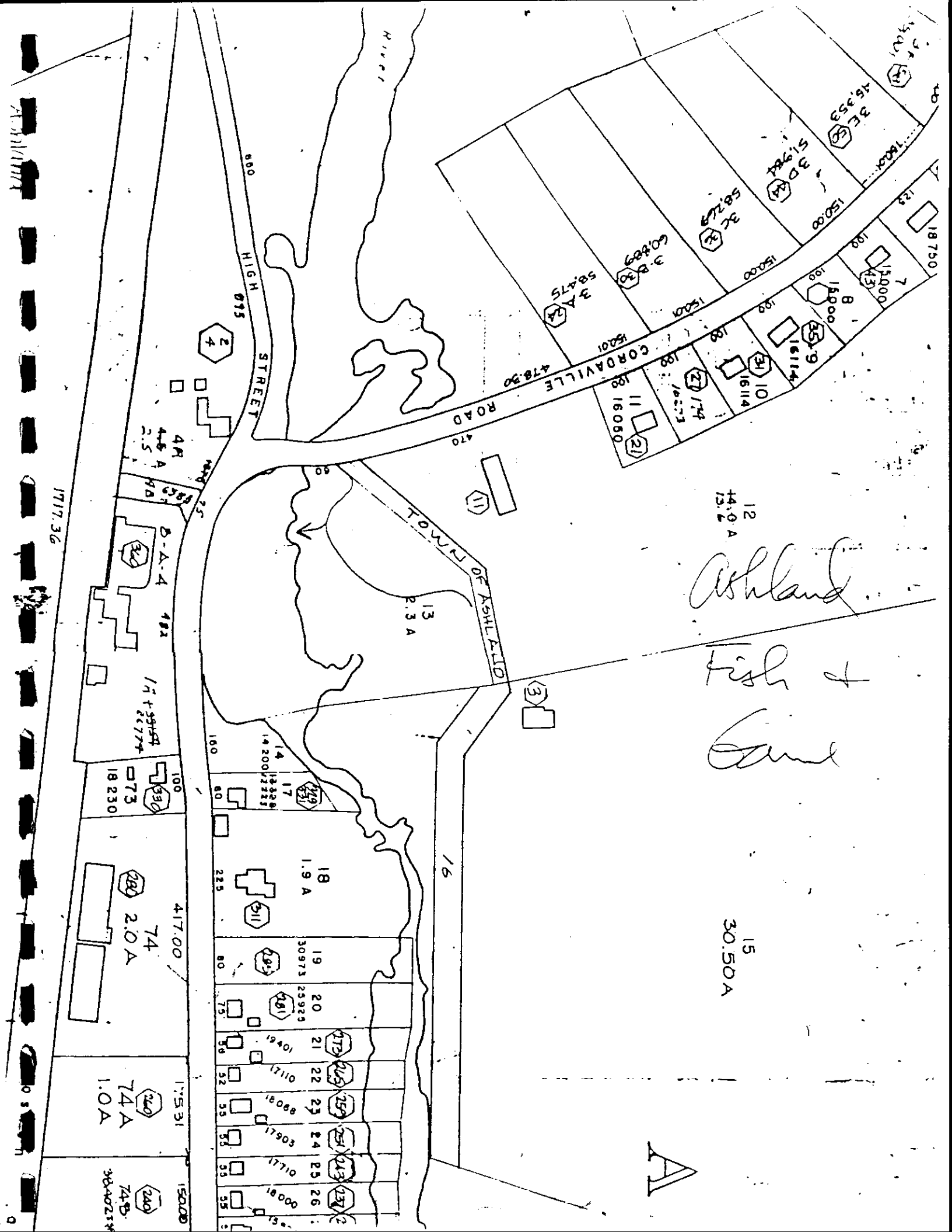
NOTES:

Off of dirt road on corner with
sign, there is a path through
the woods. Easy, level.

NOTES: (# of cars)

Dirt pulloff on corner at path
entrance with room for 7-8
cars.

This would probably be a good place to take out, as there is a
dam a few hundred feet upstream.



CANOE ACCESS POINTSHigh Street / Cordaville Road

Ashland

LOCATIONTOWN#1 - Giargiari, Daniel M. & Dennis P., & Mori, Diane - Trustees
of the Five D Realty TrustOWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

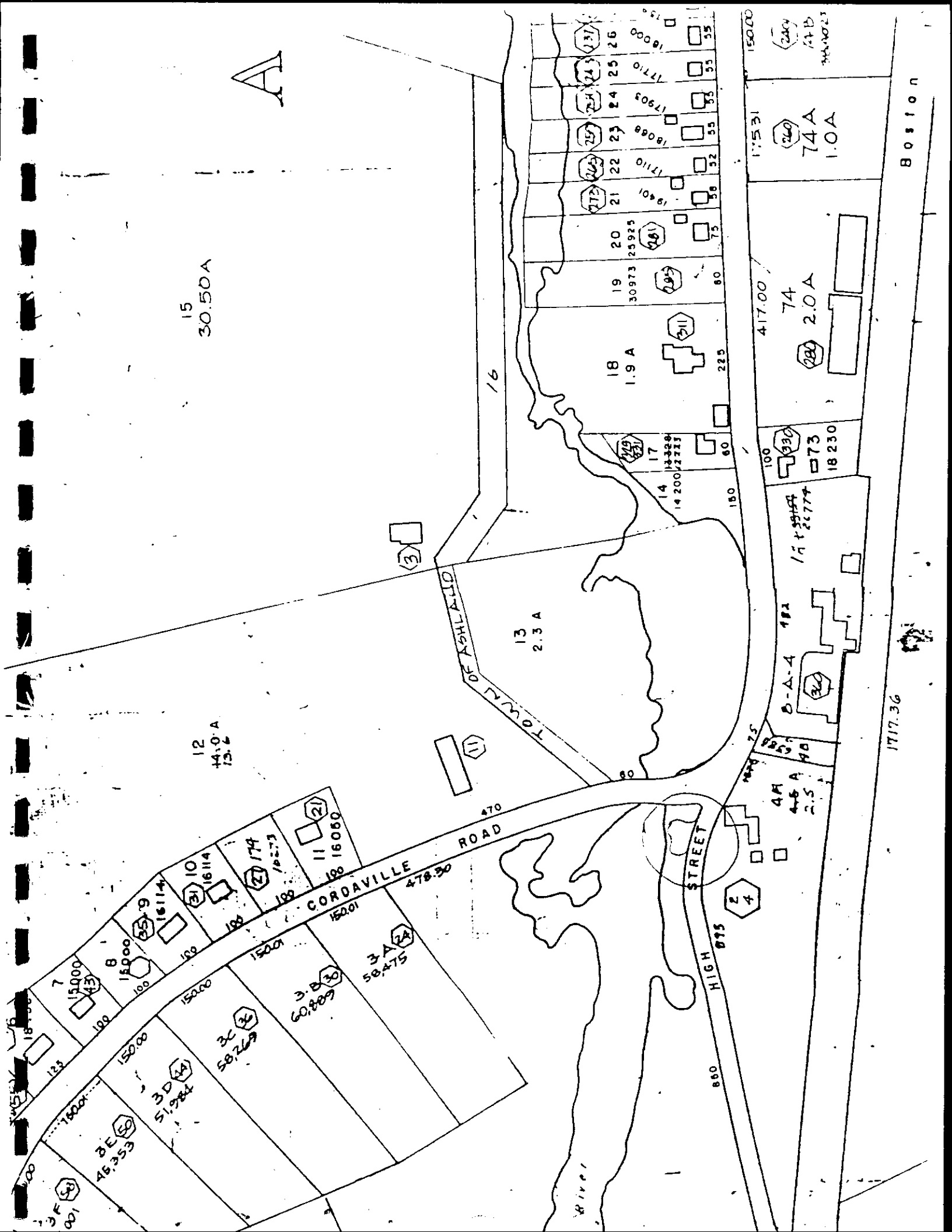
 X Great Great Okay Okay Possible but difficult X Possible but difficult Impractical/Impossible Impractical/Impossible

NOTES:

Although dirt area leading to
water is rutted & may not allow
for a car to pass over, access
to river is clear and easy.

NOTES: (# of cars) 1-2 cars.
Off High Street, along river,
there is a dirt pulloff -
although rutted, where it may
be possible to park. Across
from this is parking lot for
Antique Shop, where may be
possible to park.

This site is not specifically mentioned, but the Cordaville Road
bridge is mentioned on page 4 of RKW's draft.



A

15
30.50A

12
14.0A
13.2

31

13
2.3A

CORDAVILLE ROAD
470
478.30
15001

3A
58.475
60.889
3.8

3E
46.353

3D
51.284

3C
58.269

11
100 16050
100 16273

10
16114

9
16114

8
15000

7
15000

3F
901

16

18
1.9A

19
30973 25925

20
19401

21
17110

22
18088

23
17903

24
17110

25
18000

26
15000

27
15000

28
15000

29
15000

30
15000

31
15000

32
15000

33
15000

34
15000

35
15000

36
15000

37
15000

38
15000

39
15000

40
15000

41
15000

42
15000

43
15000

44
15000

45
15000

46
15000

47
15000

48
15000

49
15000

50
15000

417.00

74
2.0A

73
18230

74A
1.0A

75
1717.36

1717.36

BOSTON

HIGH STREET

860

875

880

890

900

910

920

930

940

950

960

970

980

990

1000

1010

1020

1030

1040

1050

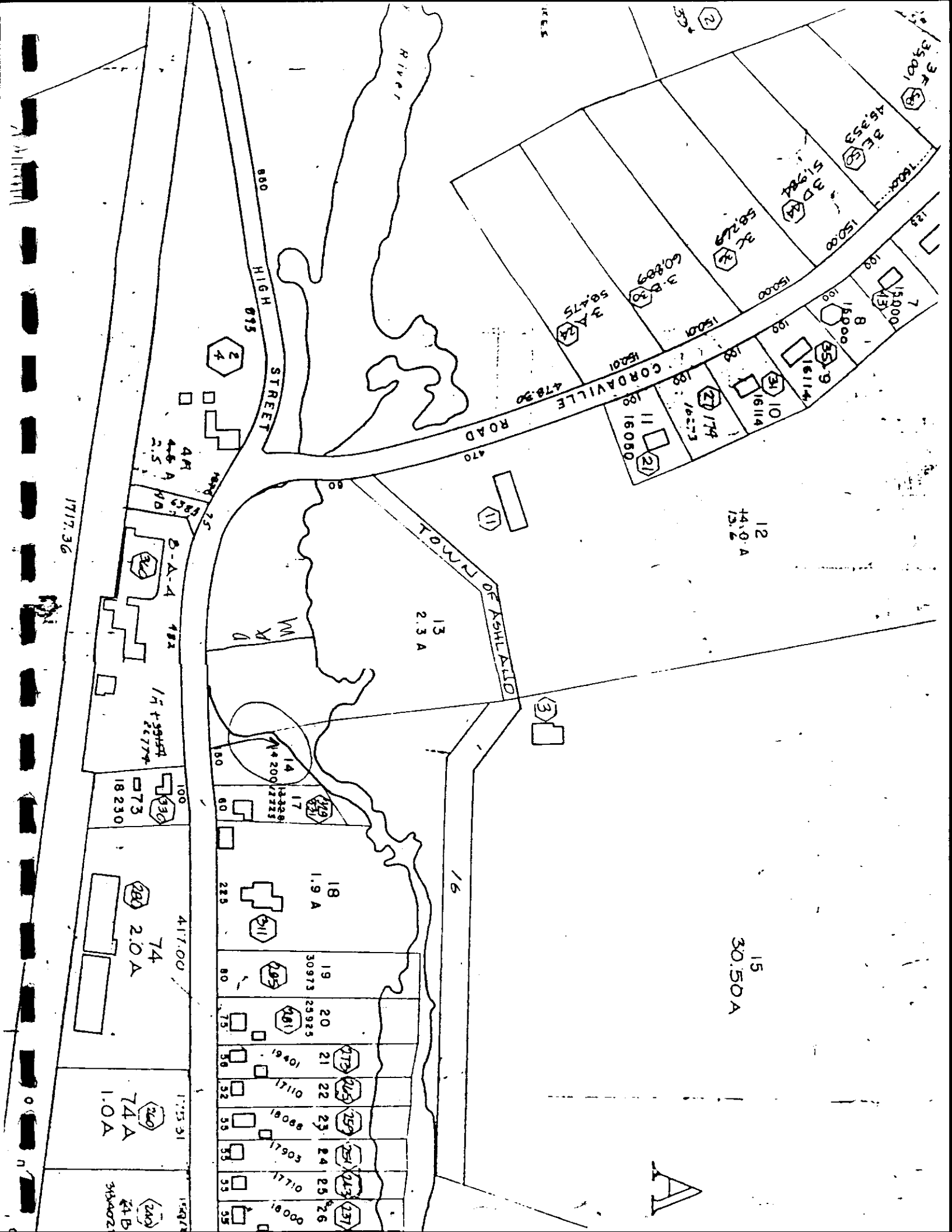
1060

1070

1080

1090

1100



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Howe Street

Ashland

LOCATION

TOWN

#3 - Maloney, Charles J. & Barbara A.

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

Great

Great

X Okay

Okay

Possible but difficult

X Possible but difficult

Impractical/Impossible

Impractical/Impossible

NOTES:

Access to river is by a narrow path next to the stone wall of the bridge, with heavy brush on the other side.

NOTES: (# of cars)

Only parking is on street, or in grass field next to bridge.

This site is not mentioned in RKW's draft.

[illegible]

ASHLAND

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Johnson Street~~

LOCATION

TOWN

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

_____ Great

_____ Great

_____ Okay

_____ Okay

_____ Possible but difficult

_____ Possible but difficult

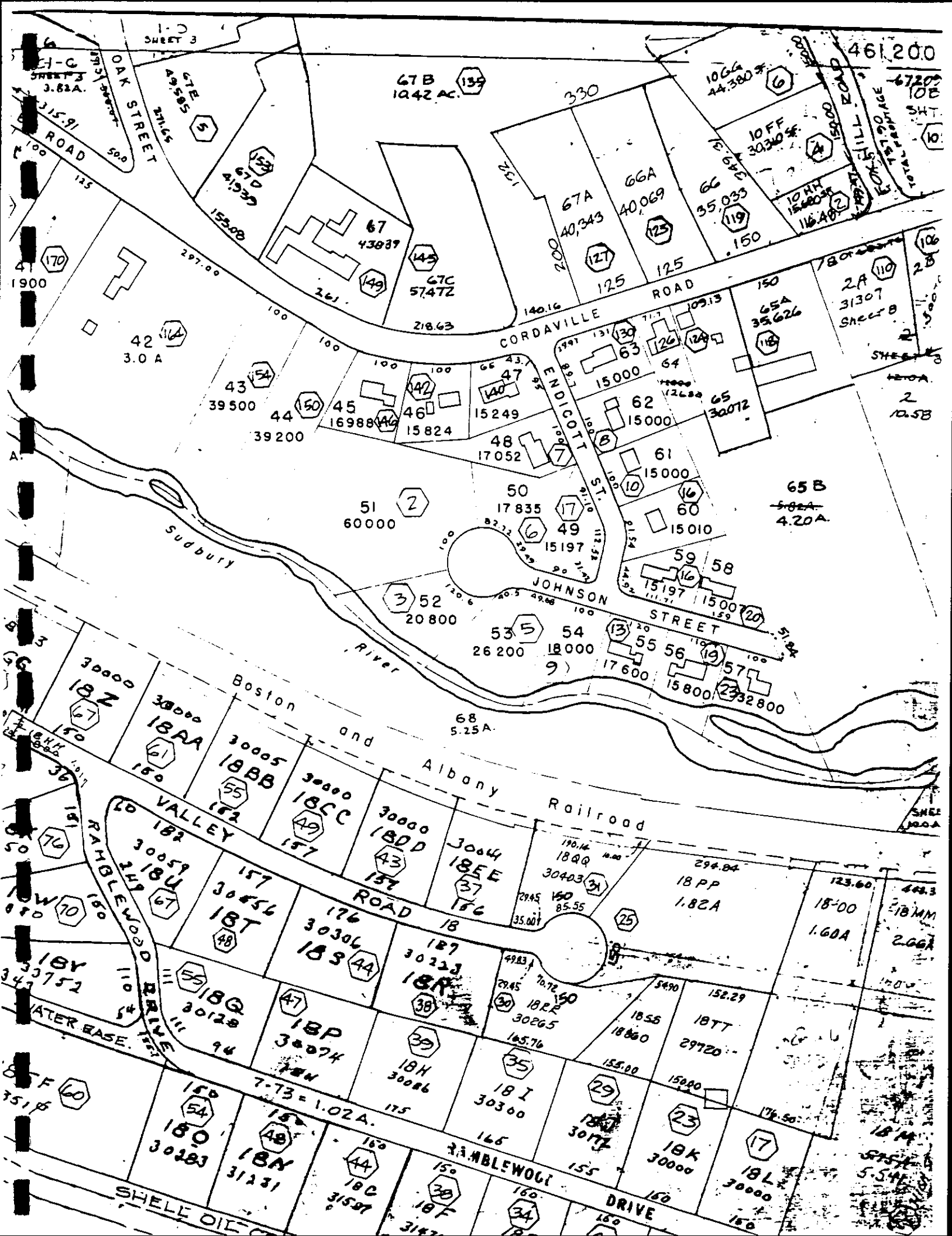
_____ Impractical/Impossible

_____ Impractical/Impossible

NOTES:

NOTES: (# of cars)

Although this site was mentioned on page 4 of RKW's draft, When I went out to the road, I was unable to find any paths leading to the river, off of either side of the dead-end Johnson Street.



CANOE ACCESS POINTS

Pine Hill Road / Myrtle Street

Ashland

LOCATIONTOWN

#51, 142 - GMOL Trust - Gordon, Jay R. & Minndick, Arnold J.
 #53 - Cuddy, Joan C., Trustees of the Joan C. Cuddy Realty Trust

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great X Great Okay Okay Possible but difficult Possible but difficult Impractical/Impossible Impractical/Impossible

NOTES:

On corner of the two roads, the entrance to the river is flat & level. This is right above the dam.

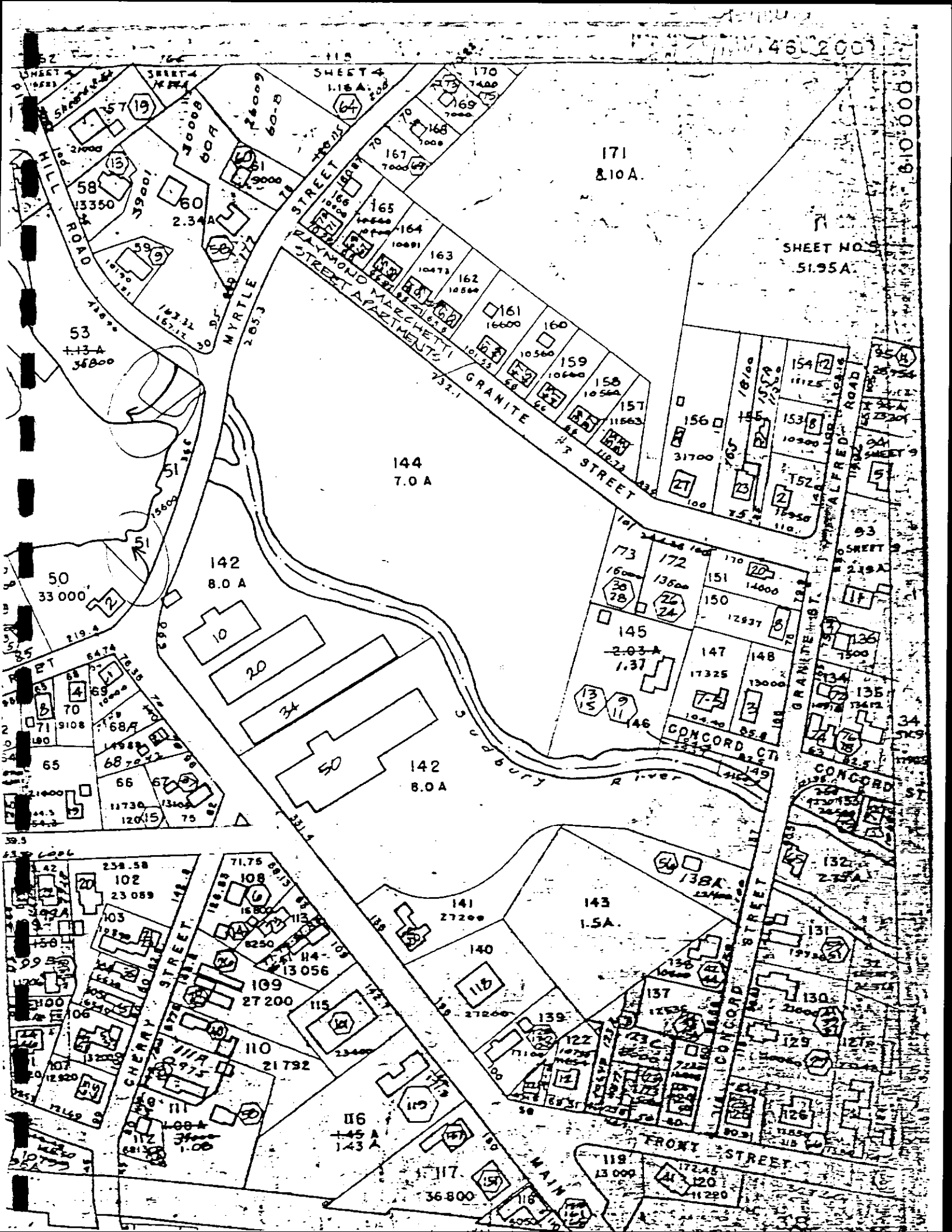
NOTES: (# of cars)

Dirt pulloff space for 3-4 cars. Parking also in dirt space across from entrance to Pine Hill Road.

On Myrtle Street, access is further from dam. Bank is lined with rocks, and one is missing here, to allow for access with a slight slope.

On dirt pulloff up slight hill, with parking space for 1-2 cars at actual site. Across street is lot for "Ashland Office Center" which may provide possible parking.

This site is mentioned on page 4 of RKW's draft as an access point.



Framingham

1. Winter St. Reservoir

 Bowditch Field

3. Fenwick St. Dam

 Central Street

 Simpson Drive

6. Centennial Place

 Purchase Street

8. Little Farms Road

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Town: Framingham

Site address: Winter St. Reservoir

Site ownership (from Town map): MWRA and/or MDC

Physical practicality: [Great]

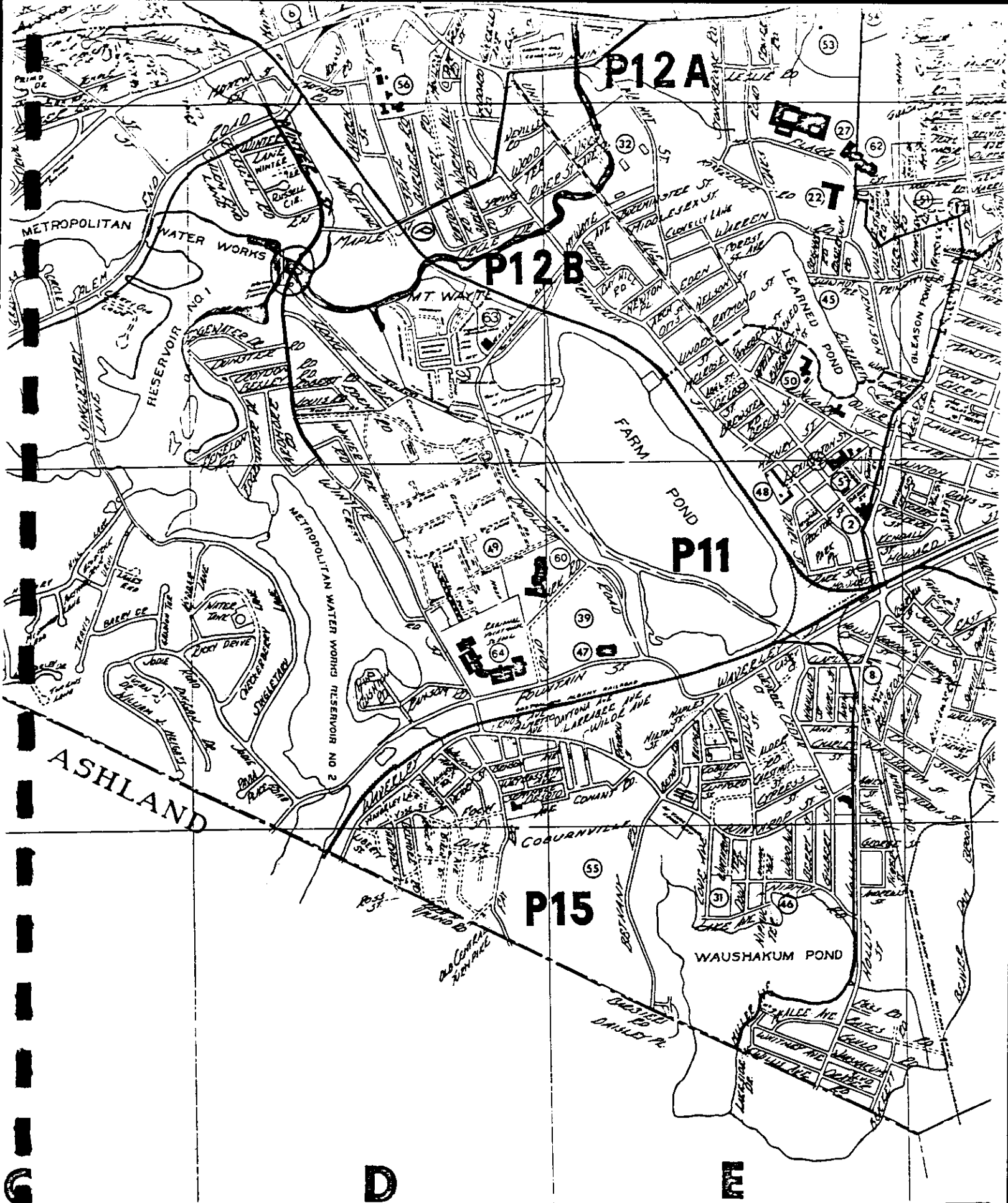
Notes: Walk over bridge, away from pumping station, entrance to field through break in chain link fence. Easy - not a steep slope. Direct access.

