

Lamprey River Conservation

Groups want to ensure Lamprey stays pristine

By Steve Haberman. Exeter News Letter. May 6, 2001

NEWMARKET — There is a mystery brewing in the Lamprey River. Why, state and federal officials want to know, have the last two decades seen a large decrease in the number of fish native to the river, while the numbers in non-native species have increased?

"There doesn't seem to be any good answer for why there has been this shift from the early 1980s to the late 1990s," U.S. Fish and Wildlife Department Concord office supervisor Vernon Lang said.

Lang raised the issue at an environmental forum on water quality and in-stream habitat in the Lamprey held last week in Durham. He, along with Beth Malcolm of the New Hampshire Department of Environmental Service's Volunteer River Assessment Program, and New Hampshire Fish and Game marine biologist Doug Grout made presentations at the forum.

The federal government has targeted the Lamprey for fish restoration, Lang said. The goal is to re-establish the fish species that are native to the river in the quantities biologists would expect to see there, while still making room for the non-native species that have established themselves in the waterway, he said.

What is clear, Lang said, is that the decrease in the numbers of indigenous species, such as fallfish and common shiners, is related, to some extent, to the dams that have been placed on the river.

When Newmarket resident and member of the Lamprey River Advisory Committee, Sharon Meeker, pointed out that no new dams had been erected in the past 20 years, Lang conjectured that the decline in native species probably began long before the early 1980s.

"When you have dams on a system, you have a situation where micro-habitat generalists (fish that can survive anywhere) out compete fluvial (native) species," the U.S. Fish and Wildlife supervisor said.

He also noted that micro-habitat generalists normally tolerate pollution better than fluvial species. However, despite nearly three years of monitoring, Malcolm said her volunteers are not yet ready to say that pollution in the Lamprey is the cause for the declining numbers of native species.

"Maybe, after five or 10 years (of monitoring), we will be able to say the river is moving in a specific direction," the Volunteer River Assessment Program director said.

What monitoring has determined so far is that there are periods of the year during which the levels of dissolved oxygen and pH, or acidity, in the river drop below what the state would like to see, Malcolm said. The state standard is 75 percent oxygen concentration and a pH of five.

"The Lamprey is a slow-flowing river," Malcolm said. "At times, particularly during the summer, dissolved oxygen and pH dip below the levels we'd like to see. Our challenge is to find out why." Oxygen is an important factor in fish species development, the VRAP director said, and warm water holds less of it than cooler water. The fact that the Lamprey is normally a slow-flowing river and that there are a number of downed trees in the waterway allows the water temperature to increase significantly, Malcolm said.

Acidity, measured on the pH scale, is also very important to marine life in the river, she indicated. A low pH can make naturally occurring metals more soluble and more toxic," Malcolm said. "Fish are particularly sensitive to pH." And, of course, there are the impacts of human activity on the river.

Malcolm noted that at a monitoring point upstream from Epping's new wastewater treatment plant, the dissolved oxygen levels are higher than were noted at a monitoring point below the plant.

"People are concerned that the plant is contributing to the lack of dissolved oxygen," Malcolm said, but was not yet prepared to make that charge. "I think a lot of it is natural conditions, but with only three or four years of monitoring it's hard to tell," she said.

Another issue is the amount of development that has taken place along the river, Malcolm said. "Clay and silt can be increased by human activity along the shore," she said. "That material absorbs sunlight and increases temperature." Whether these issues are contributing to the decline of native species remains to be seen. "We want to continue monitoring to find out what the baseline readings (that we have gotten so far) mean in specific areas or for specific interests," the VRAP director said.

The Lamprey River flows 60 miles through six towns before emptying into Great Bay. It is freshwater until it turns tidal as the Piscassic River below the falls in Newmarket.

The river was designated as a federal Wild and Scenic River, from Newmarket to the Epping/Lee town line in 1996. The Epping portion received that designation just last year, bringing a total of 24 miles of the river under federal protection. In 1995, the Lamprey River Management Plan was approved by the towns of Lee, Newmarket and Durham, and the Lamprey River Advisory Committee was formed. Representatives from Epping were added to the committee last year.

The group continues to monitor the health of the river and the species that use or inhabit it. It is also working to increase public awareness of the value of waterway. Last week's forum was part of that process, and another forum, titled, "The Historic Lamprey River — Scenes and Stories," is scheduled for 7 p.m. on Tuesday, May 15, at the Mast Way School in Lee. For details about the forum, please contact Margaret Watkins at 641-5686.

In addition, the group is planning its first "Lamprey River cleanup and canoe trip" from 9 a.m. to noon on Sunday, May 12. For details about this event, contact Sharon Meeker at 659-5441.

To learn about the state's volunteer monitoring program, contact Beth Malcolm at 271-2457.

Lamprey River Smells, *Organic material likely cause of odor*

By Susan Nolan. Exeter News Letter. , snolan@seacoastonline.com

NEWMARKET — The water from the Lamprey River is the likely cause of the swampy smell in Newmarket's municipal water, a state official said last week.

The Town Administrator has stated over the past month that the problem was in the "scouring" effect in the distribution (piping) system caused by the flushing of the hydrants, increased water pressure, and flow changes.

But Department of Environmental Services engineer Bob Mann said last week organic matter in the bottom of the Lamprey is more likely the culprit.

When told the town water was described as smelling like "chlorinated swamp water", Mann replied, "Those aren't good technical terms, but I wouldn't dispute the description."

"There is a problem of bad taste and odor and discoloration," said Mann. "What appears to be happening is that they have an organics problem and a manganese problem." Mann emphasized that the water is safe to drink, though it may be odorous and distasteful. The problem is owing to organics — fulvic, humic, and tannic acid. The water intake, said Mann, is located in the Lamprey in the pool created by the Macallen Dam.