Parking: [Okay]

Notes (no. of cars): 3-5 cars. In front of brick pumping station. Lot for Framingham State is a far walk, but would hold many cars.

Very

note: if map was made - pg (6).



Framingham - Winter St. Reservoir

CONCORD RIVER

CANOE ACCESS POINTS

Bowditch Field

Framingham

LOCATION

TOWN

Town of Framingham

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 X Great

 Okay

 Okay

 X Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

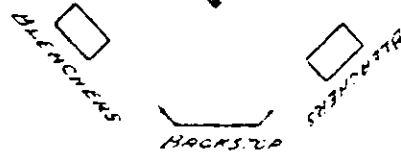
NOTES:

River access is over a steep bank, through brush. Closer to Union Ave. bridge, the path is clearer, but still steep.

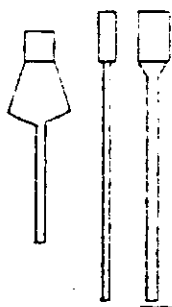
NOTES: (# of cars)

Lots of parking in lot of field, and along drive.

18.2 MILES



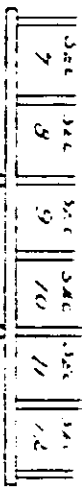
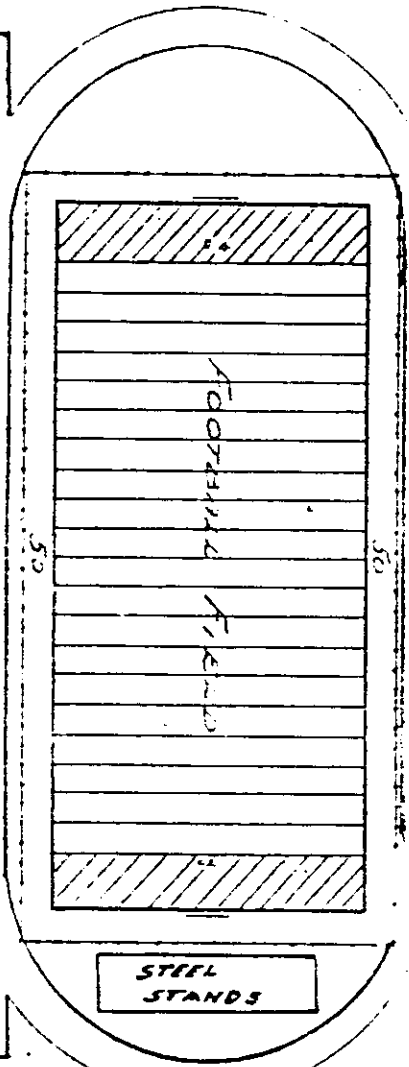
CUMULING PITS



TRACK



GRANDSTAND



203
6

UNION

368 90 FIG.

AVENUE

PARK

ENTRANCE GATE

384 73 FIG.

201
1

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

4 "Fenwick St. Dam" - around curve of
Central St., before Fenwick St. and Summer Framingham

<u>LOCATION</u>	<u>TOWN</u>
Town of Framingham and Mass. Turnpike Authority	
<u>OWNERSHIP AS SHOWN ON TOWN MAP</u>	

Physical practicality:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

NOTES:

Can access river on either side of small drop of wooden dam. On side nearest road, above the dam a pile of branches make entrance awkward, while below the dam there are concrete steps to water. There is a concrete footbridge which crosses the river. On other side there is a sloped path to water above the dam.

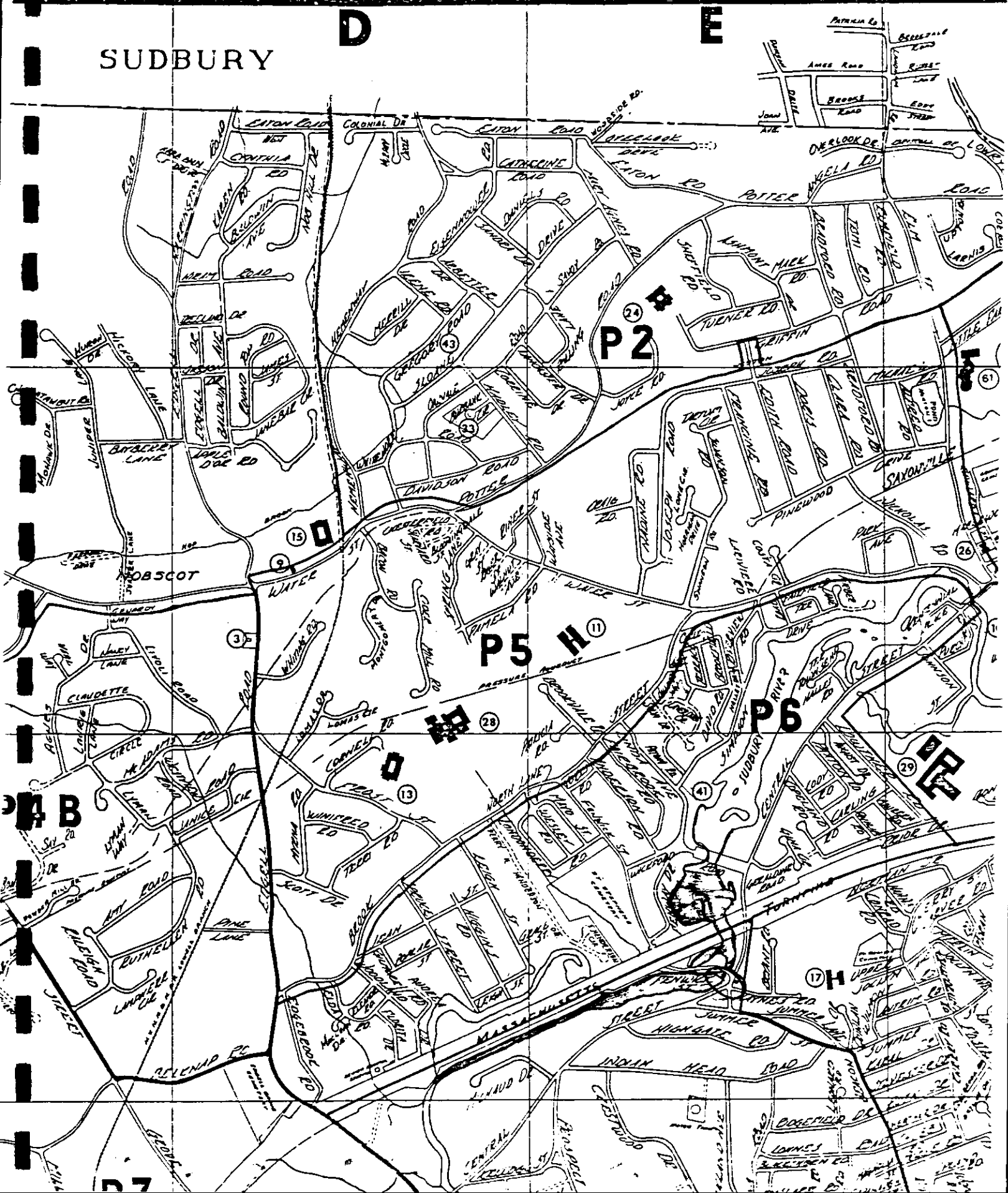
NOTES: (# of cars)

Over curb there is a dirt parking area right next to river. 5-6 cars. Also a drive across the street for pumping station where 1-2 car,s can park, although curve makes crossing the street dangerous.

This site is mentioned in RKW's draft on page 8.

ramingunumf3, - Fenwick St. Dam

SUDBURY



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

 Framingham

LOCATION

TOWN

Town of Framingham

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great *8.*
 Okay
 Possible but difficult
 Impractical/Impossible

 Great
 Okay
 X Possible but difficult
 Impractical/Impossible

NOTES:

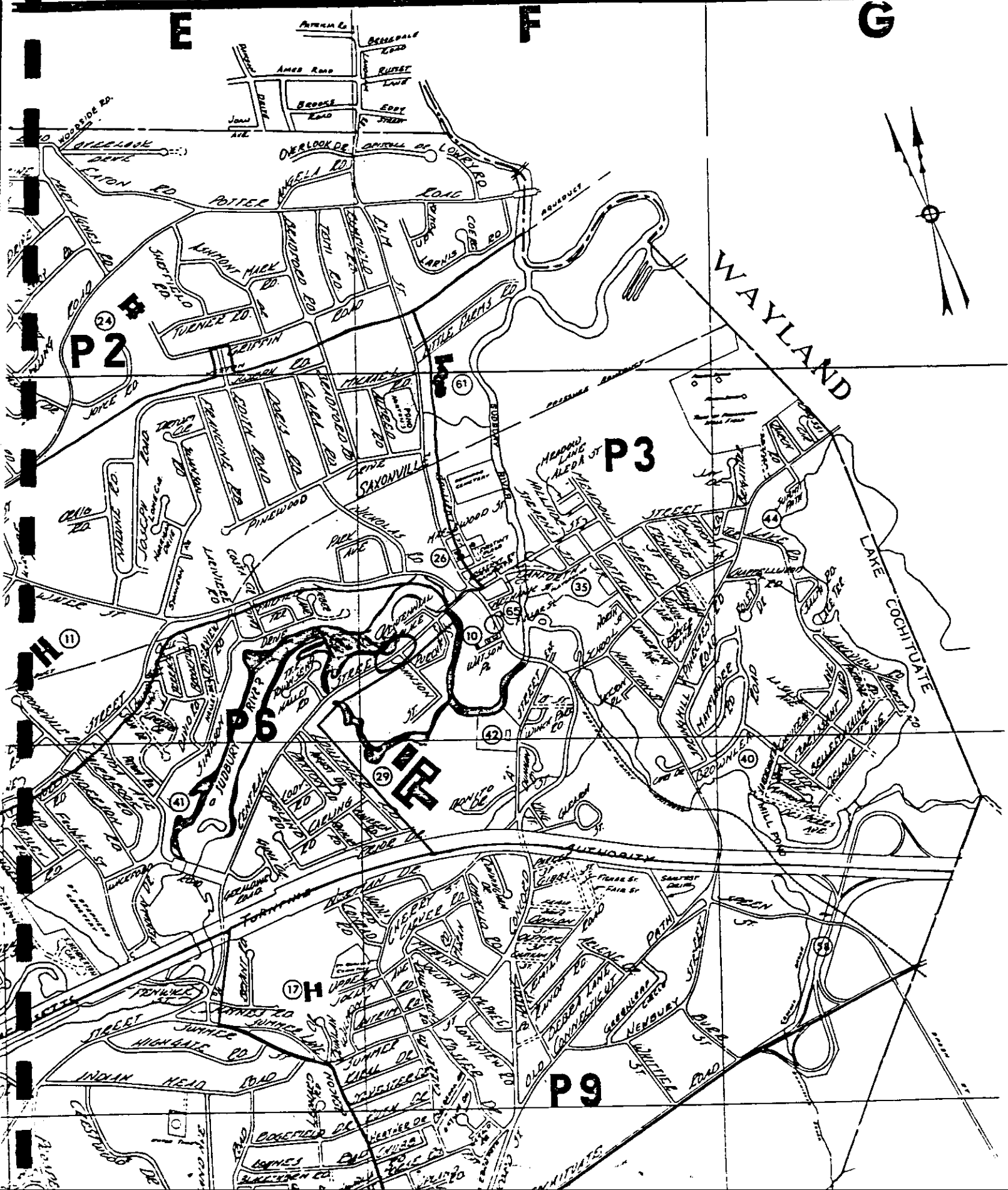
Access directly to river over broken wooden guard rail, which is right on edge of water.

NOTES: (# of cars)

No pulloff of road. Room for 1-2 cars on side of road.

This site is not mentioned in RKW's draft, and at meeting with AHM and others, it was said that this site was "no good."

Framingham (4) - Central St.



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS



Framingham

LOCATION

TOWN

Framingham Conservation Commission

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 X Okay

 Okay

 Possible but difficult

 X Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Clear path from road, through woods to river. Path is level with river, have to push through a little brush right on river edge. Seems a far way to walk with a canoe.

NOTES: (# of cars)

Only parking is along side of street - there is nowhere to pull off of road, although it is a back, highly residential road.

This site is not mentioned in RKW's draft.

Simpson Drive

DATE OF AQUISITION: Unknown

SIZE: 1.7 acres

ADJACENT LAND USE: Residential

ACCESS: From Simpson Drive

NATURAL FEATURES: Woods along Sudbury River; flat terrain

USE: Fishing, picnicking

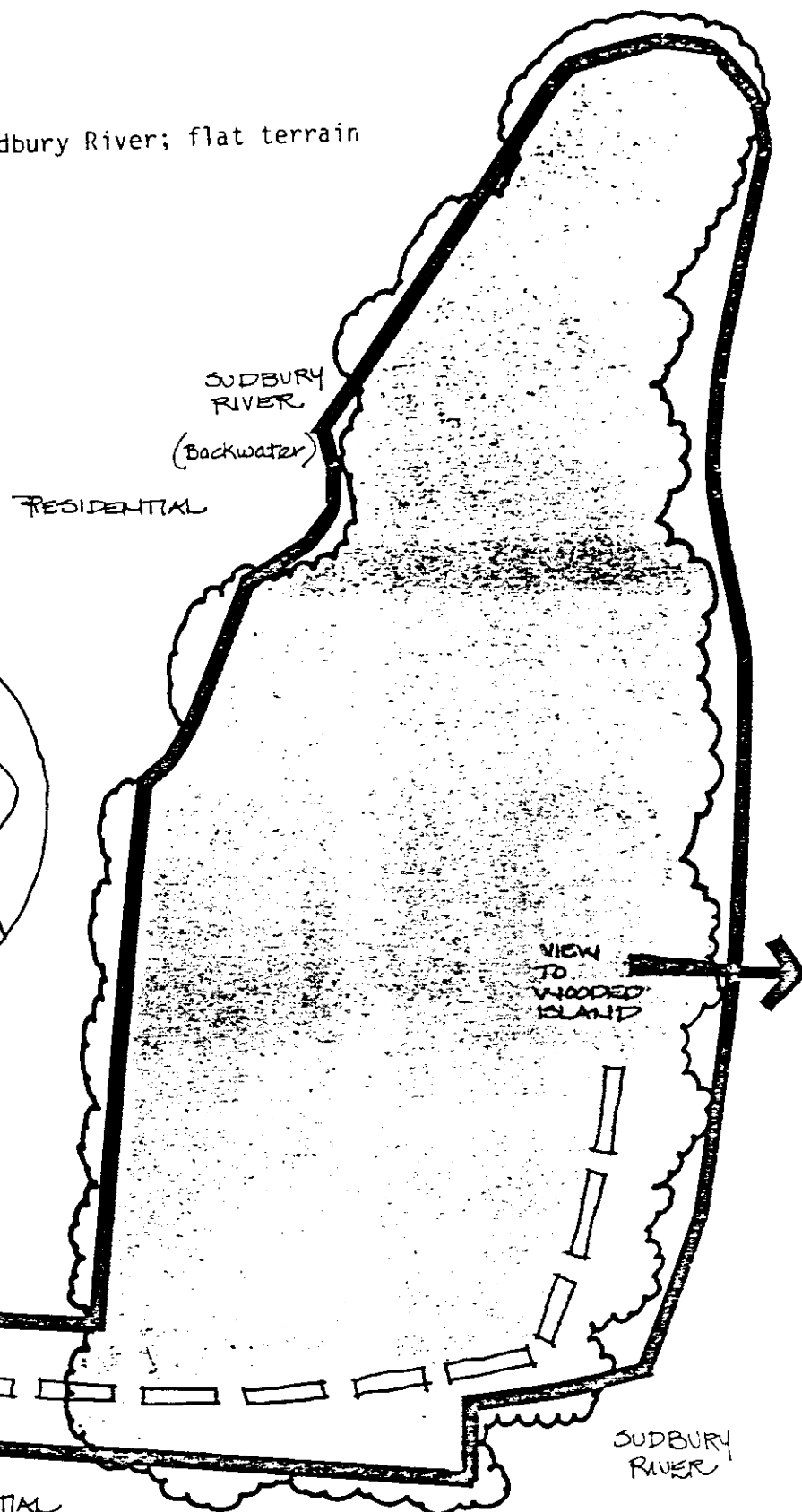
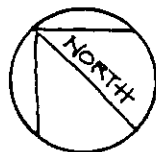
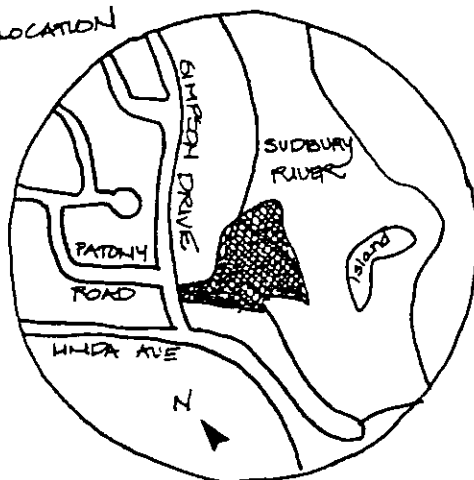
KEY

 woods

 path

 main access point

LOCATION



CANOE ACCESS POINTS

(Centennial Place

Framingham

LOCATIONTOWN

Town of Framingham

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great X Great Okay Okay Possible but difficult Possible but difficult Impractical/Impossible Impractical/Impossible

NOTES:

Right above/before the
Saxonville Dam. Access to river
is through some grass - a bit
wet. Close to road, within 15
feet.

NOTES: (# of cars) 3-4 cars.
On right hand side, thin dirt
pulloff. Is across from
residential area, parking may
not always be available.

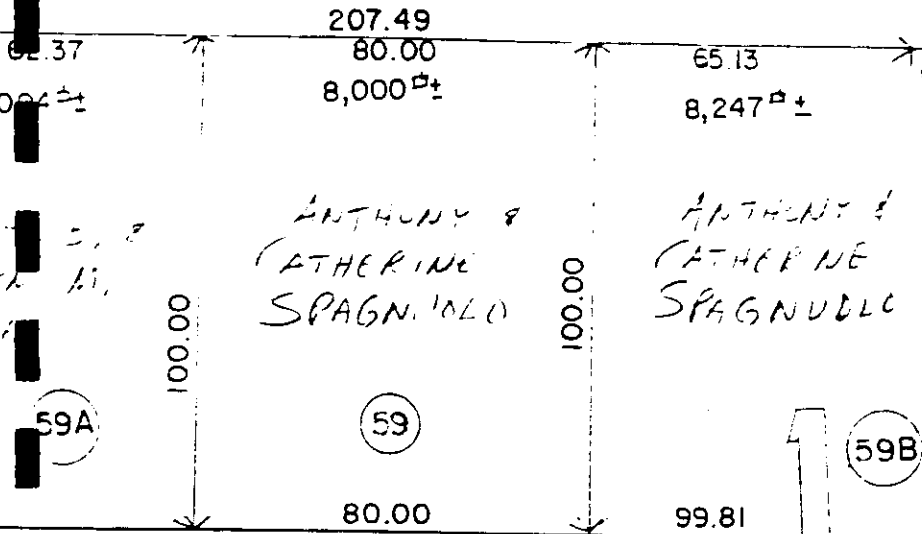
This site is not specifically mentioned, although the area is
talked about on page 9 of the draft, when talking about a portage
around the Saxonville Dam.

TOWN OF FRAMINGHAM

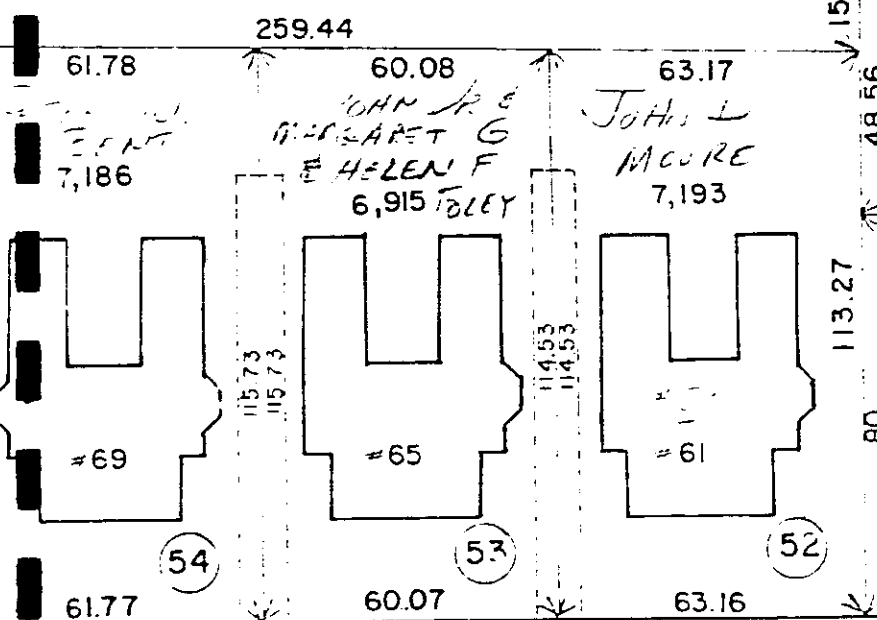
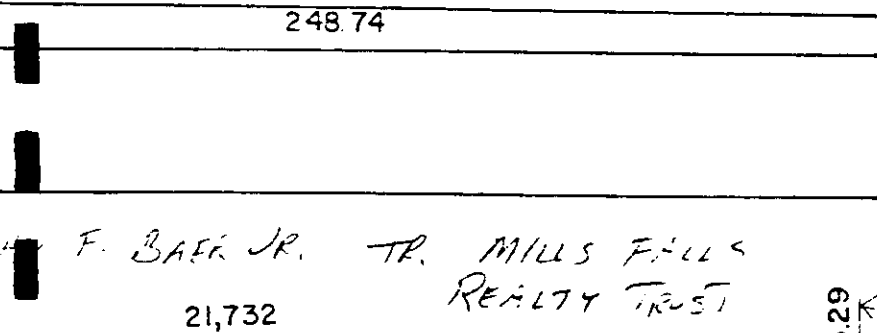
57A

23,500 (54 ACRES)

SUDBURY RIVER



CENTENNIAL



PLACE

STREET

Centennial Place

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Framingham

LOCATION

TOWN

not shown - most likely private

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 Okay

 Okay

 X Possible but difficult

 X Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Logs and many rocks line actual river bank. Path to river from road is difficult, holes in the ground on steep hill, with no clear path to river.

NOTES: (# of cars)

1-2 cars. There are metal posts with wires strung across right at the curve of the road along the river. One can park on slight shoulder off road, otherwise on side of road. These posts and wire will also make it a bit difficult to carry a canoe through.

This site is mentioned on page 9 of RKW's draft.

279
156

SUDBURY RIVER

STREET

TOWN OF FRANKLIN, TENN.

5



1,805 SQ. FT.

173.79 p1
198.93

⑨

12

93.00

LINCOLN
PORTER

(5)

ALAN H. PHILIP
 1900
 1900
 1900

117 SCALED
171 SCALED

1105 96111.1

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Little Farms Road - end of

Framingham

LOCATION

TOWN

Framingham Conservation Commission

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 X Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Clear, wide path to access at river. Short slight incline at bank, but easy.

NOTES: (# of cars)

7-8 cars. Large dirt turnaround at end of road.

This site is mentioned on page 9 of RKW's text.

Little Farms Road

DATE OF AQUISITION: 10/29/81; Gift of the Generazio Family

SIZE: 2.1 acres

ADJACENT LAND USE: Residential; woodland

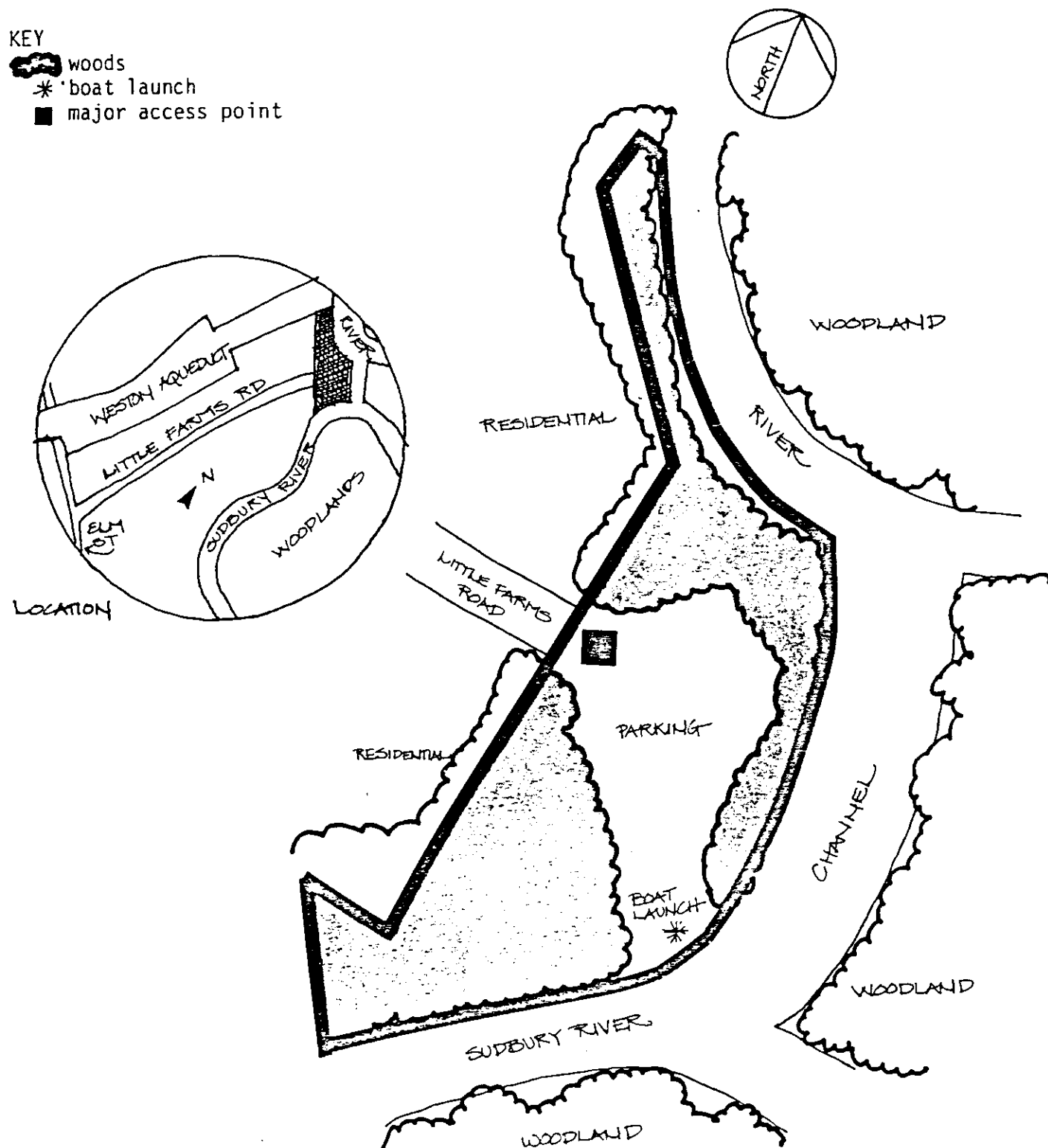
ACCESS: From the end of Little Farms Road

NATURAL FEATURES: Sudbury River below Saxonville Dam, woodland

USE: Boat launch

KEY

-  woods
-  boat launch
-  major access point



Sudbury/Concord River
Canoe Access

Wayland

 Shore Drive

[2. Pelham Island

[3. Boston Post Road

 River Road

[5. Old Rt. 27

 6. Sherman's Bridge Road

SUDURY/CONCORD RIVER

CANOE ACCESS POINTS

Shore Drive

Wayland

LOCATION

TOWN

United States of America

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 X Okay

 Okay

 Possible but difficult

 X Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

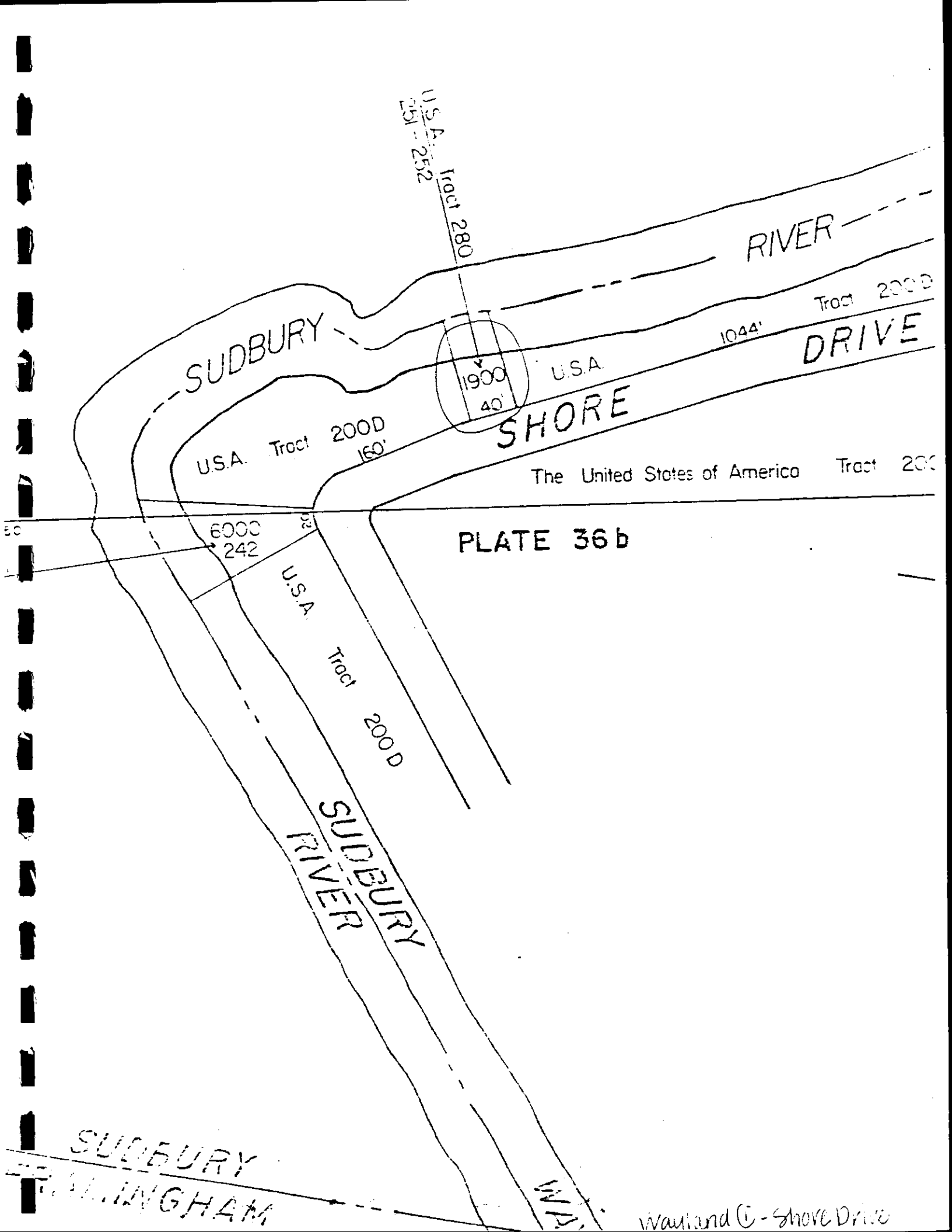
NOTES:

Path through woods and to left,
over small compost dump. Easy
river access, no slope. Path
is fairly clear - a few
overhanging branches, but wide.
Seems far to carry a canoe.

NOTES: (# of cars)

Wooden posts prevent parking
except on road (which is dirt).

This site is not mentioned in RKW's draft.



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

1 Pelham Island - bridge

Wayland

LOCATION

TOWN

U.S. Fish & Wildlife

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 Great

 Okay

 X Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

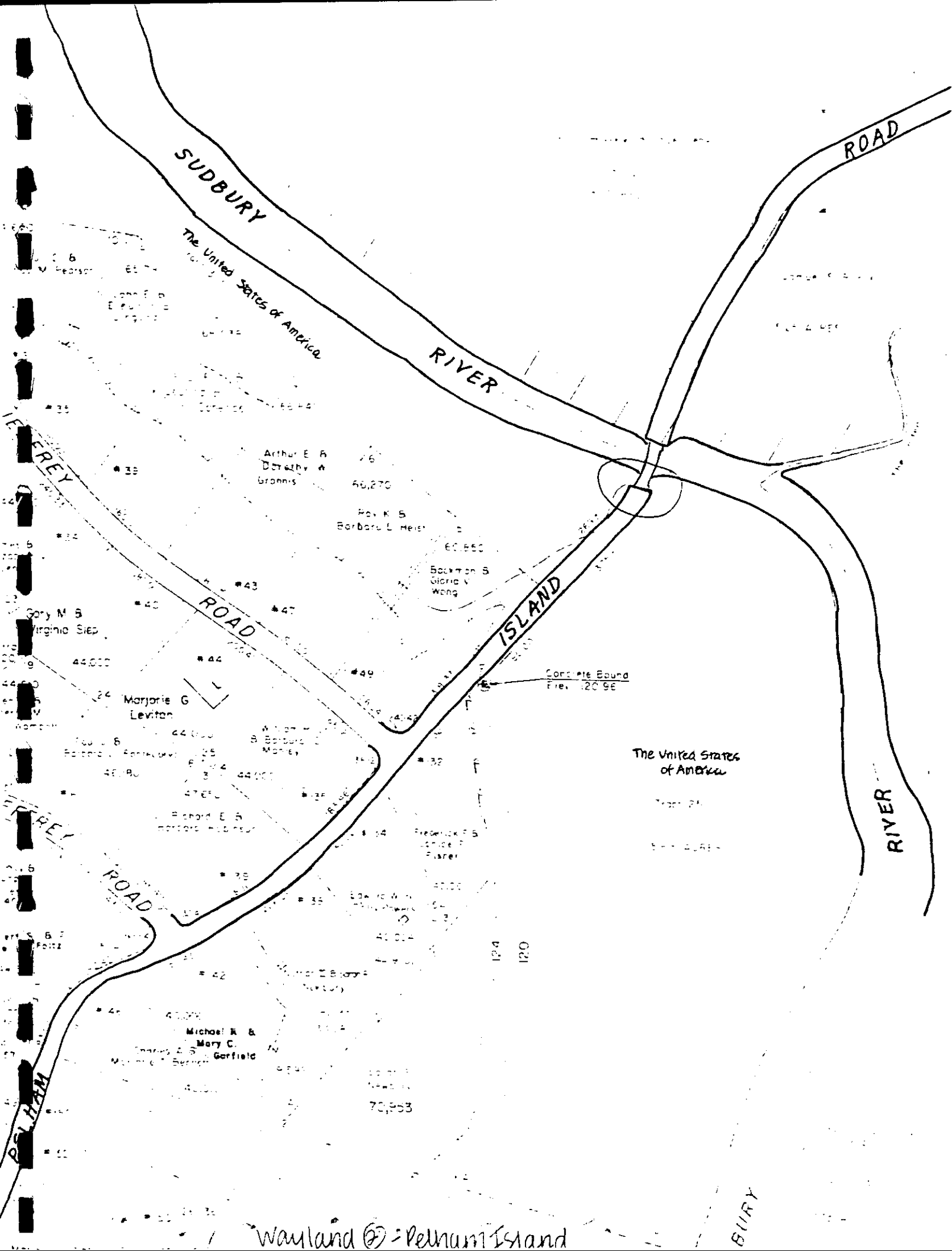
NOTES:

On far side of bridge (towards Jeffrey Road), on the left hand side there is access without much slope, clear. Right hand side also provides similar access.

NOTES: (# of cars)

5-6 cars. Parking in a semi pulloff, but able to park along the sides of road.

This site is not specifically mentioned as a launch site, although the bridge itself is mentioned on page 13 of RKW's draft.



Wayland @ Pelham Island

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

(Boston Post Road - Rt. 20 - after Raytheon

Wayland

LOCATION

TOWN

James M. & Devens H. Hamlen

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 X Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Direct, clear access to river.
May be a bit steep if parked on
shoulder, but manageable.

NOTES: (# of cars)

5-7 cars. Dirt shoulder on
right, before bridge traveling
west. Slopes downward,
although not too steep to drive
a car down to edge of river.
Farther down road there is
another dirt pulloff on side.

The bridge is mentioned on page 13 of RKW's draft, but not as a
point of access.

BOSTON

DATE: 10/1/70
BY: [illegible]

15 ACRES

James M. B.
Devens H. Hamlen

15 ACRES
40 ACRES (marsh)
55 ACRES

James M.
Devens H. Hamlen

Town of
Wayland

ROAD

POST

POST

BOSTON

SUDBURY RIVER

USA
Forest
Land

10/1/70 (2) - BY: [illegible]

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

 Old Sudbury Road

Wayland

LOCATION

TOWN

USA - Great Meadows Nat'l Wildlife Refuge

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

 Great
 X Okay
 Possible but difficult
 Impractical/Impossible

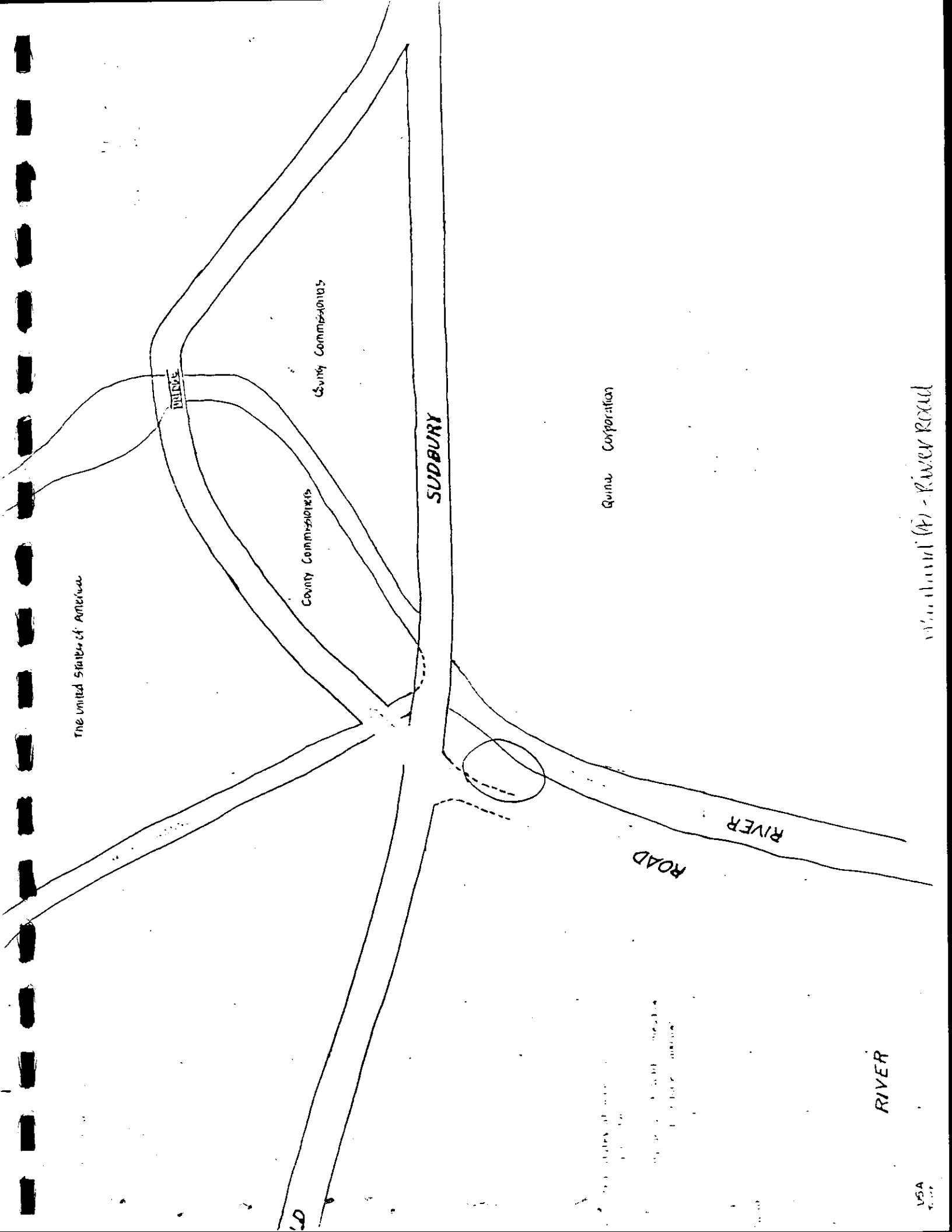
NOTES:

Direct access to river within
15 feet of road.

NOTES: (# of cars)

Right at water, on left hand
side of road, dirt pulloff with
room for 2-3 cars. Other small
dirt pulloffs farther along
road away from Old Sudbury
Road.

In speaking with Great Meadows - Weir Hill, Sudbury, it was
indicated that the want to advertise this spot in a canoe
guide. This site was mentioned on page 13 of RKW's draft.



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

1 Old Rt. 27 - near Wayland Golf Course

Wayland

LOCATION

TOWN

USA or County Commissioners

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

NOTES:

Access to river is clear, on a somewhat steep gravel path, some rocks. Easy.

NOTES: (# of cars)

Site is at end of road - dirt pulloff at this area can hold 2-3 cars. Before wooden bridge, there is a grass/gravel area for parking 6-8 cars, but is a narrow roadway, and a bit of a walk to the river.

This site is mentioned on pages 13, 14 of RKW's draft.

111

~~County Commissioners~~ County Commissioners

SUDBURY

Quina Corporation

ROAD

RIVER

RIVER

155A

(5, 11, 17, 23)

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Sherman's~~ Bridge Road

Wayland

LOCATION

TOWN

United States of America

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 Great

 Okay

 X Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Access to river clear,
unobstructed wide dirt paths on
both sides of the road, on
Wayland Town line side. Slight
slope.

NOTES: (# of cars)

Dirt pulloffs on both sides of
the road, Wayland side, holding
4-5, and 2-3 cars.

On Sudbury side of the river there is a sign which says "Canoe
Rental 1/4 mile, " but no further indication is given of where to
rent. This bridge is mentioned on page 15 of RKW's draft, but
not as an access point.

United States of America

RIVER

SHERMAN'S BRIDGE RD.

USA

ZUPPE

PROPERTY OF
KODAK CO. MA

SUDBURY
WAYLAND

Wayland - Sherman's Bridge

Sudbury/Concord River
Canoe Access Points

Sudbury

~~Great Egg~~ National Wildlife Refuge

In speaking with directors at Weir Hill - Sudbury it was indicated that while there are no points of access from Refuge property, there are two canoe landings along the river (through the Refuge) which are meant for public use. Although canoeists are not allowed to launch their canoes from these points, they are welcome to land their canoes at these sites in order to explore the Refuge. Those who do land should be aware thkat they are upon Refuge property, and must observe certain restrictions, as listed under Public Use Regulations in attached pamphlet.

Refuge area is shown on attached sheet as well.



PUBLIC USE / REGULATIONS

All persons using the refuge are asked to comply with local, State, and Federal laws, regulations, and ordinances, as well as with the following conditions.

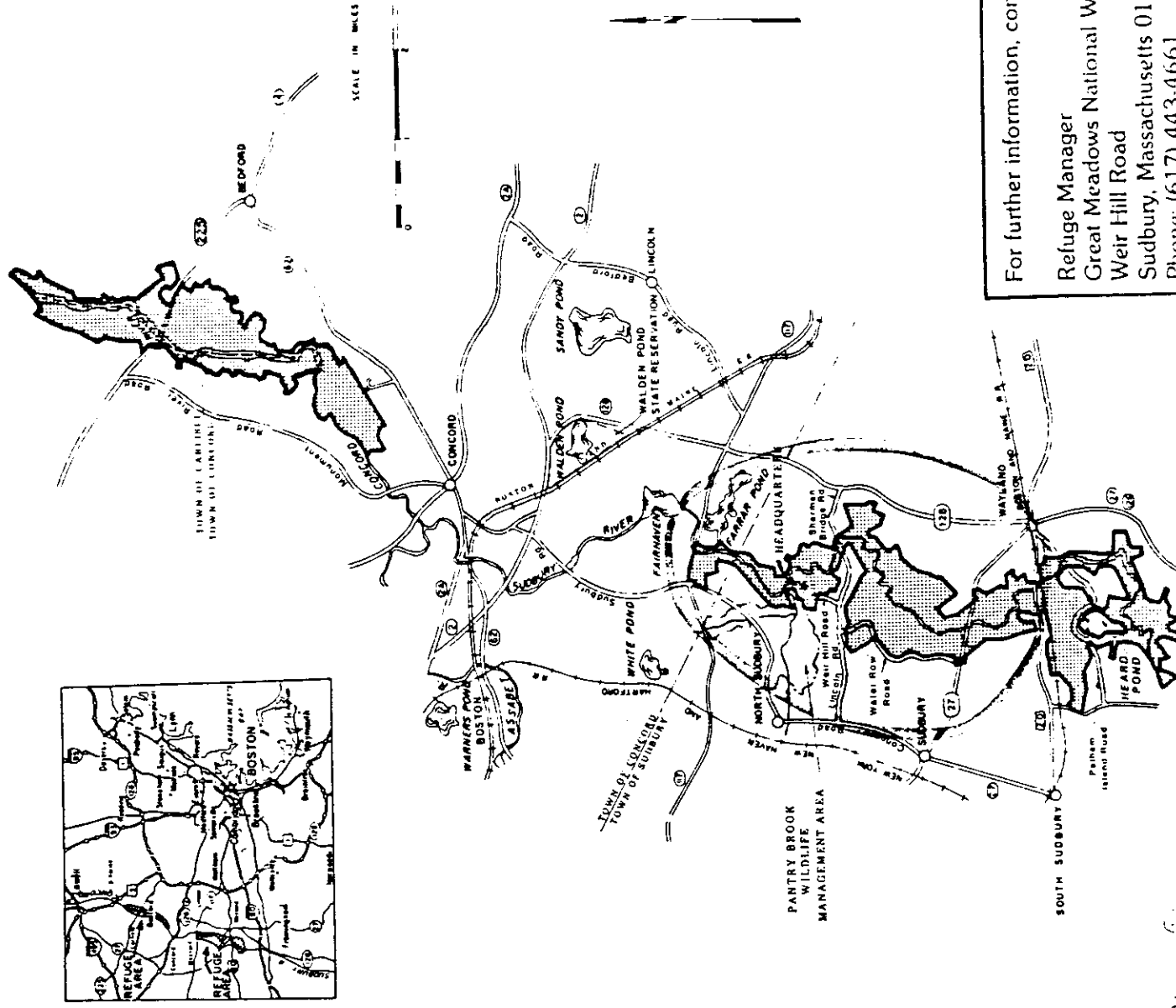
1. Public use of designated trails within the refuge for nature study, hiking and photography is permitted from one-half hour before sunrise to one-half hour after sunset.
2. Pets must be on a short hand-held leash during the entire visit. No horses are permitted.
3. Motorized vehicles are restricted to the entrance roads and parking areas.
4. Hunting, shooting, camping, building campfires, and swimming are not permitted.
5. Boating and fishing are allowed in the Concord and Sudbury Rivers, but not in the refuge pools.
6. The disturbance, destruction, or removal of wildlife, vegetation, and facilities are prohibited.

This is your refuge, but not only yours. Enjoy it, and please do nothing to harm it.



by Bruce Flagg

GREAT MEADOWS NATIONAL WILDLIFE REFUGE



For further information, contact

Refuge Manager

Great Meadows National Wildlife Refuge

Weir Hill Road

Sudbury, Massachusetts 01776

Phone: (617) 443-4661

Sudbury/Concord River
Canoe Access Points

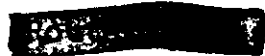
Lincoln

 Rt. 117 - Lee's Bridge

2. Rt. 117 - "Sudbury River Canoe Landing"

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

 Lee's Bridge	Lincoln
<u>LOCATION</u>	<u>TOWN</u>
Great Meadows National Wildlife Refuge	
<u>OWNERSHIP AS SHOWN ON TOWN MAP</u>	

Physical practicality:

☐ Great
☐ Okay
☒ Possible but difficult
☐ Impractical/Impossible

Parking:

☐ Great
☐ Okay
☒ Possible but difficult
☐ Impractical/Impossible

NOTES:

On the East side of the river, below the bridge, a set of stone steps lead from edge of bank into the river. Descent from pavement to water is both steep and rocky.

NOTES: (# of cars)

There is a dirt shoulder off side of road - along with a "No Parking" sign. Dirt shoulder would accomodate no more than two cars. The visibility and narrowness of bridge at this point in the road create a potentially dangerous situation for travel along the side of the road.