"Primarily the organics problem is due to humic materials," he said. Humic matter is decomposed plant or animal matter such as that found in the bottom of rivers. "Part of the problem is that the intake is from a backwater behind the Macallen dam," he said.

"The temperature goes up in the warm months ... and you get an accumulation of silt and organics," he said. The severe drought has also affected the situation, said Mann, in that the river flows are not as strong as they are when the rainfall is normal.

The short-term solution to the town's odorous water is in chemically treating it, said Mann. The long-term solution is to extend the water plant's Lamprey River intake upstream where the water is less stagnant, he said.

Newmarket's water plant, which was retrofitted in 1990, was put on line last month when the Bennett Well, one of two wells supplying municipal water, dropped to dangerously low levels. The water plant had been used for only a few months since it was mothballed 11 years ago and officials had not expected to put it on line until December or January.

Town Administrator Al Dixon said Monday he knew there was an organics problem with the river water but thought that the treatment of it took care of the problem. The administrator said he had not been informed that the organic matter was the cause of the odor in the water. "I thought the main problem was the failure to flush the systems," said Dixon. "That was what was coming back to me."

Mann said that might have had some impact but he did not believe it to be the primary problem with the water.

Mann said he also does not believe the odor and taste problem is in any way related to treated Epping wastewater that is discharged into the Lamprey.

"We never say no, but these problems exist in many water supplies that do not receive treated wastewater," said Mann. "It's not a principal concern of treated wastewater so I would have to say no, this is not related to the fact that the Lamprey River is a receiving stream way upstream."

The problem, he said, is primarily related to the organic matter at the bottom of the Lamprey in the Macallen Dam pool from which Newmarket's water is drawn. It is common for surface water to have tannic, fulvic, and humic acids, said Mann.

Before the retrofit of the water plant in 1990, its two sources of water were Follette's brook and the Piscassic River.

The Lamprey intake was added at the time. The Follette's Brook intake is no longer operational, and the current intake on the Piscassic cannot be used because of the water flow problems associated with the drought, said Mann.

That leaves the Lamprey River intake as the only solution to the town's water woes since the wells cannot continue to sustain the town's water demand. "Since July we've had five inches of rain when we should have had 15," said Mann.

Plant operator Ed Meekus is treating the Lamprey water with coagulants, potassium permanganate, and powder-activated carbon, said Mann.

Mann called those standard "tools" for water treatment. "He's the guy on the front line who's trying to adjust the chemical feed to get the optimum performance out of the plant," said Mann.

"Some plants are very good at getting out organics and some are not," said Mann. "This one is having a hard time presently." Mann said the combination of chlorine and organics can cause odor problems of its own. "When chlorine combines with organic materials ... it can be extremely troublesome," he said. While chlorine kills bacteria, he said, "the combination (with organic matter) causes its own distinctive odors."

Meekus and Dixon have been working diligently on the problem, said Mann. "They've been talking to a consultant. They've been talking to chemical suppliers. "I was down there most recently on Friday (Nov. 9)," he said. "Al was there and so was George (Laney, water superintendent) and so was the plant operator. We have talked with them and made site visits."

"They've been getting calls and we've been getting calls," said Mann. Mann said it is possible that the odor problems might not be eliminated without building a new water intake on the Lamprey. Mann called Meekus one of the most competent plant operators in the field,

"Worst case ... this could be a very persistent problem," said Mann, "but I've got to emphasize again the level of competence of the people that are working on this problem. With (Ed Meekus') level of concern, if anybody can resolve the problem through treatment adjustment's, he's the one who can."

Water treatment plant now in use

By Susan Nolan. Exeter News Letter. Oct 30,2001

NEWMARKET — Municipal water users may notice a change in the taste of their water this week, but all is well except for the town wells.

While the water quality is just fine, said Town Administrator Al Dixon, the town's wells are not in good shape.

Those wells dropped to dangerously low levels last week, forcing the town to switch over to its Packer's Falls Road water plant last Thursday and Friday.

The change in the water taste is traced to the source. The town's water is now coming from Lamprey River instead of the Bennett and Sewall wells. and the new water is chlorinated.

The wells will be used on weekends, but the town has finally switched over to using the water plant as its main source of water.

"We would have liked to have waited until this morning to put the plant on line," said Dixon, "but because of the water table in the wells, we arrived at the conclusion that we had to put it on line and Department of Environmental Services gave us the green light to proceed."

Though the Bennett and Sewall Wells were not chlorinated, the water plant chlorinates water, said Dixon. As a result, the taste may be little different, though the quality is good, he said.

"We had good, clear water," he said. "We had excellent tests. We have good drinking water that we are producing.

Still, said Dixon, at the request of the state, the town will add chlorinating systems to its wells this week.

"We ran the treatment plant Thursday and Friday," Dixon continued. "Over the weekend the wells serviced the town and this morning (Monday) we went back on line with the water treatment plant."

The town has been using the Bennett and Sewall Wells off Route 152 steadily since 1990, when the town water plant went off line to be retrofitted. Following the \$2.3 million upgrade of the plant, the town continued to use the wells, but used the new water plant for a few months.

And while the Town Council decided several months ago that the town would at last bring its moth-balled water plant on line, the town did not expect to get the plant going until January.

Town Water and Sewer Superintendent George Laney said he had been warning the council that the wells were getting dangerously low and that the water plant was needed. As a result, the Town Council agreed to allow Laney to hire a plant operator, which he did in June. Laney and assistant John Puchlopek have been preparing the plant for permanent operation, aiming for the January start-up date.

But the