In speaking with Great Meadows, Weir Hill - Sudbury, it was indicated to me that they considered this access point as "not very safe." This site is mentioned as the bridge in RKW's draft on page 15,16, but not as access point.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Route 117 - "Sudbury River Canoe Landing"

Lincoln

LOCATION

TOWN

Town of Lincoln

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

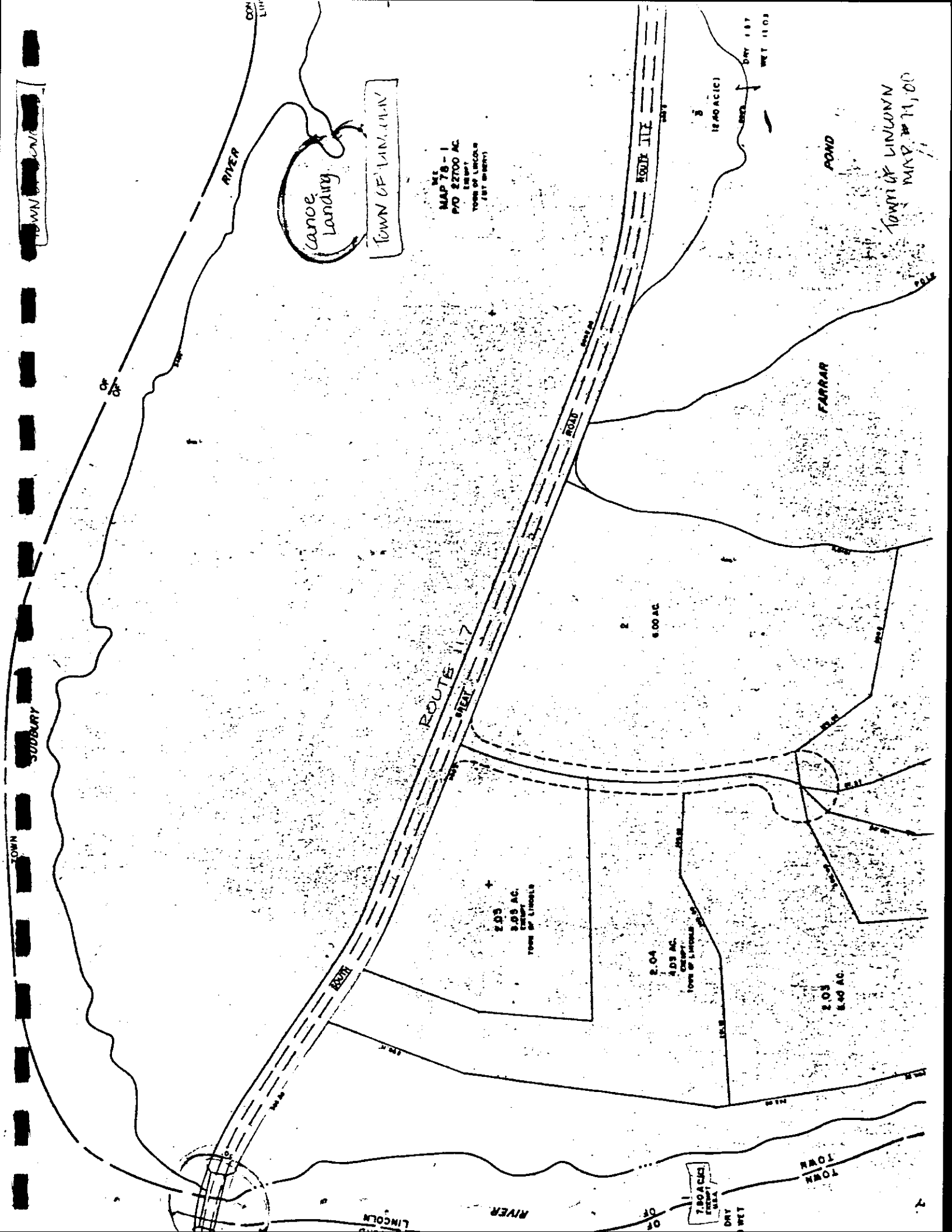
 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

NOTES:

Easy, safe, clearly marked paths - short walk to water access.

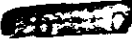
NOTES: (# of cars) 7-10 cars. Parking in a dirt semi-circular parking area. More parking available on dirt shoulder past parking area - with a worn trail leading to canoe path.

This site is mentioned in detail on page 17 of RKW's draft. He also mentions Mt. Misery Conservation area as available parking space, but this is a far walk along a windy road.



Sudbury/Concord River
Canoe Access Points

Concord

-  Sudbury Road - Heath's Bridge
- 2. Concord Boat House
-  3. Mashawtuc Road - Hurd's Bridge
-  4. Main St. - Rt. 2A
- 5. Lowell Road
-  Old North Bridge
-  7. Monument Street - "Simmon's Landing Lane"
-  8. Monument Street - Flint's Bridge

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Sudbury~~ near Heath's Bridge Road

Concord

LOCATION

TOWN

#3991 - Town of Concord

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 X Impractical/Impossible

 X Impractical/Impossible

NOTES:

Wooden telephone/log fence
along road as approach river,
and actual bridge crossing. No
breaks on either side.

NOTES: (# of cars)

No dirt shoulders for pulloff.
Has a curbed sidewalk along
road.

The bridge is mentioned on page 18 of RKW's draft, but only in
narrative, not as access point..

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Concord Boat House

Concord

LOCATION

TOWN

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 X Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Easy, direct access.

NOTES: (# of cars)

Parking in parking lot.

This is a private boat house where the public may rent canoes and is a popular launching site. I do not know how the management would feel about one launching one's own canoe.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

 - Rt. 2A

Concord

LOCATION

TOWN

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 X Impractical/Impossible

 X Impractical/Impossible

NOTES:

No access.

NOTES: (# of cars)

No parking.

Bridge is not mentioned in RKW's draft.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS



ad - Hurd's Bridge

Concord

LOCATION

TOWN

Concord Land Conservation Trust; First Parish in Concord

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 Okay

 Okay

 X Possible but difficult

 X Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Open access, but... guard rails line the sides of road, after the stone walls of the bridge, although there are small breaks with paths to water. Nearest side on right, path is stony & steep with a chain link fence underlying some gravel; at far right side, path is dirt, but drops off approximately two feet over a concrete stone. On far side, left, there is a small dirt path but narrow and steep.

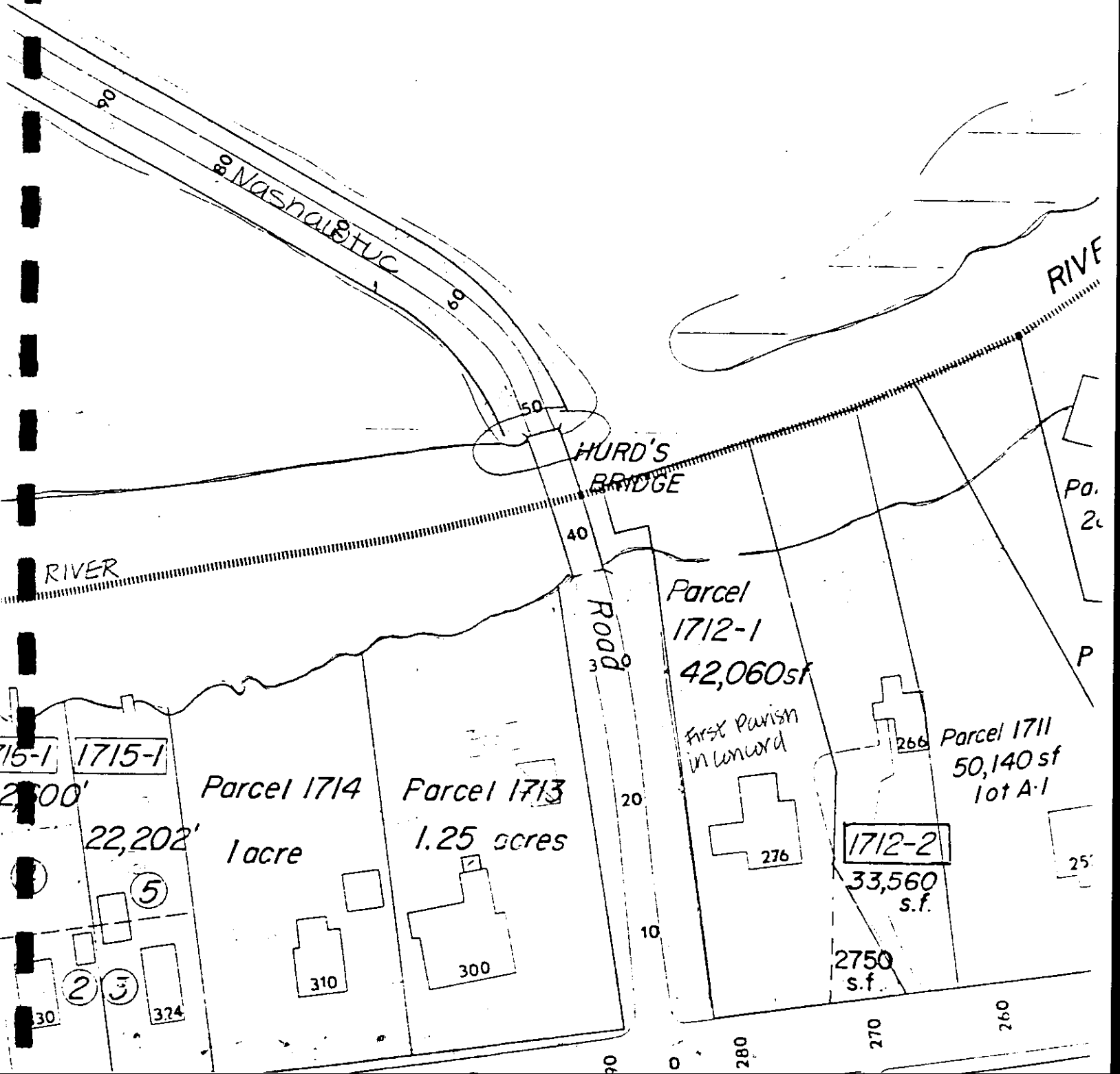
NOTES: (# of cars) 2-3 cars. Bit of dirt shoulder on right after bridge, and on left before bridge.

The bridge is mentioned on page 20 of RKW's draft, but not as an access point.

Concord Land Conservation Trust

Parcel 1734

29.3 acres



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Lowell Road

Concord

LOCATION

TOWN

=1677-1 - Town of Concord Conservation Commission

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 X Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

On side of the bridge, there is a dirt road path which goes below surface level of road. Clear access to river from parking area.

NOTES: (# of cars) 5-6 cars. Cleared lot among trees. Parking can also be done on side of road opposite this area.

This site is mentioned on page 20 of RKW's draft as an access point - it is mentioned as "Cow Pasture Conservation Area."

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Concord

LOCATION

TOWN

#1261 - Town of Concord

#1265,6,7,8 - USA, Nat'l Park #1264,69,70 - USA, Dept. Interior

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

NOTES:

If you walk down path directly across from parking area, will approach the bridge. As one approaches, the two nearest sides of bridge are clear, level easy access points.

NOTES: (# of cars)

In parking lot for historical park on Monument Street.

yes, but too far, intrudes on monument

This site was mentioned as a landing site on page 20 of RKW's draft. At meeting with Nat'l Park Service, it was questioned whether this was a good spot. It is a far walk from lot to bridge to carry a canoe.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Monument St.~~ Simmons Landing Lane"

Concord

LOCATION

TOWN

#1262 - Shole, M. Washburn, 41 Great Meadows Rd., Thomaston ME

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 X Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 X Impractical/Impossible

 Impractical/Impossible

NOTES:

There is a small semi-gravel lane right after the exit to parking area. From a view further down the road, one can see that a dock has been placed in the river, which presumably can be reached by this lane. A few yards into the lane, however, a "NO TRESPASSING" sign has been posted.

NOTES: (# of cars)

In Parking area for historical park.

This site is not mentioned in RKW's draft.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS



Bridge - "Flint's Bridge"

Concord

LOCATION

TOWN

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 X Impractical/Impossible

 X Impractical/Impossible

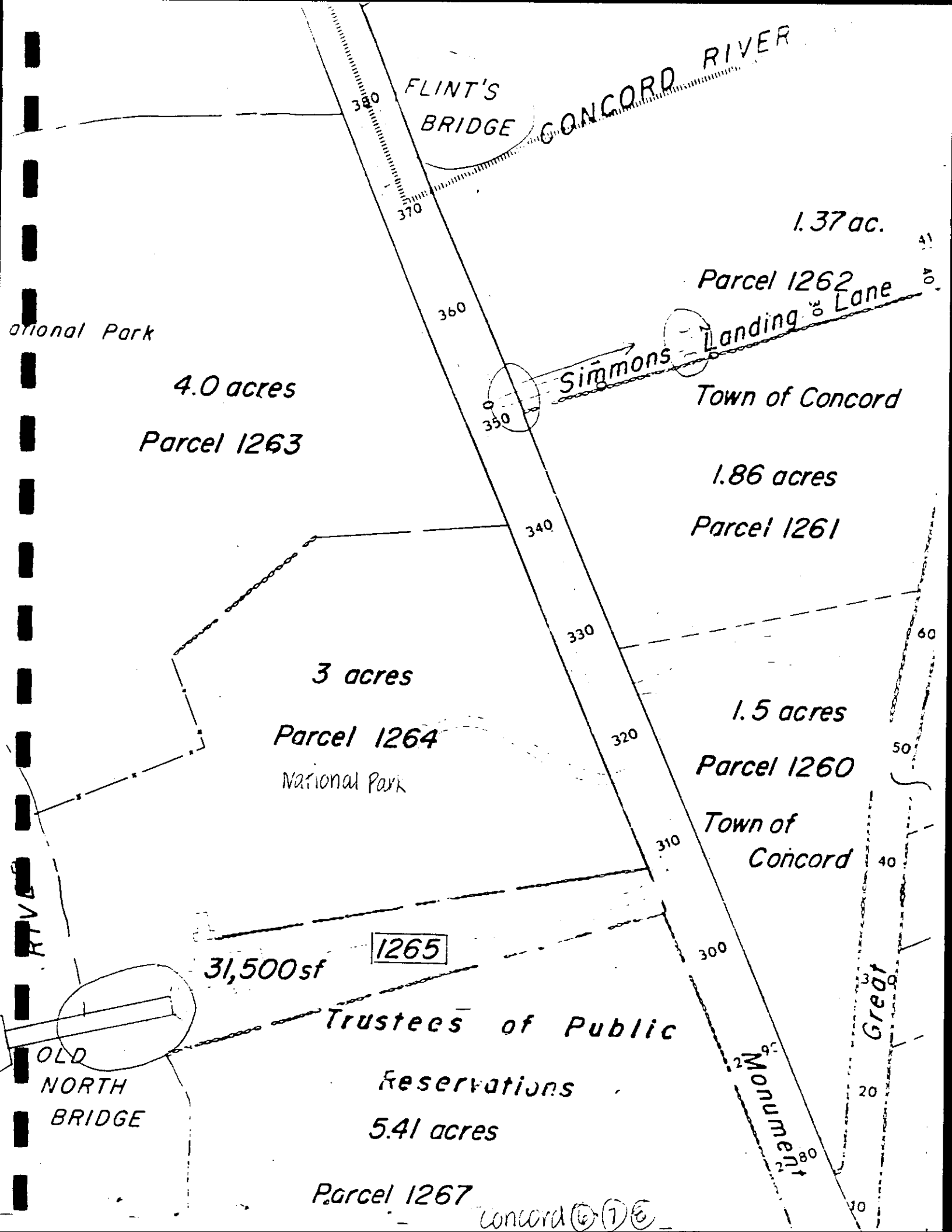
NOTES:

No access off road down to river, as bridge covers length along road.

NOTES: (# of cars)

No Parking either on or off the road.

This bridge is mentioned on page 21 of RKW's draft, but not as an access point.



FLINT'S BRIDGE CONCORD RIVER

1.37 ac.

Parcel 1262

Landing Lane
Town of Concord

1.86 acres

Parcel 1261

3 acres

Parcel 1264

National Park

1.5 acres

Parcel 1260

Town of Concord

31,500sf 1265

Trustees of Public

Reservations

5.41 acres

Parcel 1267

OLD NORTH BRIDGE

Great

Monument

concord 676

Sudbury/Concord River
Canoe Access Points

Bedford

1. Bedford Boat Ramp

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Bedford Boat Ramp - off Rt. 225

Bedford

LOCATION

TOWN

Town of Bedford, #304,5,7 - US Fish & Wildlife

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

NOTES:

Very slight slant from large
dirt area leading to water.
Easy.

NOTES: (# of cars)

At end of wide, 2/10 mile dirt
road, one reaches the water.
There is a side area on left
for parking, but area is so
wide that one can park
anywhere. Gate open 6 am -
8 pm.

This site is mentioned as an access point on page 22 of RKW's
draft.

CARLISLE

RIVER

TRACT 722
13.7 Acres

24

= 30

CARLISLE

305

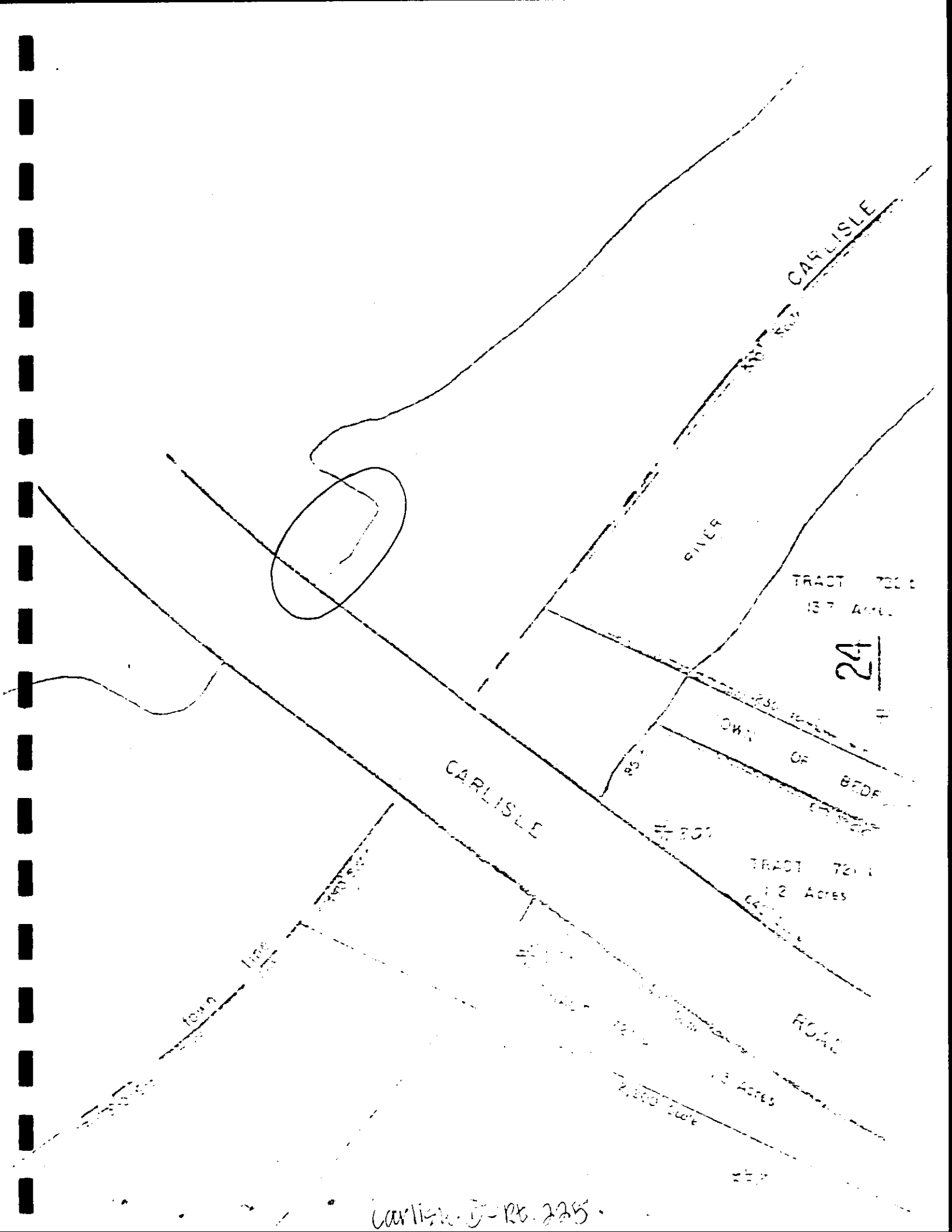
TRACT 721
12 Acres

304

TRACT 720
13.4 Acres

ROAD

Bedford (I) - Boat Ramp



CARLISLE

SILVER

TRACT 7211
137 Acres

24

TOWN OF BEDFORD

CARLISLE

TRACT 7212
12 Acres

ROAD

13 Acres

CARTERS - R. 235

Sudbury/Concord River
Canoe Access Points

Carlisle

1. Rt. 225 - at bridge.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Off Rt. 225~~ - Dirt road at bridge

Carlisle

LOCATION	TOWN
Barbour, William Jr.: Home - 41 Skelton Rd., Mail - PO 460, Concord	Carlisle
OWNERSHIP AS SHOWN ON TOWN MAP	

Physical practicality:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

Parking:

 Great
 X Okay
 Possible but difficult
 Impractical/Impossible

NOTES:

The bank is slanted, steeper than across the river in Bedford, but still manageable. many large rocks on the wide slope blocking a clear and straight passage.

NOTES: (# of cars)

On Carlisle side of bridge, there is a dirt shoulder pulloff - room for 4 cars. Immediately before this, there is a short dirt road which one could drive down very slowly as there are large ditches, in order to reach the water's edgm. However, unless one parked along side of this dirt road, there is no parking area at entrance to river.

The map of this site was not available from the Carlisle Town Hall. If necessary one may be obtained from John E. O'Donnell of Auburn, ME - Map 11. This site is mentioned on page 22 of RKW's draft as access point.

Billerica

1. Rt. 4 - Nashua Road
2. Riverview Road
3. Island Street - off Rio Vista Drive
4. Middlesex Turnpike - end of
5. Elsie Ave. - field across Kilsyth Rd.
6. River St. / Elsie Ave.
7. Rt. 3A - Boston Road
8. Salem / Darby Road
9. Lowell St. Fire Station
10. Faulkner St. - Cambridge Tool
11. Talbot Mills

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Rt. 4 - Nashua Rd., "Spinning Wheel"
Restaurant

Billerica

LOCATION

TOWN

#208 - Aardvark Cheap Car Rentals Inc., 409 Boston Rd.

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

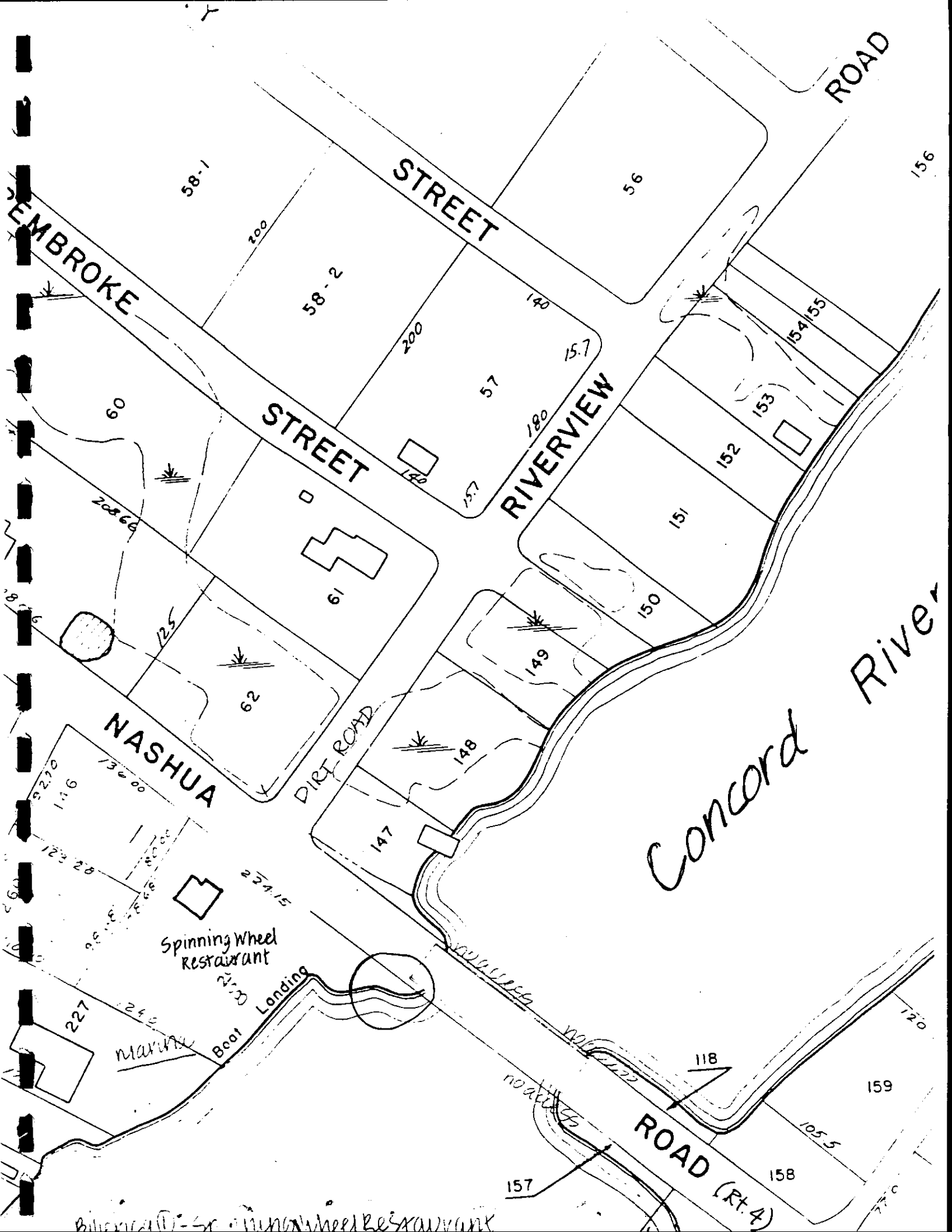
NOTES:

Easy access, open, not a very big slope, with some ditches made by rain in sand & stone path, and also some iron pipe in path down to river.

NOTES: (# of cars)
In lot of restaurant.

permission?

Should check with owner of Center Harbor Marina to see about access. Also possibly check deed to see if "Spinning Wheel" is legally owner of land at river - or if there are any provisions in the deed for river use. This site is mentioned on page 23 of RKW's draft, although he cites the Marina as access point rather than the restaurant.



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Riverview~~ off of

Billerica

LOCATION

TOWN

#156 - William E. Fowler , #154,5 - Town of Billerica

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

 Great
 Okay
 X Possible but difficult
 Impractical/Impossible

NOTES:

Dirt, residential road - more like a path - barely drivable with easy, level access.

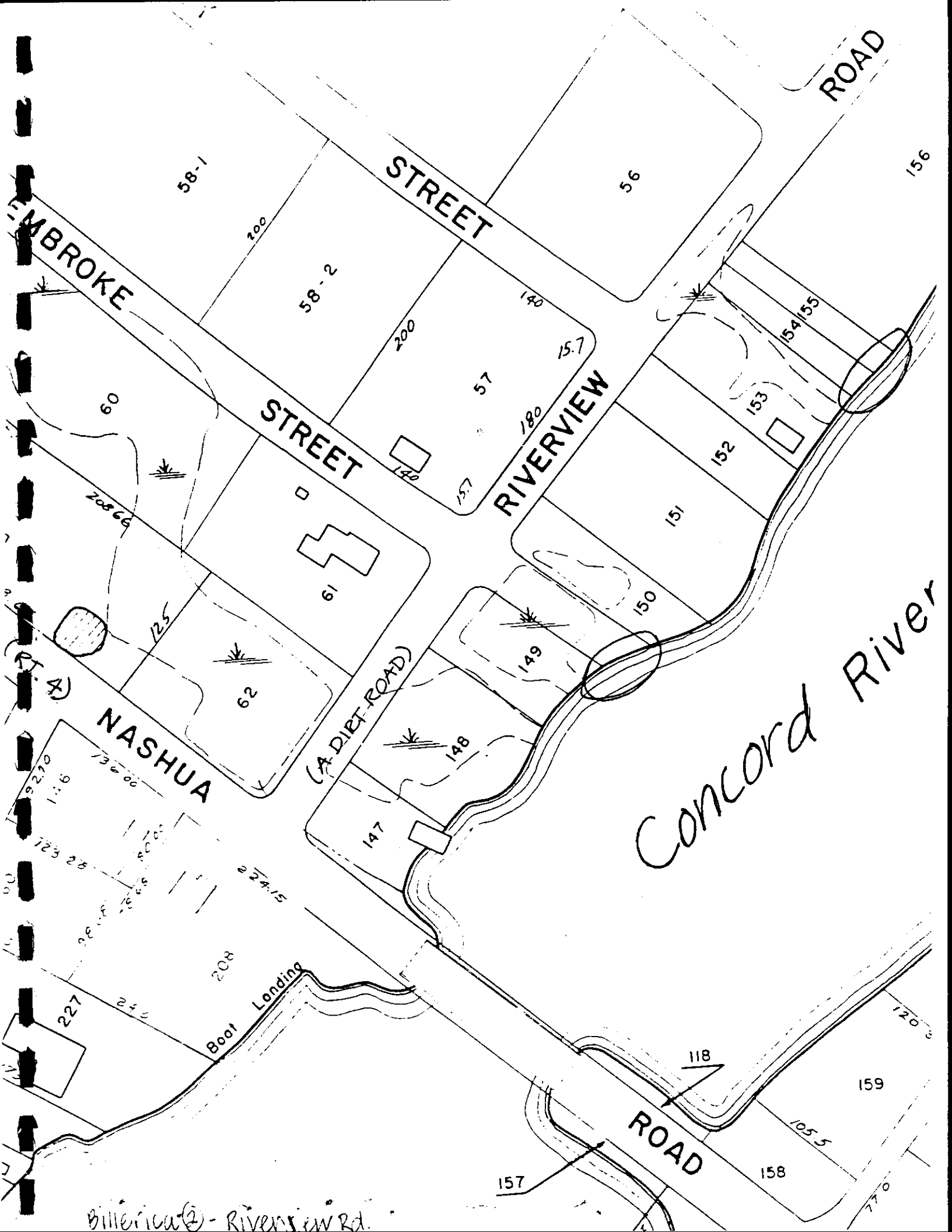
Level with river, easy, unobstruced.

NOTES: (# of cars)

No parking but for on path.

At end of Riverview Road, on right, wide grassy path leading to river, with entrance blocked off by stones. Not much room to park except along road. 1-2 cars.

These sites are not mentioned in RKW's draft.



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Island St.~~ off Rio Vista Drive

Billerica

LOCATION

TOWN

Town of Billerica - designated as "Boat Launching"

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

Parking:

 Great
 X Okay
 Possible but difficult
 Impractical/Impossible

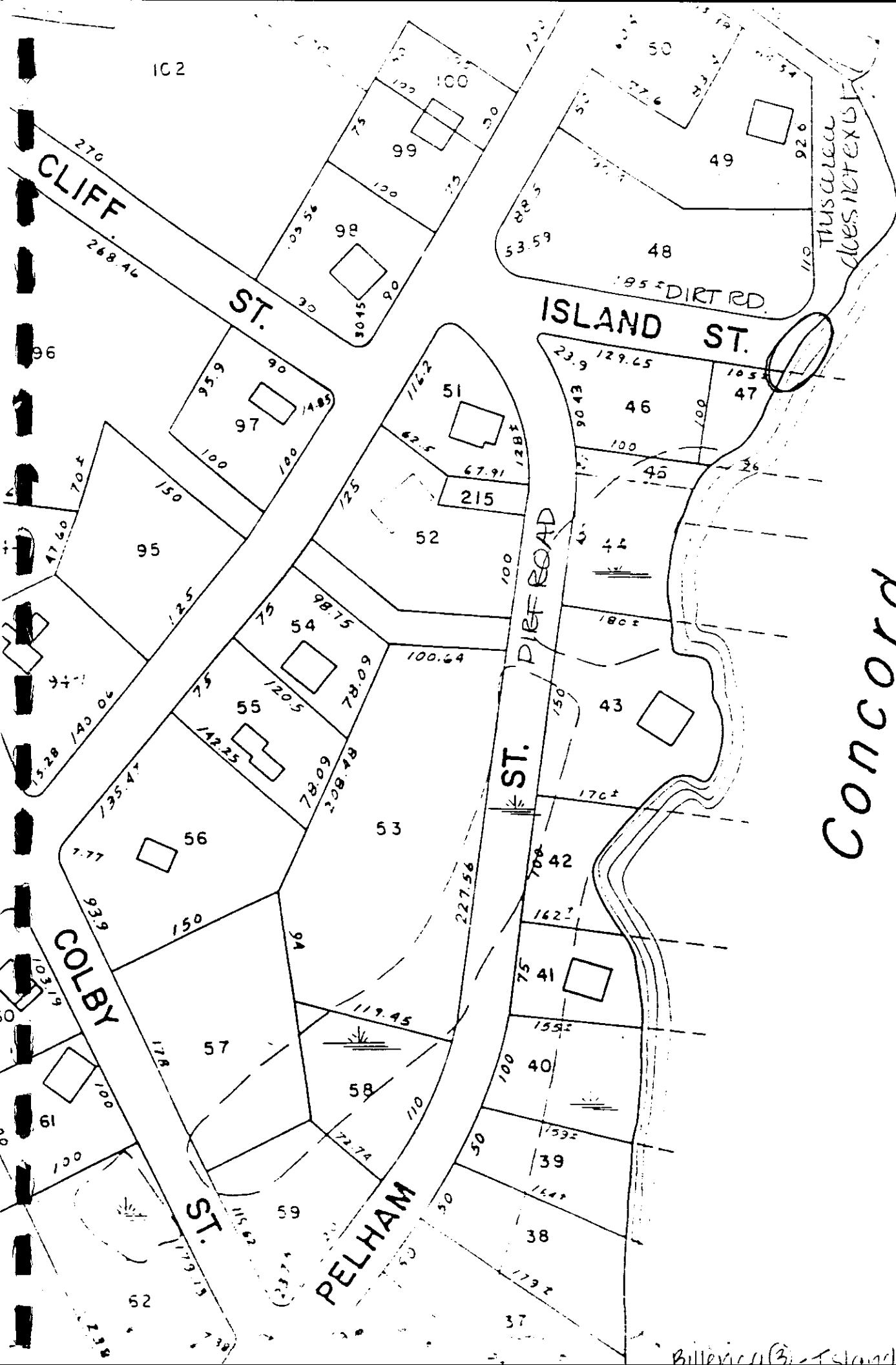
NOTES:

Easy, level and clear access to the water.

NOTES: (# of cars)

Island St. is a dirt road, off of another dirt road (Pelham St.). There is a sign post, but without street sign. The street ends next to a residential area, and seems to be part of the yard, with a slight sub-division off to right. Parking in this area 3-4 cars.

This site is not mentioned in RKW's draft.



Concord

Billerica (3) - Island St

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Middlesex Turnpike - end of (dirt road)

Billerica

LOCATION

TOWN

No ownership known. The Middlesex Turnpike no longer exists.

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 Great

 Okay

 X Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Dirt path to river. Straight clear access.

NOTES: (# of cars) 4-6 cars.

Able to park along the street, and at entrance to river. Is a dirt road.

This site is not mentioned in RKW's draft.

NESTER

KILSYTH

ROAD

BRANFORD

ROAD

MIDDLESEX TURNPIKE

ELSIE

AVE DIRT ROAD

River

Concord

Billerica & Middlesex Twp.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Elsie Ave. - Field across Kilsyth Road

Billerica

LOCATION

TOWN

#122,23 - Jennings, Brenda & Frederick

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 Great

 Okay

 X Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Flat, clear access to river.

NOTES: (# of cars) 4-6 cars.
Parking on street, or on field.
AS there are trees and rocks in
field, it is not ideal, as it
is neither completely clear or
flat.

This site is not mentioned in RKW's draft.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

River St. / Elsie Ave. Corner

Billerica

LOCATION

TOWN

Town of Billerica

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 X Okay

 X Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Access is limited, as bank is lined with large boulders. There is a small path, although also narrow with slight incline, but with clear access to river.

NOTES: (# of cars) 3-4 cars. Dirt pulloff of corner with parking.

The River St. bridge is mentioned in RKW's draft, but not as an access point.

RIVER ST

AVE.

ELSIE

LENORE

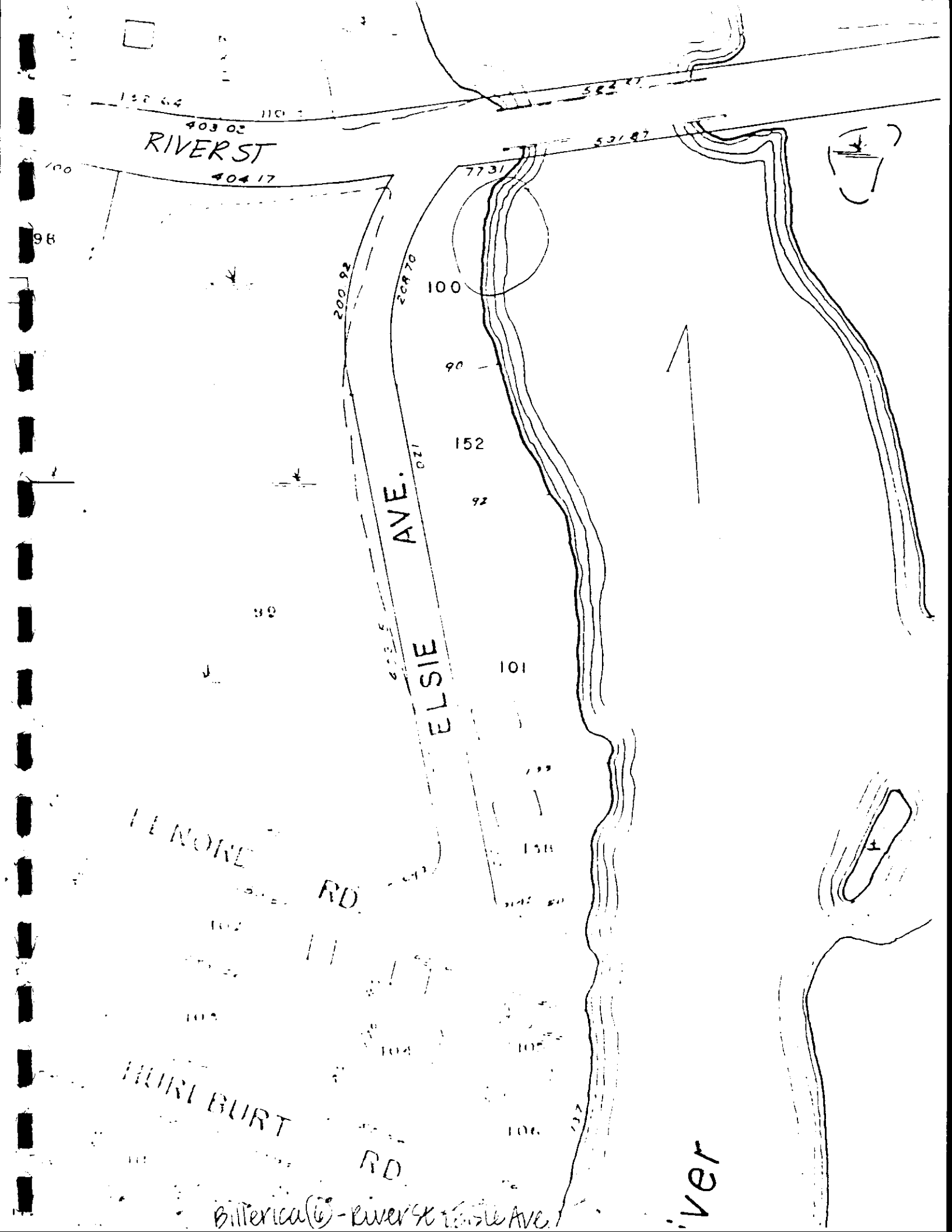
RD.

HURTBURT

RD.

Butlerica (C) - River & Elsie Ave.

iver



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Rt. 3A - Boston Road - "Concord Shores"

Billerica

LOCATION

TOWN

Arakelian, Morris Tr., Concord Shores Realty Trust, Bennet Hall Annex, 1 Fern Brook Lane, Billerica

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

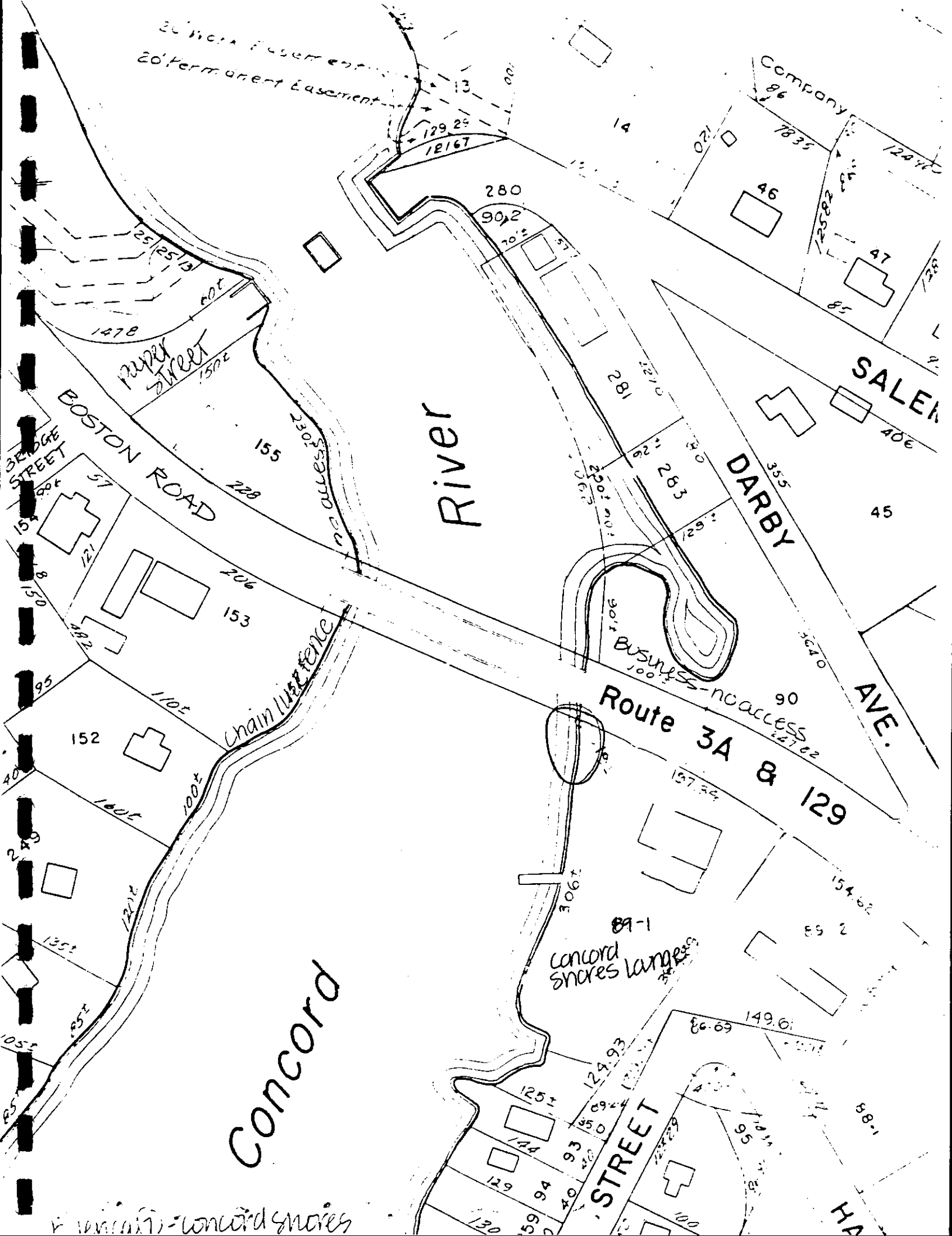
NOTES:

In back of building is concrete drive leading down to river, ending a few yards from shore. Level, but with broken concrete, making path a little uneven.

NOTES: (# of cars)

In parking lot - but may be a concern as it is a restaurant.

The Rt. 3A bridge is mentioned in RKW's draft on page 24, but not as an access point.



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Private Ave~~ - end of

Billerica

LOCATION

TOWN

Town of Billerica

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 Great

 Okay

 X Okay

 Possible but difficult

 Possible but difficult

 X Impractical/Impossible

 Impractical/Impossible

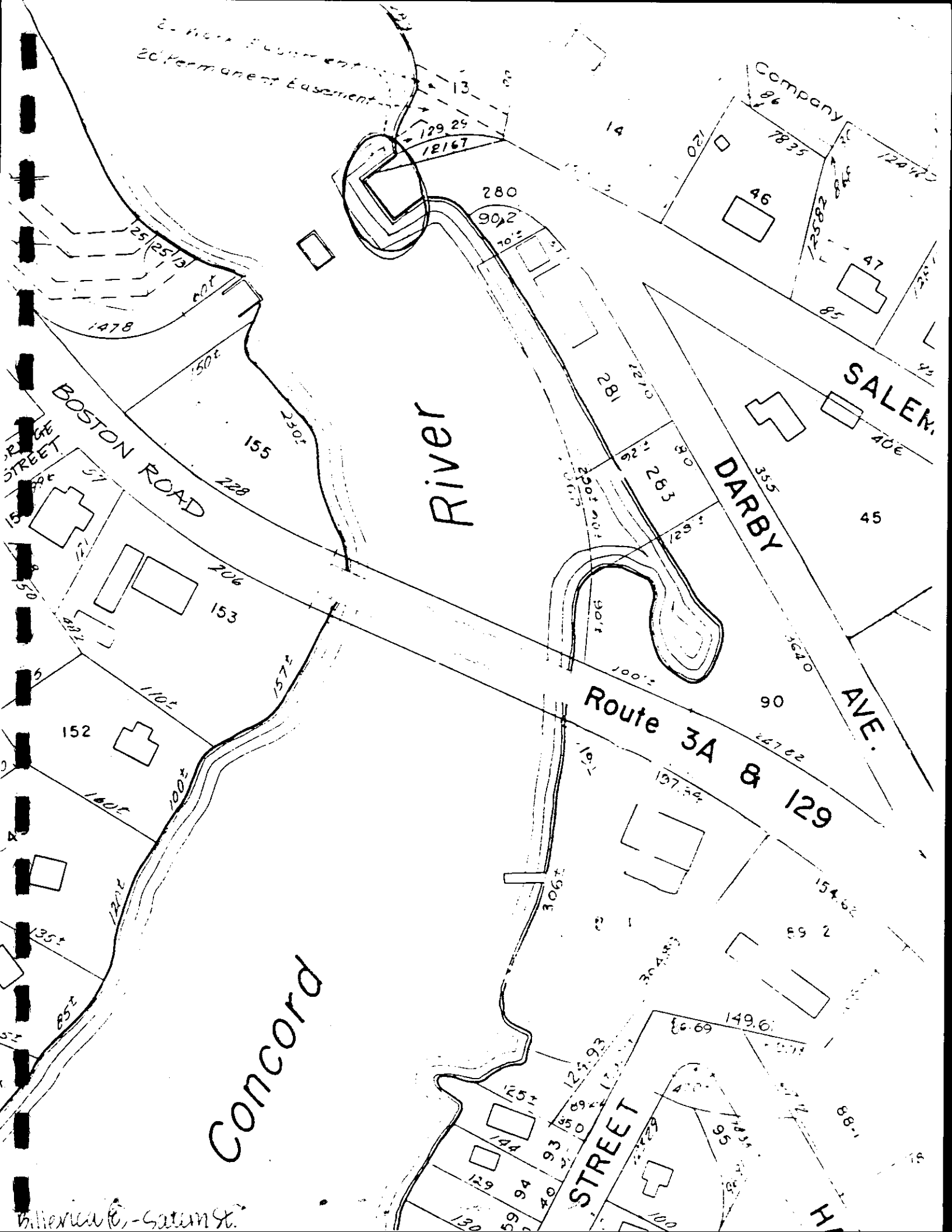
NOTES:

"Private Property - no parking"
sign. Little path, no access
to river because of large
boulders on slope.

NOTES: (# of cars)

Dead end road with room for 3-5
cars.

Bridge structure mentioned on page 24 of RKW's draft, but not as
an access point.



20' Permanent Easement
25' Easement

Company

River

BOSTON ROAD

DARBY

SALEM AVE.

Route 3A & 129

Concord

STREET

Concord, Mass.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Lowell St. Fire Station

Billerica

LOCATION

TOWN

Town of Billerica

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 Great

 Okay

 X Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Easy, clear access.

NOTES: (# of cars)

In back of Fire Station, there is a dirt/grass road. At end there is parking for 2 or 3 cars.

Possible to park at Fire Station and walk, but it is far to walk with a canoe.

This site is mentioned on page 25 of RKW's draft.

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

LOCATION	TOWN
Cambridge Tool Manufacturing CRT Development, Faulkner St., N. Billerica	Billerica
OWNERSHIP AS SHOWN ON TOWN MAP	

Physical practicality:

☐ Great
☐ Okay
☒ Possible but difficult
☐ Impractical/Impossible

Parking:

☒ Great
☐ Okay
☐ Possible but difficult
☐ Impractical/Impossible

NOTES:

Access is over fairly steep slope, although a dirt path remains clear.

NOTES: (# of cars)

On rear side of Cambridge Tool, there is a dirt parking lot. However, there is a large sign indicating that "WARNING - Illegally parked Cars Towed Away at Owner's Expense."

This site is mentioned as an access point on page 25 of RKW's draft.

SUNLIGHT

ROAD

INDIAN

FAULKNER

M

Paper St. - NO ACCESS

ver

STREET

ELM

ST.

LOWELL ST.

225

SON (WILKIN)
IVE.

207

219

103

102

101

100

99

8

5673

119

120

121

122

123

127

128

130

131

10724

18229

19002

222.98

73.17

2595

3074

3116

3158

3199

3240

3281

3322

3363

3404

3445

3486

3527

3568

3609

3650

3691

1941

1982

2023

2064

2105

2146

2187

2228

2269

2310

2351

2392

2433

2474

2515

2556

2597

2638

1941

1982

2023

2064

2105

2146

2187

2228

2269

2310

2351

2392

2433

2474

2515

2556

2597

2638

1941

1982

2023

2064

2105

2146

2187

2228

2269

2310

2351

2392

2433

2474

2515

2556

2597

2638

1941

1982

2023

2064

2105

2146

2187

2228

2269

2310

2351

2392

2433

2474

2515

2556

2597

2638

1941

1982

2023

2064

2105

2146

2187

2228

2269

2310

2351

2392

2433

2474

2515

2556

2597

2638

1941

1982

2023

2064

2105

2146

2187

2228

2269

2310

2351

2392

2433

2474

2515

2556

2597

2638

1941

1982

2023

2064

2105

2146

2187

2228

2269

2310

2351

2392

2433

2474

2515

2556

2597

2638

1941

1982

2023

2064

2105

2146

2187

2228

2269

2310

2351

2392

2433

2474

2515

2556

2597

2638

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Talbot Mills - back of parking lot

Billerica

LOCATION

TOWN

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 X Great

 X Okay

 Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

Rocks are placed at the edge of the river, there is a lot of trash in this spot near bank, which is lined with large pebbles. Small incline, except for rocks at edge.

NOTES: (# of cars)

In back side of the building across from mill, before Lowell St. Bridge.

This site is mentioned on page 25 in RKW's draft as a point from which to take out. The portage he discusses is a very far walk with a canoe, along a busy street.

Susbury/Concord River
Canoe Access Points

Lowell

- (1. Billerica St. - 5 Arch Bridge
- (2. Billerica St.
- (3. Lawrence St. / Billerica St.
- (4. Lawrence St. Bridge

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

~~Lawrence St.~~ Bridge - off Lawrence St.

Lowell

LOCATION

TOWN

City of Lowell

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 Great

 X Great

 X Okay

 Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

NOTES:

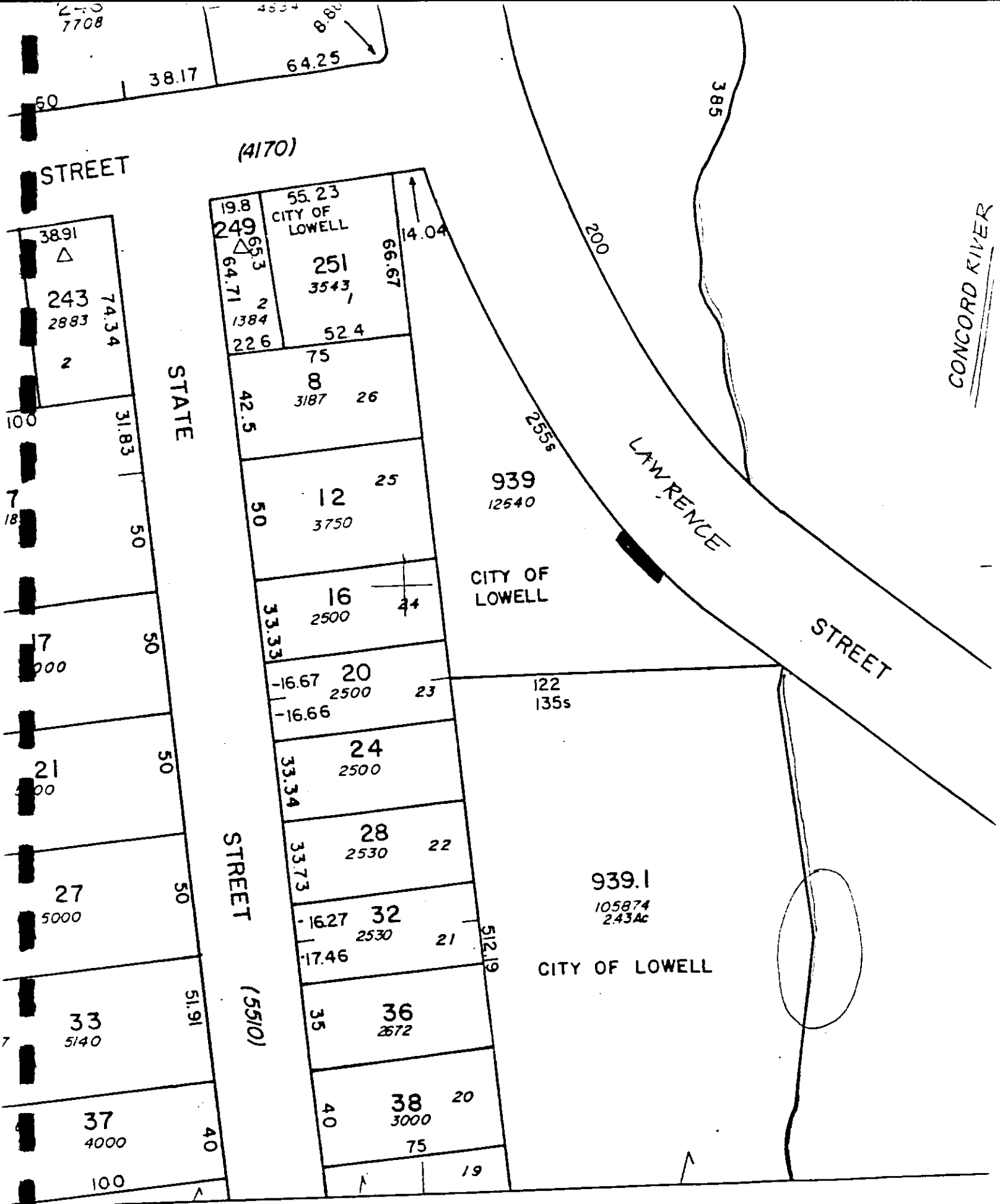
Bank is lined with large rocks, but it is possible to put in at one area directly in front of end of dirt drive on left, where there is only one rock in the way with a short steep incline.

Farther along bank, there is a more open spot, with less of an incline, but more rocks.

NOTES: (# of cars)

Can drive right up to water through field with wide dirt paths, off of Lawrence St. at bridge.

This site is not specifically mentioned, only mentioned as the Lawrence Street Bridge.



Lowell - Lawrence St. Bridge

SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

BillERICA St. - 5 Arch Bridge - Denton St. Lowell

LOCATION

TOWN

not shown - lot next to is owned by City of Lowell

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 Great

 Okay

 X Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

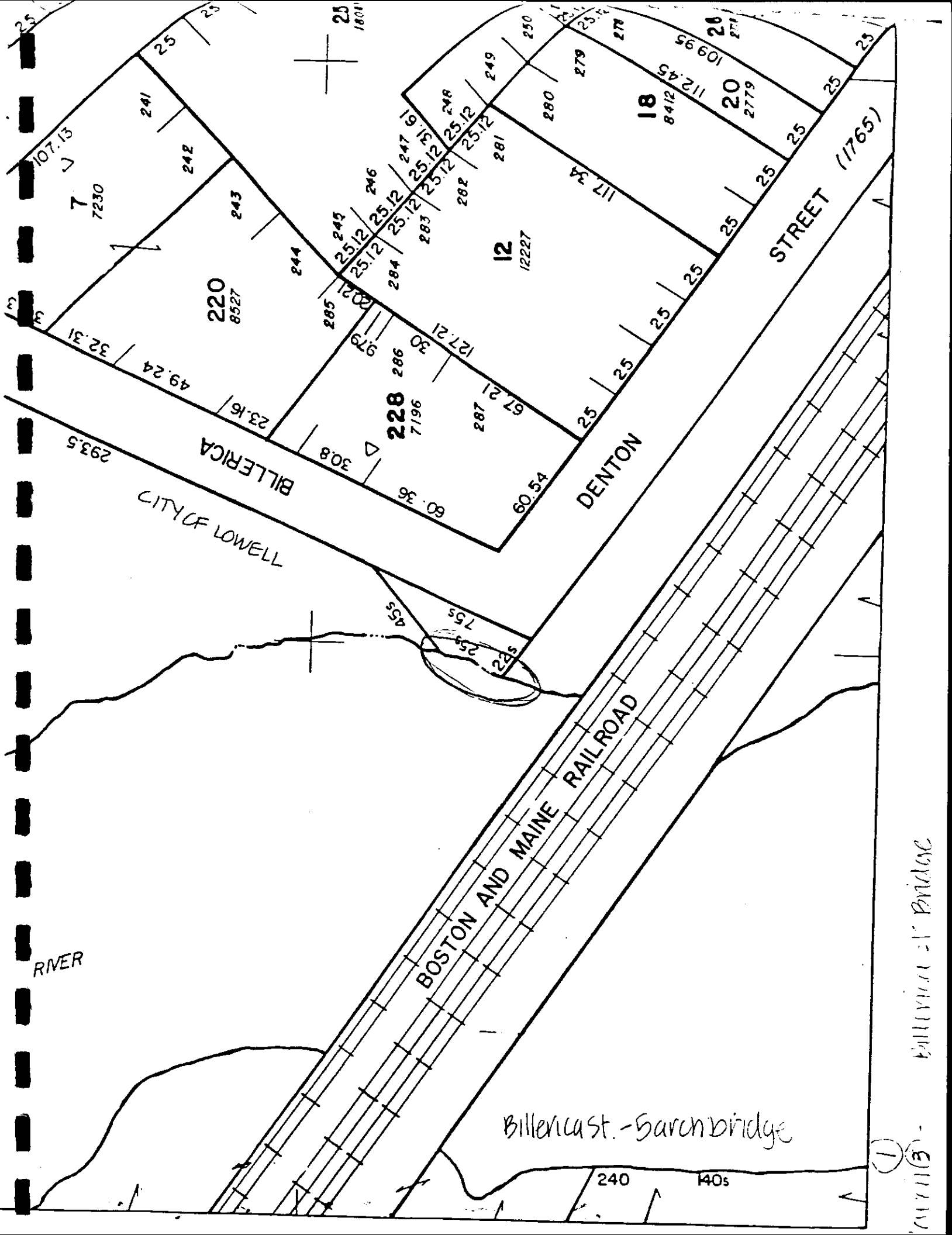
NOTES:

Clear, easy access close to road.

NOTES: (# of cars) 3-5 cars.

Only along side of road.

This site is mentioned on page 27 of RKW's text as an access point, mentioned as 5 arch railroad , below the 495 bridge.



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Billerica St. - between Eugene and Acton St. Lowell

LOCATION

TOWN

Philbrick, Leonard / Trs. TPB Trust

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

 X Great
 Okay
 Possible but difficult
 Impractical/Impossible

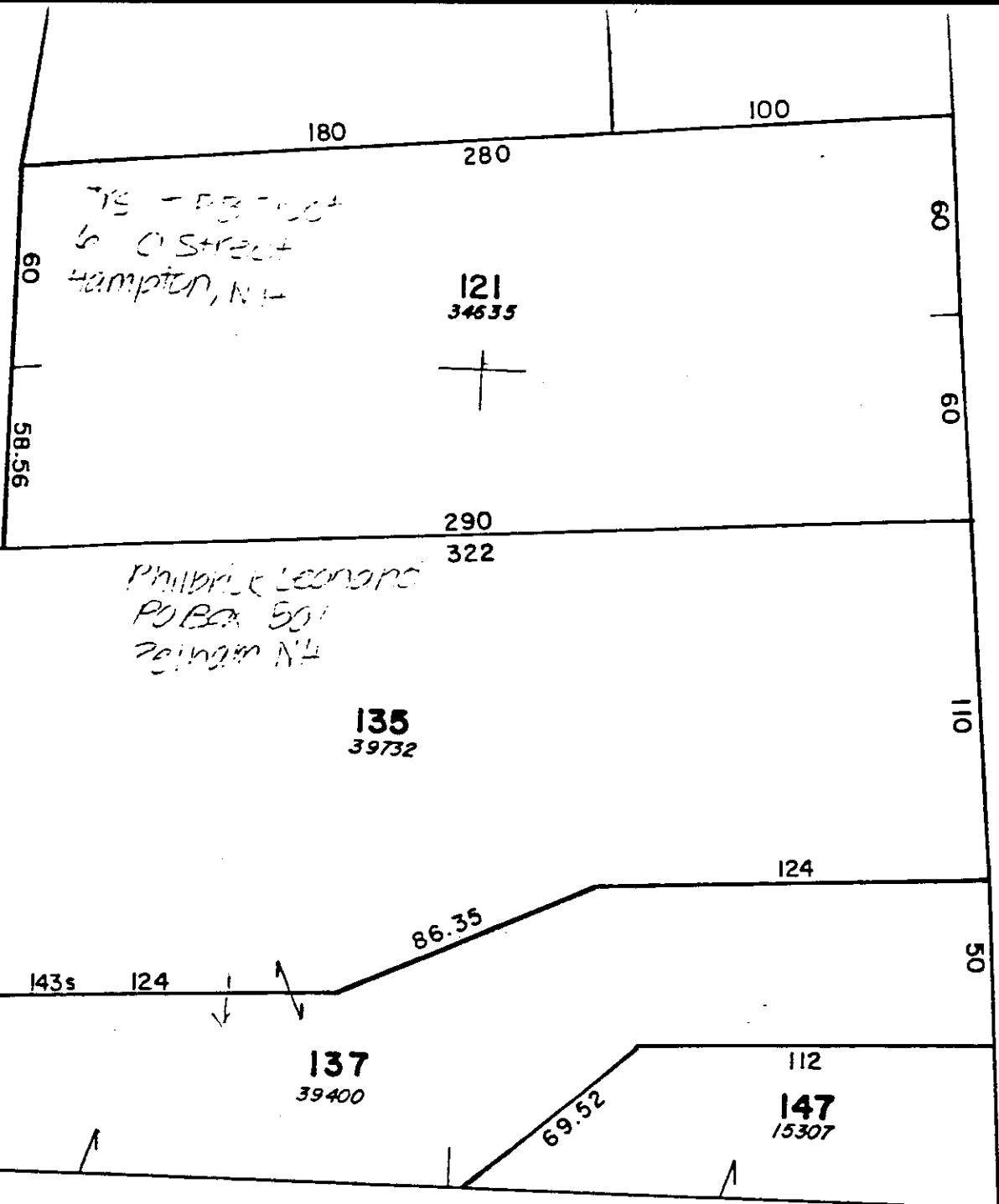
NOTES:

Level, right on river. Easy clear access.

NOTES: (# of cars)

Large dirt area between Eugene St. and Acton St. At old Automotive Repair sign. Lots of space on dirt to park.

This site is not mentioned in RKW's draft.



SUDBURY/CONCORD RIVER

CANOE ACCESS POINTS

Lawrence St. & Billerica St. Corner

Lowell

LOCATION

TOWN

City of Lowell

OWNERSHIP AS SHOWN ON TOWN MAP

Physical practicality:

Parking:

 X Great

 X Great

 Okay

 Okay

 Possible but difficult

 Possible but difficult

 Impractical/Impossible

 Impractical/Impossible

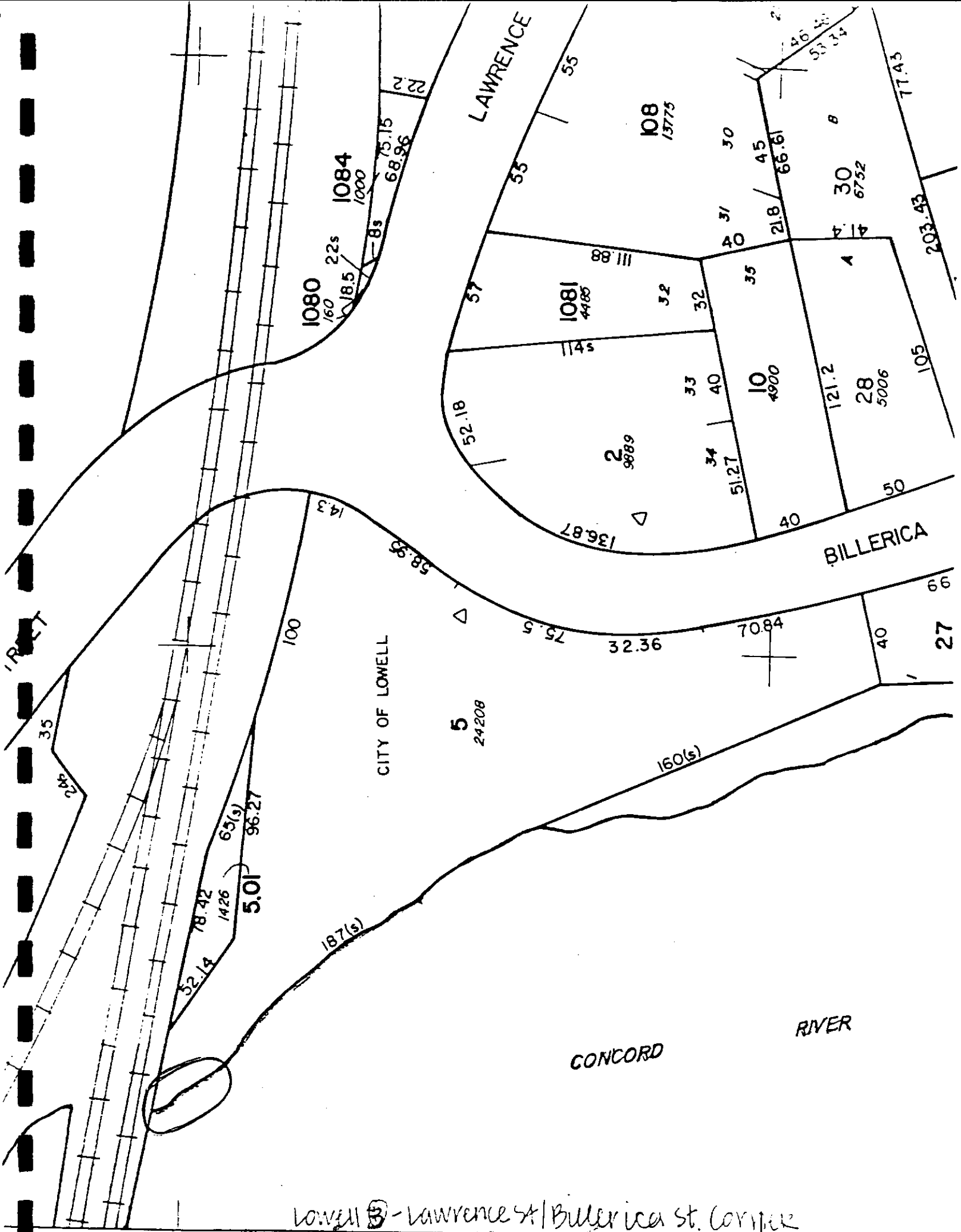
NOTES:

Path through weed field
alongside the railroad bridge.
Entrance to river under bridge.
Easy, level.

NOTES: (# of cars) 6-7 cars.

Right at sharp corner of
Lawrence St. and Billerica near
tunnel. Dirt area to park.

This site is mentioned on page 27 of RKW's draft as "the next
railroad bridge & railroad trestle."



Lowell 3 - Lawrence St / Billerica St. Corner

COMMUNITY CONTACT REPORT



SUDBURY AND CONCORD RIVERS

COMMUNITY CONTACT REPORT

November 1986

The SUASCO Watershed Association
The Sudbury-Assabet-Concord Rivers Watershed Association
130 Forest Avenue
Hudson, Massachusetts 01749

SUASCO watershed association, inc.

Organized for the development and maintenance of clean water in the Sudbury, Assabet and Concord river basins

SUDBURY AND CONCORD RIVERS

COMMUNITY CONTACT REPORT

November 1986

Prepared for:
Purchase Order No. PX 1600-6-0463
United States
Department Of The Interior
National Park Service
North Atlantic Regional Office
15 State Street
Boston, Massachusetts 02109-3572

Prepared by:
The Sudbury-Assabet-Concord Rivers Watershed Association
130 Forest Avenue
Hudson, Massachusetts 01749

Or, care of:
United States Fish and Wildlife Service
Great Meadows National Wildlife Refuge
Weir Hill Road
Sudbury, Massachusetts 01776

RIVER GUIDE PROJECT

SUDBURY AND CONCORD RIVERS COMMUNITY CONTACT REPORT

INTRODUCTION

The SUASCO Watershed Association's contract under the National Park Service's "River Guide Project" included provisions for a River User Survey and for Community Contacts. These tasks served to provide a limited amount of publicity, to notify the riverside communities that the project was underway, and to provide the communities and certain segments of the user population an opportunity to communicate their attitudes and preferences regarding river use policy, to the Watershed Association and to the National Park Service.

The Sudbury Valley Trustee's contract under the "River Guide Project" provides for the actual preparation of the River Guide booklet and maps.

The results of the River User Survey and the results of the Community and Organizational Contacts are reported in the River User Survey Report and in this Community Contact Report, respectively. In the former report, because of the large number of responses involved, the number of responses in each category has been tallied and the resulting sums reported--that is, the frequency functions of each possible response are reported for each category. In the latter report, in contrast, because much useful information would be lost if only the frequency functions were to be reported and because the smaller number of responses made it practical to do so, the individual respondent survey forms are reproduced and included in the report.

OBJECTIVES

The objectives of the Community and Organizational Contact Task were:

- (1) To notify the communities and organizations that the River Guide Project was underway and to describe the purpose of the Project;
- (2) To identify those communities which have a high level of interest in the river and its uses;
- (3) To provide an opportunity for the communities and other interested parties to participate in the Project by communicating their positions

and policies and by offering suggestions on the content of the River Users Code; and

(4) To assess the potential benefits of establishing some type of River Basin Group to better facilitate the coordination of river management policy between the various governmental agencies, the communities, the civic and environmental organizations, and the user groups.

APPROACH

Responses were solicited from the Boards of Selectmen and from the Conservation Commissions of the dozen riverside communities from Westboro on the headwaters of the Sudbury River downstream to Billerica on the Concord River. Packets were mailed to each of these communities (and to organizations) containing a cover letter explaining the project, a draft copy of the River Users Code, and a survey form inviting their response on a wide variety of river use questions.

Responses were also solicited from five Rod and Gun Clubs located along the river and from four Guide Services and Canoe Rentals serving the river. The parties from whom suggestions were solicited are listed in Appendix A; and the contents of the packet are contained in Appendix B.

RESULTS

Twelve of the thirty-one parties completed and returned the survey forms; none made any suggestions regarding the content of the River Users Code. Appendix C contains copies of these responses.

Among the more interesting observations gleaned from these responses are three negative ones. They concern powered boating, hunting and trapping, none of which receive much support from those community representatives who were sufficiently interested to respond.

INTERPRETATIONS

Although the responses of several selected public officials do not necessarily represent the policy of their communities, the past experience of the SUASCO Watershed Association leads us to believe that these responses are typical. Many communities do not have official policies on many of these specific issues. Official community policy, to the extent that it exists, on environmental or river issues

may be embodied in such documents as open-space plans and in flood-plain zone bylaws. Of course, such laws and regulations as those associated with the Federal Emergency Management Act (FEMA), which provides for the identification of flood hazard areas, and the state Wetland Protection Act (WPA), and the Massachusetts Environmental Protection Act (MEPA) affect community policy.

To be fair, we should note that to a certain extent an inconsistency exists between the public officials responses on hunting activities and the significant and often pioneering contributions made by sportsman's organizations for the protection of our wildlife and the natural habitat. Unfortunately, the public is often more aware of the actions of a minority of individuals whose irresponsible behavior causes their activity to become incompatible with the activities of other types of users.

RECOMMENDATIONS

Although the problems created by a minority of ill-trained or emotionally unsuitable individuals are a blemish to any user activity, they are particularly damaging to a potentially dangerous activity such as hunting. This is a difficult issue and will probably remain so for some time.

On the other hand, there are many issues on which responsible parties are likely to agree, no matter what their favorite river use activities. These include such issues as the removal of sources of contamination from the watershed, protection of open space and of wetlands, restoration of the anadromous fish (shad, herring, alewives, etc.) to the watershed by constructing fish passage facilities at two dams, proper location and regulation of boat launching or mooring sites, and more effective communication of appropriate behavior and procedures to the responsible users and more certain and effective enforcement action for the intentional violator who by his behavior demands such action.

Perhaps the most important observation to note here is one which becomes obvious to anyone actively involved in the effort to protect our water resources and which does not require a survey to identify it. This observation is that the development of river management policy and the implementation of that policy is not very well coordinated among the federal and state agencies, the river basin communities, and the civic, the environmental, and the user organizations.

The Watershed Association should restructure itself to better serve as a vehicle for coordination between citizen groups throughout

the watershed; the Executive Committee for the River Guide Project should continue beyond the completion of this project in order to serve a coordinating function between the river basin organizations and the federal and state agencies. Regular periodic meetings as infrequently as once per year with additional working meetings as appropriate might be sufficient.

CONCLUSIONS

The number and the depth of the responses were as would be expected when one considers the priority which the River Guide Project entails in comparison with the more urgent administrative duties with which community officials must contend. We must conclude that either the River Guide Project is a relatively non-threatening issue at this time, or that we have not adequately communicated its implications.

The responses support--but by no means conclusively--the conjecture that power boating, hunting and trapping are viewed by these public officials as activities which conflict with other more benign uses.

The uses regarded as most important by these community officials appear to be unpowered boating, fishing, hiking, and observing wildlife.

Finally, we take this opportunity to note again that the watershed could benefit if some mechanism were established whereby better coordination and communication could be maintained between the various river and shoreline custodial agencies and the river users. Retention of the present River Guide Project, Executive Committee as a River Management Committee and a restructuring of the SUASCO Watershed Association to better accomodate and serve local citizen groups, is recommended as one possible approach.

APPENDIX A

LIST OF COMMUNITIES & ORGANIZATIONS CONTACTED

Selectmen Town of Sudbury Sudbury, MA 01776

Selectmen Town of Wayland Town Office Bldg. Wayland, MA 01778

Selectmen Town of Framingham Concord Square Framingham, MA 01701

Selectmen Town of Ashland 101 Main St. Ashland, MA 01721

Selectmen Town of Hopkinton Hayden Rowe Hopkinton, MA 01748

Selectmen Town of Hopkinton Hayden Rowe Hopkinton, MA 01748

Selectmen Town of Southboro Southboro Common Southboro, MA 01772

Selectmen Town of Westboro Town Hall Westboro, MA 01581

Selectmen Town of Lincoln 16 Lincoln Rd. Lincoln, MA 01773

Selectmen Town of Concord Town House Concord, MA 01742

Selectmen Town of Bedford 16 South Rd. Bedford, MA 01730

Selectmen Town of Carlisle Town Hall Carlisle, MA 01741

Selectmen Town of Billerica Town Hall Billerica, MA 01821

Lincoln Guide Service 152 Lincoln Rd. Lincoln, MA 01773

Tucker's Canoeing & Canoe Rentals 80 Lincoln Rd. Sudbury, MA 01776

Wayland Rod & Gun Club 4 Meadowview Rd. Wayland, MA 01778

Southboro Rod & Gun Club Fruit St. Hopkinton, MA 01748

Framingham Sportsman's Association, Inc. Lumber St. Hopkinton, MA

Concord Rod & Gun Club Strawberry Hill Rd. Concord, MA 01742

Maynard Rod & Gun Club Old Mill Rd. Maynard, MA 01754

APPENDIX B

COMMUNICATIONS WITH COMMUNITIES & ORGANIZATIONS

SUASCO watershed association, inc.

Organized for the development and maintenance of clean water in the Sudbury, Assabet and Concord river basins

34 Barton Drive
Sudbury, MA 01776
6 October 1986

RE: River Management Policy, Exploratory Survey.

Dear River Users and Officials:

The SuAsCo Watershed Association and the Sudbury Valley Trustees are working on a "river management policy" project under contract to the National Park Service. This project is being directed by an executive committee representing those federal and state agencies which have major responsibilities related to land and water use.

In order that this project may reflect the attitudes of and may be consistent with the policies of those communities, organizations, and citizens who are interested in the future of the Sudbury-Assabet-Concord Rivers, we are soliciting your input.

The inclosed Survey Form is provided for your convenience in responding and to enable us to address certain issues which appear to require attention. Please include any additional comments on the rear of the form and/or on additional pages and return to the address given on the Survey Form--by 15 October if possible.

We are all aware of the increase in use--both in intensity and in variety--being experienced by our rivers. Recently, the surge in commercial and residential development has contributed to the pressure. Even greater increases in pressure on the riverine environment can be anticipated if the current attempts to remove the toxic contaminants from the Sudbury-Concord Rivers and the attempt to restore the shad and other anadromous fisheries to these rivers eventually succeed.

With this survey, we hope to identify those parties who are interested in River Management Policy and to determine what, if any, specific issues are of most concern to each party.

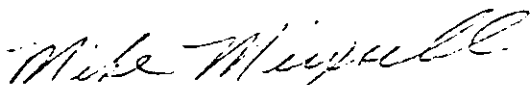
In addition, this project will produce a River Guide booklet with maps, scheduled for publication in early spring, which can then be purchased from either the SuAsCo Watershed Association or the Sudbury Valley Trustees.

This Guide will include a one or two page abstract of a "River Users Code" which is intended to encourage all users to recognize their responsibilities not only as users but also as custodians of the river. A draft copy of a suggested Code is included herein. Any comments or suggestions you may have regarding such a Code are welcome and should be mailed to the address on the Survey Form. (Eventually, it may be possible to publish a pamphlet devoted entirely to conventions of behavior, local policies, and selected regulations.)

The results of this Survey will be documented in a report to the National Park Service and other participating agencies. Copies will be available for public review in the SuAsCo File at the U.S. Fish & Wildlife, Great Meadows Refuge Headquarters, Weir Hill Road, Sudbury, MA 01776. We hope to distribute abstracts of the report to all communities which have participated--probably in November.

Your response is welcome at any time; however, to be included in the report, it should be returned by 15 October if possible.

Sincerely,



D. Mike Meixsell, Exec. Dir.

Inc: 2

RIVER USERS SURVEY

SuAsCo Watershed Association/National Park Service

PURPOSE: This survey of river and shoreline users is being conducted by the SuAsCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: _____ DATE: _____ TIME: _____ POLLSTER: _____

NAME (optional) _____ STREET ADDRESS (optional) _____

TOWN _____ STATE _____ ZIP _____

What uses are important to you? Please indicate if you oppose any use(s).
 USE USES/YEAR IMPORTANCE (Check 1) Oppose (?)

Unpowered boating.....	Great__Some__None_____
Powered boating.....	Great__Some__None_____
Fishing.....	Great__Some__None_____
Swimming.....	Great__Some__None_____
Hunting.....	Great__Some__None_____
Trapping.....	Great__Some__None_____
Hiking.....	Great__Some__None_____
Observing wildlife.....	Great__Some__None_____
Other (specify)	

What characteristics of the river system do you feel are important?

CHARACTERISTIC	IMPORTANCE (Check 1)
Natural beauty.....	Great__Some__None__
Natural habitats.....	Great__Some__None__
Historic sites.....	Great__Some__None__
Open space.....	Great__Some__None__
Flood control.....	Great__Some__None__
Water Supply.....	Great__Some__None__
Other (specify)	

To what extent are you concerned by present or potential problems such as:

PROBLEM	CONCERN (Check 1)
Water quality.....	Great__Some__None__
Overuse.....	Great__Some__None__
Trash.....	Great__Some__None__
Public access.....	Great__Some__None__
Shoreline development.....	Great__Some__None__
Other (specify)	

1. Do you or would you eat fish from the river?
2. If a boater, where do you most often put in/take out?
3. Are you interested in joining the Watershed Association?
4. Other comments? (over)

Please return to:

SuAsCo Watershed Association
 c/o U.S. Fish and Wildlife Great Meadows Refuge
 Weir Hill Road
 Sudbury, MA 01776

Thank you

We, who like the waterfowl, visit the river periodically during our seasonal migrations hither and yon; we, who like the deer, reside in the watershed and call it our home -- we, all of us, are the rivers' custodians for ourselves and our posterity. Because mankind and the river environment have evolved together through the ages, our futures are inextricably intertwined.

Therefore, in order that we may improve the river and pass it on to future generations as past generations have protected it and passed it on to us, we adopt the River User's Code:

THE RIVER CODE

GENERALLY

We will discourage the exploitation of the river for the short-term profit of the few and will seek to foster a mutually compatible relationship for the long-term benefit of the many.

SPECIFICALLY

We recognize that those issues which deserve most attention may change with time. With this qualification, we pledge to:

1. CHARACTER and INTEGRITY

Maintain high standards of conduct for ourselves and support these standards in others. Avoid associating with those who are unable to respect the rights of others.

2. COMPETENCE and SAFETY

Develop competence in our chosen activities so that we do not endanger ourselves or others.

MAINTENANCE and HOUSEKEEPING

Help to maintain the river environment. Avoid contamination, remove debris -- take out what we take in; leave only footprints.

4. COOPERATION and ENFORCEMENT

Cooperate with others to promote behavior appropriate to the occasion and the location along the river. For example, behavior appropriate to a recreational area may be inappropriate to a historic area. Welcome suggestions from others. Tactfully bring infractions and violations to the attention of others, but do not become engaged in acrimony; instead, note pertinent facts and report to authorities.

5. MONITORING and REPORTING

Observe the condition of the environment and report items requiring attention to the proper authorities. Report incidents of contamination, violations of regulations and other pertinent information. (See Reporting Form in this booklet.)

6. PUBLIC RELATIONS and EDUCATION

Avoid activities which would damage the public's perception of our recreational pursuits. Do not jeopardize our privilege to use the river. Assist in educating our colleagues. Do not tolerate behavior by a few undisciplined individuals which could damage the reputation of all river users.

7. POLICY and REGULATION

Keep informed regarding the drafting and revision of policies, laws, and regulations governing the management of the river and its allowed uses. Submit written comment and give verbal testimony at public hearings.

8. PUBLIC PARTICIPATION

Participate with our colleagues in cooperative, organized activities to protect the river and our privilege to use it today and in the future.

We adopt this code because we know that our destiny and the river's destiny are intermingled and flow from the same source to the same sea -- and because we sense the past and perceive the future and know that they are one.

APPENDIX C

RESPONSES FROM COMMUNITIES & ORGANIZATIONS

Watershed Assessment Survey Form

PURPOSE: This survey of river and shoreline users is being conducted by the Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: _____ DATE: _____ TIME: _____ POLLSTER: _____
Dave Tucker 60 Lincoln Road
NAME (optional) STREET ADDRESS (optional)
Seabury MA 01776
TOWN STATE ZIP

What uses are important to you? Please indicate if you oppose any uses ().

USE	USE/YEAR	IMPORTANCE (Check 1)	OPPOSE ()
Unpowered boating.....		Great ☒ Some ☐ None ☐	
Powered boating.....		Great ☐ Some ☐ None ☒	
Fishing.....		Great ☐ Some ☒ None ☐	
Swimming.....		Great ☐ Some ☐ None ☒	
Hunting.....		Great ☐ Some ☐ None ☒	☒
Trapping.....		Great ☐ Some ☐ None ☒	☒
Hiking.....		Great ☐ Some ☒ None ☐	
Observing wildlife.....		Great ☐ Some ☒ None ☐	
Other (specify) _____		Great ☐ Some ☒ None ☐	

What characteristics of the river system do you feel are important?

CHARACTERISTIC	IMPORTANCE (Check 1)
Natural beauty.....	Great ☒ Some ☐ None ☐
Natural habitats.....	Great ☒ Some ☐ None ☐
Historic sites.....	Great ☐ Some ☒ None ☐
Open space.....	Great ☒ Some ☐ None ☐
Flood control.....	Great ☐ Some ☒ None ☐
Water supply.....	Great ☒ Some ☐ None ☐
Other (specify) _____	Great ☒ Some ☐ None ☐

To what extent are you concerned by present or potential problems such as:

PROBLEM	CONCERN (Check 1)
Water quality.....	Great ☒ Some ☐ None ☐
Overuse.....	Great ☐ Some ☒ None ☐
Trash.....	Great ☒ Some ☐ None ☐
Public access.....	Great ☐ Some ☒ None ☐
Shoreline development.....	Great ☐ Some ☒ None ☐
Other (specify) _____	Great ☐ Some ☒ None ☐

1. Do you or would you eat fish from the river? no
2. If a boater, where do you most often put in/take out? Seabury Beach
3. Are you interested in joining the Watershed Association? yes
4. Other comments? (over)

Please return to: Seabury Watershed Association
c/o U.S. Fish and Wildlife Great Meadows National
Wild River Trail
Seabury, MA 01776

PURPOSE: This survey of river and shoreline users is being conducted by the SacoCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: Fruit St HapKinton DATE: 10/21/86 TIME: 2:35 PM POLLSTER: _____

NAME (optional) _____

STREET ADDRESS (optional) _____

HapKinton
TOWN

Ma
STATE

01748
ZIP

What uses are important to you? Please indicate if you oppose any use(s).
 USE NEVER/YES IMPORTANCE (Check 1) Oppose (?)
 Unpowered boating..... Great ☒ Some ___ None ___
 Powered boating..... Great ___ Some ___ None ___
 Fishing..... Great ☒ Some ___ None ___
 Swimming..... Great ___ Some ___ None ___
 Hunting..... Great ___ Some ☒ None ___
 Trapping..... Great ☒ Some ___ None ___
 Hiking..... Great ___ Some ___ None ___
 Observing wildlife..... Great ___ Some ___ None ___
 Other (specify) _____

What characteristics of the river system do you feel are important?
 CHARACTERISTIC IMPORTANCE (Check 1)
 Natural beauty..... Great ☒ Some ___ None ___
 Natural habitats..... Great ☒ Some ___ None ___
 Historical sites..... Great ___ Some ___ None ___
 Game refuge..... Great ☒ Some ___ None ___
 Flood control..... Great ☒ Some ___ None ___
 Water supply..... Great ___ Some ___ None ___
 Other (specify) _____

To what extent are you concerned by present or potential problems such as:
 PROBLEM CONCERN (Check 1)
 Water quality..... Great ☒ Some ___ None ___
 Overuse..... Great ___ Some ___ None ___
 Trash..... Becoming a Disposal Area Great ☒ Some ___ None ___
 Public access..... Great ___ Some ___ None ___
 Shoreline development..... Great ___ Some ___ None ___
 Other (specify) _____

1. Do you or would you eat fish from the river? No
2. If a boater, where do you most often put in/take out? Fruit St
3. Are you interested in joining the Watershed Association? yes
4. Other comments? (over)

Please return to:

SacoCo Watershed Association
 c/o U.S. Fish and Wildlife Great Meadows Refuge
 Main Hill Road
 Durham, NH 03824

Thank you

Watershed Survey
Sudbury Watershed Association National Park Service

PURPOSE: This survey of river and shoreline users is being conducted by the SudAsCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: 250 Boston Rd DATE: Oct 18 86 TIME: _____ POLLSTER: _____

NAME (optional) John McGovern STREET ADDRESS (optional) 250 Boston Rd
Supt. Billerica Water Works

TOWN Billerica

STATE MA

ZIP 01821

What uses are important to you? Please indicate if you oppose any use(s).
USE USES/YEAR IMPORTANCE (Check 1) Oppose (?)
Unpowered boating..... Great ___ Some ___ None ☒ ___
Powered boating..... Great ___ Some ___ None ☒ ___
Fishing..... Great ☒ ___ Some ___ None ___
Swimming..... Great ☒ ___ Some ___ None ___
Hunting..... Great ___ Some ___ None ☒ ___
Trapping..... Great ___ Some ___ None ☒ ___
Hiking..... Great ___ Some ___ None ☒ ___
Observing wildlife..... Great ___ Some ___ None ☒ ___
Other (specify) _____

What characteristics of the river system do you feel are important?
CHARACTERISTIC IMPORTANCE (Check 1)
Natural beauty..... Great ___ Some ☒ ___ None ___
Natural habitats..... Great ☒ ___ Some ___ None ___
Historic sites..... Great ___ Some ☒ ___ None ___
Open space..... Great ___ Some ☒ ___ None ___
Flood control..... Great ☒ ___ Some ___ None ___
Water supply..... Great ☒ ___ Some ___ None ___
Other (specify) _____

To what extent are you concerned by present or potential problems such as:
PROBLEM CONCERN (Check 1)
Water quality..... Great ☒ ___ Some ___ None ___
Overuse..... Great ☒ ___ Some ___ None ___
Trash..... Great ☒ ___ Some ___ None ___
Public access..... Great ___ Some ☒ ___ None ___
Shoreline development..... Great ☒ ___ Some ___ None ___
Other (specify) _____

1. Do you or would you eat fish from the river? No
2. If a boater, where do you most often put in/take out?
3. Are you interested in joining the Watershed Association? yes
4. Other comments? (over)

Please return to: SudAsCo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Refuge
Weir Hill Road
Sudbury, MA 01776

Thank you

U.S. Fish and Wildlife Service National Park Service

This survey of river and shoreline users is being conducted by the North Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: _____ DATE: _____ TIME: _____ FULLSTER: _____

David Robertson
NAME (optional)

264 Main St. B.L.
STREET ADDRESS (optional)

Framingham
TOWN

MASS
STATE

01701
ZIP

What uses are important to you? Please indicate if you oppose any users.

USE	OPPOSE	Great	Some	None
Unpowered boating.....	☒	☒	☐	☐
Powered boating.....	☐	☐	☐	☒
Fishing.....	☒	☒	☐	☐
Swimming.....	☐	☒	☐	☐
Hunting.....	☐	☒	☐	☐
Trapping.....	☐	☒	☐	☐
Hiking.....	☐	☒	☐	☐
Observing wildlife.....	☒	☒	☐	☐
Other (specify) _____	☐	☐	☐	☐

What characteristics of the river system do you feel are important?

CHARACTERISTIC	Great	Some	None
Natural beauty.....	☒	☐	☐
Natural habitats.....	☒	☐	☐
Historic sites.....	☐	☒	☐
Open space.....	☒	☐	☐
Flood control.....	☒	☐	☐
Water supply.....	☒	☐	☐
Other (specify) _____	☐	☒	☐

To what extent are you concerned by present or potential problems such as:

PROBLEM	Great	Some	None
Water quality.....	☒	☐	☐
Overuse.....	☐	☐	☒
Trash.....	☒	☐	☐
Public access.....	☒	☐	☐
Shoreline development.....	☒	☐	☐

Other (specify) Lack of public interest

1. Do you or would you eat fish from the river? Yes
2. If a boater, where do you most often put in/take out? Winter St. Dim
3. Are you interested in joining the Watershed Association? Yes
4. Other comments? (over)

Please return to:

90AeCo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Region
Main Hill Road
Framingham, MA 01701

Thank you

RECEIVED

OCT 16 1986

NOTE: This survey of river and shoreline users is being conducted by the SoRasCo Watershed Association, GREAT MEADOWS REFUGE Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public and to facilitate the protection of our river resource.

LOCATION: _____ DATE: _____ TIME: _____ FOLLSTER: _____

R. E. Thompson
NAME (optional)

Town Hall
STREET ADDRESS (optional)

Sudbury
TOWN

Vt
STATE

01776
ZIP

What uses are important to you? Please indicate if you oppose any use(s).

USE	OPPOSE	IMPORTANCE (Check 1)	OPPOSE
Unpowered boating.....		Great ☒ Some ☐ None ☐	.....
Powered boating.....		Great ☐ Some ☐ None ☒	.....
Fishing.....		Great ☒ Some ☐ None ☐	.....
Swimming.....		Great ☒ Some ☐ None ☐	.....
Hunting.....		Great ☐ Some ☒ None ☐	.....
Trapping.....		Great ☐ Some ☐ None ☒	.....
Hiking.....		Great ☒ Some ☐ None ☐	.....
Observing wildlife.....		Great ☐ Some ☒ None ☐	.....
Other (specify) _____		Great ☐ Some ☒ None ☐	.....

What characteristics of the river system do you feel are important?

CHARACTERISTIC	IMPORTANCE (Check 1)
Natural beauty.....	Great ☒ Some ☐ None ☐
Natural habitats.....	Great ☒ Some ☐ None ☐
Historic sites.....	Great ☒ Some ☐ None ☐
Open space.....	Great ☒ Some ☐ None ☐
Flood control.....	Great ☒ Some ☐ None ☐
Water Supply.....	Great ☒ Some ☐ None ☐
Other (specify) _____	Great ☐ Some ☒ None ☐

To what extent are you concerned by present or potential problems such as:

PROBLEM	CONCERN (Check 1)
Water quality.....	Great ☒ Some ☐ None ☐
Overuse.....	Great ☐ Some ☐ None ☒
Trash.....	Great ☐ Some ☒ None ☐
Public access.....	Great ☐ Some ☒ None ☐
Shoreline development.....	Great ☐ Some ☐ None ☒
Other (specify) _____	Great ☐ Some ☒ None ☐

1. Do you or would you eat fish from the river? No
2. If a boater, where do you most often put in/take out? -
3. Are you interested in joining the Watershed Association? No
4. Other comments? (over) None

Please return to:

SoRasCo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Park
Main Hill Road
Sudbury, VT 01776

San Joaquin River National Park Service

PURPOSE: This survey of river and shoreline users is being conducted by the SoAsCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: _____ DATE: _____ TIME: _____ POLLSTER: _____

NAME (optional) _____ STREET ADDRESS (optional) _____

TOWN WAYLAND STATE _____ ZIP _____

What uses are important to you? Please indicate if you oppose any users).

USE	USERS/YEAR	IMPORTANCE (check 1)	Oppose (0)
Unpowered boating.....		Great ☒ Some ☐ None ☐	.....
Powered boating.....		Great ☐ Some ☐ None ☒	.....
Fishing.....		Great ☒ Some ☐ None ☐	.....
Swimming.....		Great ☒ Some ☐ None ☐	.....
Hunting.....		Great ☐ Some ☐ None ☐	.....
Trapping.....		Great ☐ Some ☐ None ☐	.....
Hiking.....		Great ☒ Some ☐ None ☐	.....
Observing wildlife.....		Great ☐ Some ☐ None ☐	.....
Other (specify) _____		Great ☐ Some ☐ None ☐	.....

What characteristics of the river system do you feel are important?

CHARACTERISTIC	IMPORTANCE (check 1)
Natural beauty.....	Great ☒ Some ☐ None ☐
Natural habitats.....	Great ☒ Some ☐ None ☐
Historic sites.....	Great ☒ Some ☐ None ☐
Open space.....	Great ☒ Some ☐ None ☐
Flood control.....	Great ☒ Some ☐ None ☐
Water Supply.....	Great ☒ Some ☐ None ☐
Other (specify) _____	Great ☐ Some ☐ None ☐

To what extent are you concerned by present or potential problems such as:

PROBLEM	CONCERN (check 1)
Water quality.....	Great ☒ Some ☐ None ☐
Overuse.....	Great ☒ Some ☐ None ☐
Trash.....	Great ☒ Some ☐ None ☐
Public access.....	Great ☐ Some ☒ None ☐
Shoreline development.....	Great ☐ Some ☒ None ☐
Other (specify) _____	Great ☐ Some ☐ None ☐

1. Do you or would you eat fish from the river? NO, NOT NOW!
2. If a boater, where do you most often put in/take out? Wayland
3. Are you interested in joining the Watershed Association? yes
4. Other comments? (over)

Please return to: SoAsCo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Refuge
Main Hill Road
Wayland, MA 01776

1. To determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

PURPOSE: This survey of river and shoreline users is being conducted by the SuAsCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: Sudbury DATE: 11/5/86 TIME: _____ FOLLSTER: _____

Sudbury Cons. Comm.
NAME (optional)

Town Hall
STREET ADDRESS (optional)

Sudbury
TOWN

MA
STATE

01776
ZIP

What uses are important to you? Please indicate if you oppose any use(s).
USE USE/1986 IMPORTANCE (check 1) Oppose (?)
Unpowered boating..... Great Some None
Powered boating..... Great Some None
Fishing..... Great Some None
Swimming..... Great Some None
Hunting..... Great Some None
Trapping..... Great Some None
Hiking..... Great Some None
Observing wildlife..... Great Some None
Other (specify) _____

What characteristics of the river system do you feel are important?
CHARACTERISTIC IMPORTANCE (check 1)
Natural beauty..... Great Some None
Natural habitats..... Great Some None
Historic sites..... Great Some None
Open space..... Great Some None
Flood control..... Great Some None
Water Supply..... Great Some None
Other (specify) recreation - passive

To what extent are you concerned by present or potential problems such as:
PROBLEM CONCERN (check 1)
Water quality..... Great Some None
Overuse..... Great Some None
Trash..... Great Some None
Public access..... Great Some None
Shoreline development..... Great Some None
Other (specify) _____

1. Do you or would you eat fish from the river? NO
2. If a boater, where do you most often put in/take out? n/a
3. Are you interested in joining the Watershed Association? not at this time
4. Other comments? (over)

Please return to:

SuAsCo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Area
Main Hill Road
Sudbury, MA 01776

RIVER USER SURVEY

SuAsCo Watershed Association/National Park Service

RECEIVED

NOV 1986

PURPOSE: This survey of river and shoreline users was conducted by the SuAsCo Watershed Association for the National Park Service to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: LINCOLN, MA. DATE: 11-4-86 TIME: _____ FULLSTER: _____

NAME (optional): LESLIE RICE LINCOLN WATERSHED ASSOCIATION STREET ADDRESS (optional): _____

TOWN: LINCOLN, MA. STATE: MA. ZIP: 01773

What uses are important to you? Please indicate if you oppose any use(s)

USE	USES/YEAR	IMPORTANCE (Check 1)	Oppose ()
Unpowered boating.....		Great ☒ Some ☐ None ☐	
Powered boating.....		Great ☐ Some ☐ None ☐	☒
Fishing.....		Great ☒ Some ☐ None ☐	
Swimming.....		Great ☐ Some ☐ None ☒	
Hunting.....		Great ☐ Some ☐ None ☒	
Trapping.....		Great ☐ Some ☐ None ☒	
Hiking.....		Great ☒ Some ☐ None ☐	
Observing wildlife.....		Great ☒ Some ☐ None ☐	
Other (specify) _____		Great ☒ Some ☐ None ☐	

What characteristics of the river system do you feel are important?

CHARACTERISTIC	IMPORTANCE (Check 1)
Natural beauty.....	Great ☒ Some ☐ None ☐
Natural habitats.....	Great ☒ Some ☐ None ☐
Historic sites.....	Great ☐ Some ☒ None ☐
Open space.....	Great ☒ Some ☐ None ☐
Flood control.....	Great ☒ Some ☐ None ☐
Water Supply.....	Great ☒ Some ☐ None ☐
Other (specify) _____	Great ☒ Some ☐ None ☐

*for me to get
that comment
out of me*

To what extent are you concerned by present or potential problems such as

PROBLEM	CONCERN (Check 1)
Water quality.....	Great ☒ Some ☐ None ☐
Overuse.....	Great ☐ Some ☐ None ☒
Trash.....	Great ☐ Some ☒ None ☐
Public access.....	Great ☐ Some ☐ None ☒
Shoreline development.....	Great ☐ Some ☒ None ☐
Other (specify) <u>Development in floodplain</u>	Great ☐ Some ☒ None ☐

1. Do you or would you eat fish from the river? *do not eat fish from river*
2. If a boater, where do you most often put in/take out? *South end of pond*
3. Are you interested in joining the Watershed Association? *Yes, if possible*
4. Other comments? (over)

Please return to:

SuAsCo Watershed Association
c/o U.S. Fish and Wildlife Service
Main Hill Center
Lincoln, MA 01773

RIVER USERS SURVEY

SoNoCo Watershed Association/National Park Service

PURPOSE: This survey of river and shoreline users is being conducted by the SoNoCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: Framingham DATE: 1/15/78 TIME: _____ FOLLSTER: _____

Framingham Park Dept (RMERUSI)

NAME (optional)

STREET ADDRESS (optional)

FRAMINGHAM

TOWN

STATE

ZIP

What uses are important to you? Please indicate if you oppose any use(s).

USE	USSES/YEAR	IMPORTANCE (Check 1)	Oppose (✓)
Unpowered boating.....		Great ☒ Some ☐ None ☐	
Powered boating.....		Great ☐ Some ☐ None ☐	
Fishing.....		Great ☐ Some ☒ None ☐	☒
Swimming.....		Great ☐ Some ☐ None ☒	
Hunting.....		Great ☐ Some ☐ None ☐	☒
Trapping.....		Great ☐ Some ☐ None ☐	☒
Hiking.....		Great ☒ Some ☐ None ☐	☒
Observing wildlife.....		Great ☒ Some ☐ None ☐	
Other (specify)		Great ☒ Some ☐ None ☐	

What characteristics of the river system do you feel are important?

CHARACTERISTIC	IMPORTANCE (Check 1)
Natural beauty.....	Great ☒ Some ☐ None ☐
Natural habitats.....	Great ☒ Some ☐ None ☐
Historic sites.....	Great ☐ Some ☒ None ☐
Open space.....	Great ☒ Some ☐ None ☐
Flood control.....	Great ☐ Some ☒ None ☐
Water Supply.....	Great ☐ Some ☐ None ☒
Other (specify)	

To what extent are you concerned by present or potential problems such as:

PROBLEM	CONCERN (Check 1)
Water quality.....	Great ☒ Some ☐ None ☐
Overuse.....	Great ☐ Some ☒ None ☐
Trash.....	Great ☒ Some ☐ None ☐
Public access.....	Great ☒ Some ☐ None ☐
Shoreline development.....	Great ☐ Some ☒ None ☐
Other (specify)	

1. Do you or would you eat fish from the river? NO
2. If a boater, where do you most often put in/take out? Winter St
3. Are you interested in joining the Watershed Association? Little Tree Farm
4. Other comments? (over) NO

Please return to:

SoNoCo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Refuge
Weir Hill Road
Framingham, MA 01718

RIVER LAND SURVEY
SoWaCo Watershed Association/National Park Service

PURPOSE: This survey of river and shoreline users is being conducted by the SoWaCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: Framingham **DATE:** 1/17/78 **TIME:** _____ **POLLSTER:** _____

Framingham Park Dept (RMERUSI)
NAME (optional)

STREET ADDRESS (optional)

Framingham
TOWN

STATE

01702
ZIP

What uses are important to you? Please indicate if you oppose any uses).

USE	USES/YEAR	IMPORTANCE (Check 1)	OPPOSE (C)
Unpowered boating.....		Great ☒ Some ☐ None ☐	.....
Powered boating.....		Great ☐ Some ☐ None ☐	.....
Fishing.....		Great ☐ Some ☒ None ☐	☒
Swimming.....		Great ☐ Some ☐ None ☒	.....
Hunting.....		Great ☐ Some ☐ None ☐	☒
Trapping.....		Great ☐ Some ☐ None ☐	☒
Hiking.....		Great ☒ Some ☐ None ☐	☒
Observing wildlife.....		Great ☒ Some ☐ None ☐	.....
Other (specify) _____		Great ☒ Some ☐ None ☐	.....

What characteristics of the river system do you feel are important?

CHARACTERISTIC	IMPORTANCE (Check 1)
Natural beauty.....	Great ☒ Some ☐ None ☐
Natural habitats.....	Great ☒ Some ☐ None ☐
Historic sites.....	Great ☐ Some ☒ None ☐
Open space.....	Great ☒ Some ☐ None ☐
Flood control.....	Great ☐ Some ☒ None ☐
Water Supply.....	Great ☐ Some ☒ None ☐
Other (specify) _____	Great ☐ Some ☐ None ☒

To what extent are you concerned by present or potential problems such as:

PROBLEM	CONCERN (Check 1)
Water quality.....	Great ☒ Some ☐ None ☐
Overuse.....	Great ☐ Some ☒ None ☐
Trash.....	Great ☒ Some ☐ None ☐
Public access.....	Great ☒ Some ☐ None ☐
Shoreline development.....	Great ☐ Some ☒ None ☐
Other (specify) _____	Great ☐ Some ☐ None ☐

1. Do you or would you eat fish from the river? **NO**
2. If a boater, where do you most often put in/take out? **Winterset**
3. Are you interested in joining the Watershed Association? **Little Tree Farm**
4. Other comments? (over) **NO**

Please return to:

SoWaCo Watershed Association
 c/o U.S. Fish and Wildlife Great Meadows Refuge
 Main Hill Road
 Dummer, N.H. 03824

Billerye, MA 01920
Billerye, MA 01920
Billerye, MA 01920

PLEASE: A survey of river and shoreline users is being conducted by the Southcoast Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: Billerye DATE: _____ TIME: _____ FOLLSTER: _____
Ralph R. Bacon 250 Boston Rd
NAME (optional) STREET ADDRESS (optional)
Billerye MA 01920
TOWN STATE ZIP

What uses are important to you? Please indicate if you oppose any use(s).
USE USER/YEAR IMPORTANCE (Check 1) Oppose (?)
Unpowered boating..... Great ☒ Some ___ None ___
Powered boating..... Great ☒ Some ___ None ___
Fishing..... Great ☒ Some ___ None ___
Swimming..... Great ___ Some ☒ None ___
Hunting..... Great ___ Some ☒ None ___
Trapping..... Great ___ Some ☒ None ___
Hiking..... Great ___ Some ☒ None ___
Observing wildlife..... Great ☒ Some ___ None ___
Other (specify) _____

What characteristics of the river system do you feel are important?
CHARACTERISTIC IMPORTANCE (Check 1)
Natural beauty..... Great ☒ Some ___ None ___
Natural habitat..... Great ☒ Some ___ None ___
Historic sites..... Great ___ Some ☒ None ___
Open space..... Great ___ Some ☒ None ___
Flood control..... Great ☒ Some ___ None ___
Water supply..... Great ☒ Some ___ None ___
Other (specify) _____

To what extent are you concerned by present or potential problems such as:
PROBLEM USER/YEAR (Check 1)
Water quality..... Great ☒ Some ___ None ___
Overuse..... Great ___ Some ☒ None ___
Trash..... Great ☒ Some ___ None ___
Public access..... Great ___ Some ☒ None ___
Shoreline development..... Great ☒ Some ___ None ___
Other (specify) _____

1. Do you or would you eat fish from the river? Yes
2. If a boater, where do you most often put in/take out? Bedford (Coulton Rd)
3. Are you interested in joining the Watershed Association? Not Now
4. Other comments? (over)

Please return to: SuAsCo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Farm
Weir Hill Road
Bedford, MA 01830

13 Nov. 1986

Mike:

Christi Velge our chemist is representing Billerica now as far as I know. This came to me through channels. A few comments follow.

1. Have talked to a few commercial trappers. There's a good muskrat population and could produce a good harvest each year but they are reluctant to trap in areas that are built up even though houses do not occupy the marsh area. Children wander into marshes and follow the trappers trails.
2. I am concerned about the decrease in depth of water in some of the reaches of river. With the Dams and the natural large open areas we have conditions that allow silts to accumulate. Are we losing the broad expanses of open water and tending toward the usual river like channel?
3. I think we are going to lose some of our wet meadows because the materials balance now favors the accumulation of organic solids. In the past in some places the grass was harvested and removed which slowed this accumulation. In a few years there is not much change but over time the accumulation will have an effect.

P. Bacon.

RECEIVED

NOV 17 1986

GREAT MEADOWS REFUGE

PURPOSE: This survey of river and shoreline usage is being conducted by the SoAASo Watershed Association for the National Wildlife Refuge in order to determine what characteristics of the river and surrounding lands are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: _____ DATE: 1 Nov 1986 TIME: _____ POLLSTER: _____

Budford Conservation Commission
NAME (optional): _____

Town Hall
STREET ADDRESS (optional): _____

Budford
TOWN: _____

MA
STATE: _____

01730
ZIP: _____

Note: These comments relate specifically to rivers, especially the Concord, in or in close proximity to Budford.

Information provided by John H. Fitch, Member, Budford Conservation Commission

What uses are important to you? Please indicate if you oppose any use(s).
USE IMPORTANCE (check 1) Oppose (2)
Unpowered boating..... ☒ Great ☒ Some ☐ None
Powered boating..... ☒ Great ☒ Some ☐ None
Fishing..... ☒ Great ☒ Some ☐ None
Swimming..... ☒ Great ☐ Some ☐ None
Hunting..... ☒ Great ☐ Some ☐ None
Trapping..... ☒ Great ☐ Some ☐ None
Hiking..... ☒ Great ☒ Some ☐ None
Observing wildlife..... ☒ Great ☒ Some ☐ None
Other (specify): _____

What characteristics of the river system do you feel are important?

CHARACTERISTIC IMPORTANCE (check 1)
Natural beauty..... ☒ Great ☒ Some ☐ None
Natural habitats..... ☒ Great ☒ Some ☐ None
Historic sites..... ☒ Great ☐ Some ☐ None
Open space..... ☒ Great ☒ Some ☐ None
Flood control..... ☒ Great ☒ Some ☐ None
Water supply..... ☒ Great ☒ Some ☐ None
Other (specify): _____

To what extent are you concerned by present or potential problems such as:

PROBLEM CONCERN (check 1)
Water quality..... ☒ Great ☒ Some ☐ None
Overuse..... ☒ Great ☒ Some ☐ None
Trash..... ☒ Great ☒ Some ☐ None
Public access..... ☒ Great ☒ Some ☐ None
Shoreline development..... ☒ Great ☒ Some ☐ None
Other (specify): _____

1. Do you or would you eat fish from the river? *No - would depend upon river conditions but probably not*
2. If a boater, where do you most often put in/take out? *Rte 205 Bridge (Concord/Budford)*
3. Are you interested in joining the Watershed Association? *We are interested in maintaining contact with the Association in matters relating to Budford.*
4. Other comments? (over)

Please return to:

SoAASo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Refuge
Fair Hill Road
Budford, MA 01730

Thank you

1. Name of the river: _____
2. Name of the nearest post office: _____

PURPOSE: This survey of river and shoreline usage is being conducted by the SuAsCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: _____ DATE: _____ TIME: _____ POLLSTER: _____

WAYLAND ROAD & GUN 4 MEADOWVIEW
NAME (optional) PAUL RAMSEY CARETAKER STREET ADDRESS (optional)

WAYLAND
TOWN

MA
STATE

01928
ZIP

What uses are important to you? Please indicate if you oppose any uses.
USE USES/YEAR IMPORTANCE (Check 1) Oppose (?)
Unpowered boating..... ☒ Great ☐ Some ☐ None
Powered boating..... ☐ Great ☒ Some ☐ None
Fishing..... ☒ Great ☐ Some ☐ None
Swimming..... ☐ Great ☐ Some ☒ None
Hunting..... ☒ Great ☐ Some ☐ None
Trapping..... ☐ Great ☒ Some ☐ None
Hiking..... ☐ Great ☒ Some ☐ None
Observing wildlife..... ☐ Great ☒ Some ☐ None
Other (specify) _____

What characteristics of the river system do you feel are important?

CHARACTERISTIC IMPORTANCE (Check 1)
Natural beauty..... ☐ Great ☒ Some ☐ None
Natural habitats..... ☐ Great ☒ Some ☐ None
Historic sites..... ☐ Great ☐ Some ☒ None
Open space..... ☐ Great ☒ Some ☐ None
Flood control..... ☐ Great ☐ Some ☒ None
Water supply..... ☐ Great ☐ Some ☒ None
Other (specify) _____

To what extent are you concerned by present or potential problems such as:

PROBLEM CONCERN (Check 1)
Water quality..... ☐ Great ☒ Some ☐ None
Overuse..... ☐ Great ☐ Some ☒ None
Trash..... ☐ Great ☒ Some ☐ None
Public access..... ☐ Great ☐ Some ☒ None
Shoreline development..... ☐ Great ☒ Some ☐ None
Other (specify) _____

1. Do you or would you eat fish from the river? NO WAY
2. If a boater, where do you most often put in/take out? Stonebridge Rd Pelham IS.
3. Are you interested in joining the Watershed Association? Yes.
4. Other comments? (over)

Please return to:

SuAsCo Watershed Association
c/o U.S. Fish and Wildlife Great Meadows Refuge
Main Hall Road
Pelham, N.H. 03076

USER SURVEY



SUDBURY AND CONCORD RIVERS

USER SURVEY REPORT

November 1986

The SUASCO Watershed Association
The Sudbury-Assabet-Concord Rivers Watershed Association
130 Forest Avenue
Hudson, Massachusetts 01749

SUASCO watershed association, inc.

Organized for the development and maintenance of clean water in the Sudbury, Assabet and Concord river basins

SUDBURY AND CONCORD RIVERS

USER SURVEY REPORT

November 1986

Prepared for:
Purchase Order No. PX 1600-6-C463
United States
Department Of The Interior
National Park Service
North Atlantic Regional Office
15 State Street
Boston, Massachusetts 02109-3572

Prepared by:
The Sudbury-Assabet-Concord Rivers Watershed Association
130 Forest Avenue
Hudson, Massachusetts 01749

Or, care of:
United States Fish and Wildlife Service
Great Meadows National Wildlife Refuge
Weir Hill Road
Sudbury, Massachusetts 01776

ACKNOWLEDGEMENTS:

The SUASCO Watershed Association hopes that this River Guide Project will contribute toward a closer working relationship among the various parties involved in the management of the Sudbury-Assabet-Concord (SUASCO) Rivers Basin water and shoreline resources. The Project Executive Committee comprises one promising coordinating mechanism; regular periodic user surveys comprise a second; and the recommended printing and circulation of monitoring and violation reporting forms to the river users is a third.

SUASCO thanks the members of the Project Executive Committee for their active participation and Steve Golden, National Park Service Project Manager, for organizing and managing the project and for making expertise and resources available from the federal agencies.

Most of SUASCO's directors and officers have participated. Peter Burn, President, was responsible for preparing the User Survey Forms; Barbara Mudd, Membership Director, organized and coordinated the pollsters; Mike Meixsell, Executive Director, served as SUASCO's Project Director, contacted the communities, and prepared the draft River User Creed and the project reports; Don Eastman, Treasurer, and Elsie Kennedy, Director, helped to process the completed User Survey Forms.

We thank the pollsters who spent their weekends interviewing the river users. And the river users for their patience when they were eager to be on the river. The pollsters included: Mary Chapman, Christie Chase, Betty King, Jacqui Light, Jeannette Renshaw, and Judy Terry from the Concord League of Women Voters; Shirley Rohan, South Bridge Boat House; and Joan Dillon and Jim Waggett, Concord Natural Resources Commission.

We thank those who provided proofreading, editing or other assistance. They included: Dick Walton, author and naturalist; Dave Robertson, Framingham Conservation Commission; Richard Stanton, National Park Service; Susan Ziegler and Stephen Conant, Massachusetts Department of Environmental Management; and Allen Morgan, Sudbury Valley Trustees.

We also appreciate the, perhaps indirect but no less important contributions of others not mentioned above.

RIVER GUIDE PROJECT

SUDBURY AND CONCORD RIVERS USER SURVEY REPORT

INTRODUCTION

The SUASCO Watershed Association's "River Guide" contract from the National Park Service included provisions for a River User Survey. This survey served to provide a limited amount of publicity, to notify the riverside communities, and to provide the communities and certain segments of the user population an opportunity to communicate their attitudes and preferences regarding river use policy, to the Watershed Association and to the National Park Service.

Responses were solicited from the Selectmen and from the Conservation Commissions of the dozen riverside communities from Westboro on the headwaters of the Sudbury River downstream to Billerica on the Concord River. Packets were mailed to each of these communities containing a cover letter explaining the project, a draft copy of the River Users Creed, and a survey form inviting their response on a wide variety of river use questions.

Responses were also solicited from five Rod and Gun Clubs located along the river and from four Guide Services and Canoe Rentals serving the river.

This poll was intended to obtain an indication of the attitudes and preferences of that segment of the public which does in fact use the river and its shoreline. This poll was not a random sample of watershed residents and was not intended to provide a statistically valid representation of the attitude of the general public. Because of the season during which this survey was conducted at sites along the river, the canoeing and hiking segments of the river user community predominate in the survey. A poll conducted in late fall and winter would be expected to include more hunters; a poll conducted in the spring might be expected to include more anglers.

Over 120 river users were interviewed at popular user sites along the river. Most of the responses were from users in the Town of Concord area because the U.S. Fish and Wildlife Refuge and the Rowan Boat Rental tend to attract many river users to this area. Also, the time of year during which this survey was conducted, the autumn

months, attracted many canoers and hikers; therefore, this segment of the river user community comprised the majority of the responses.

RESULTS:

The results of processing over 120 responses to the River User Survey are shown in Figure 1. The uses most important to the respondents included unpowered boating (reflecting the Rowan Canoe Rental site) and hiking and observing wildlife (reflecting the US F&W Great Meadows Refuge site). There was also a substantial and perhaps surprising amount of interest in fishing and swimming among these users. We know that fishing is an important activity on the river; however, for the reasons already mentioned, this survey was not expected to, and probably did not, capture as large a proportion of anglers as actually exist among the river user community. Consequently, we must assume that fishing is even more important than indicated by these results.

The characteristics considered most important were natural beauty, natural habitats, and open space. Historic sites were of somewhat less importance and flood control and water supply were of least importance to these users.

We must remember that the survey is intended to assess public perceptions; these perceptions may not reflect the true importance of each of these characteristics but rather may reflect a lack of communication between public agencies and the public regarding the true importance of these characteristics. Obviously, the wide river meadows and the meandering character of the river chanal in those areas which have not been dredged or filled, perform an extremely important flood control function. Casual observation of the river meadows during spring flood or during a hurricane dispels any doubt concerning their natural water retention capacity.

Likewise, the controversy between the river basin communities (including Billerica which depends essentially exclusively upon the Concord River for its public water supply) and the Metropolitan District Commission (MDC) and now the Massachusetts Water Resources Authority (MWRA) leaves no doubt concerning the importance of the Sudbury-Concord Rivers as sources of public water supply not only for the river basin communities but also for the Boston area communities. This controversy concerns the proposed diversion of about 20 to 40 Million Gallons Per Day (MGPD) of river water from the Sudbury-Concord River to the Boston area.

~ It was somewhat surprising to see water quality and trash as being the problems of greatest concern among these users while public

access was of least concern. This may indicate that, at least in the Concord area, the present access points are serving reasonably well. Nevertheless, this should not obscure the fact that during the summer months it is not unusual to see some of the access points over-saturated with autos spilling out of the official parking areas into unauthorized or unsafe areas.

Also, there was substantial concern about shoreline development and significant concern about overuse and conflicting uses.

Finally, the response to the question, "Do you or would you eat fish from the river?", is particularly important to the Watershed Association. Most of the respondents indicated that they do or would eat fish from the river. The number of unqualified "yes" responses was 89 with 7 additional responses qualified with such phrases as "yes, if it were safe to eat the fish".

We assume that many of these respondents would favor the installation of fish passage facilities on the Concord River at the Lowell Dam and at the Talbot Mills Dam in Billerica, in order to allow the Sudbury-Concord Rivers to share in the benefits of the federal/state anadromous fisheries restoration program currently underway on the Merrimac River. Such facilities are necessary to allow shad and other anadromous and catadromous fish to reach suitable spawning grounds immediately downstream of the Saxonville Falls on the Sudbury River and in tributary streams and ponds.

The reestablishment of these fish to the Sudbury-Concord Rivers is important not only because of their obvious recreational value to the public but also because of their more subtle value as indicator species which give warning of present or incipient water problems in our rivers and streams.

RECOMMENDATIONS:

The results of this survey can serve as a reference point for future surveys for the purpose of determining trends and identifying changes in river user attitudes--to the extent that future surveys address similar concerns. It is for this reason that the present survey has attempted to address a wide variety of topics, a variety sufficiently broad to cover not only issues currently in vogue but also issues which may become important in the future. Future surveys should attempt to do this also. Nevertheless, this survey was a preliminary attempt and a number improvements have already become apparent.

For instance, the survey form should be revised to remove

ambiguities which occur in some of the questions. As one example, the present form does not allow us to determine why the respondents were concerned about water quality--did they consider the present water quality to be poor, or did they consider it to be good but were concerned for its future prospects? Another example, in the "Use" section, the large majority of respondents have indicated that they consider powered boating to be of no importance. Does this merely mean that it is unimportant to them because they do not use powered boats, or does it mean that powered boating is unimportant on these stretches of the river because the respondent believes this use to be damaging to the environment or incompatible with other more preferred uses. This is a crucial distinction which should be made but which the present form is incapable of making.

In order to remove the ambiguity cited above, it is recommended that the current "Use" section response choices of "Great____, Some____, None____." be replaced by the response choices of "Strongly Favor____, Moderately Favor____, Neutral____, Moderately Oppose____, Strongly Oppose____."

With the above change in response choices, the ability of the form to communicate useful information concerning the respondents attitudes can be still further enhanced by incorporating the items in the "Characteristics" section into the "Use" section, thereby eliminating the former section. Also, some other wording should probably be substituted for the item, "Natural beauty".

Although it would enlarge the list of items by two, it seems imperative that distinctions be made between two types of flood control--namely, between "natural flood storage" and "flood control construction"--and likewise between two categories of water supply--namely, between "local water supply" and "water diversions to other river basins". Suitable concise wording should be sought to express these distinctions.

The item "Shoreline development" should probably be transferred from the "Problem" section to the "Use" section and perhaps also the item "Public access". In any event, the item "Public access" is nearly meaningless as currently used in the form. Is the respondent concerned about public access because it is inadequate, or because there is too much for the river to accomodate, or because it is in the wrong locations? Furthermore, does public access mean boat launching sites, or does it mean riverside picnic areas, or does it mean riverside paths and trails. Perhaps the item "Public access" in the "Problem" section should be replaced with the three new items "Canoe launching sites" and "Riverside picnic areas" and "Riverside paths & trails" to be inserted into the "Use" section.

The problem of contacting a wider spectrum of river users is a difficult one. Ideally, the river users should be polled along the entire river during all seasons of the year. A possible alternative, albeit less satisfactory, approach might be to distribute blank forms to selected locations such as canoe rental facilities, wildlife refuges, sporting clubs, etc. The problem with such an approach is user disinterest or the risk of "ballot box stuffing".

A related matter which could be very useful for a variety of reasons, would be the printing of forms to facilitate the reporting to a central office, of violations of regulations and of important incidents or conditions observed along the river by the users. This would enable responsible users and the public agencies to cooperate in protecting the river from unintentionally damaging activities as well as from those parties who do not hesitate to usurp the rights of others in order to further their own personal gain. This cooperative endeavor is used very effectively in some other states by such agencies as the Pennsylvania Game and Fish Commissions in their management of that state's fish and wildlife resources and lands and waterways.

CONCLUSIONS:

These survey results are consistent with the Watershed Association's expectations, except for the very great concern over water quality and trash and the significant desire (even though the survey was not targeted toward the angling segment of the river user community) of the respondents to be able to use the river for swimming and for fishing. The great number of respondents who desire to feel secure in eating fish from the river indicates that the existing contamination of the fish is indeed a problem deserving a high priority of attention. It would also appear to imply potentially widespread support among the user community for the restoration of shad and other migrating fish to the Sudbury-Concord Rivers.

Suggestions have been offered which would improve the content of the survey form. Deficiencies in the polling process have been noted and an ideal but perhaps not a practical solution has been mentioned. Regular periodic surveys of this type are recommended, with the results from successive surveys being compared with one another to assess trends and to identify the effects of changes in river management policy upon the perceptions of the river users.

Finally, it is strongly recommended that a program or some mechanism be established to promote and to facilitate a cooperative relationship between responsible river users and the respective public agencies, to enhance the enforcement of regulations and the monitoring

and reporting of conditions along the river. The printing and circulation of reporting forms and the designation of a single receiving office have been suggested as a necessary first step toward the achievement of such a cooperative program.

FIGURE 1

Survey of River and Shoreline Users
 SuAsCo Watershed Association, National Park Service

PURPOSE: This survey of river and shoreline users is being conducted by the SuAsCo Watershed Association for the National Park Service in order to determine what characteristics of the river and surrounding areas are of importance and concern to the public, and to facilitate the protection of our river resource.

LOCATION: _____ DATE: _____ TIME: _____ FOLLSTER: _____

NAME (optional) _____ STREET ADDRESS (optional) _____

TOWN _____ STATE _____ ZIP _____

What uses are important to you? Please indicate if you oppose any use(s).

USE	USER/YEAR	IMPORTANCE (Check 1)	Oppose
Unpowered boating.....		Great 89 Some 22 None 6	.....
Powered boating.....		Great 8 Some 22 None 61	.....
Fishing.....		Great 25 Some 37 None 27	.....
Swimming.....		Great 35 Some 34 None 19	.....
Hunting.....		Great 4 Some 10 None 70	.....
Trapping.....		Great 6 Some 7 None 73	.....
Hiking.....		Great 70 Some 27 None 4	.....
Observing wildlife.....		Great 77 Some 18 None 2	.....
Other (specify) _____			

What characteristics of the river system do you feel are important?

CHARACTERISTIC	IMPORTANCE (Check 1)
Natural beauty.....	Great 114 Some 3 None 1
Natural habitats.....	Great 109 Some 7 None 1
Historic sites.....	Great 53 Some 53 None 5
Open space.....	Great 85 Some 24 None 2
Flood control.....	Great 29 Some 56 None 15
Water Supply.....	Great 39 Some 45 None 15
Other (specify) _____	.....

To what extent are you concerned by present or potential problems such as:

PROBLEM	CONCERN (Check 1)
Water quality.....	Great 95 Some 25 None 1
Overuse.....	Great 38 Some 60 None 13
Trash.....	Great 87 Some 25 None 4
Public access.....	Great 22 Some 47 None 29
Shoreline development.....	Great 56 Some 39 None 12
Other (specify) _____	.....
Conflicting uses	31 64 12

1. Do you or would you eat fish from the river? Y(89-96) N(14)
2. If a boater, where do you most often put in/take out?
3. Are you interested in joining the Watershed Association?
4. Other comments? (over)

Please return to: SuAsCo Watershed Association
 c/o U.S. Fish and Wildlife Great Meadows NHP
 Main Hill Road
 Jackson, TN 37601

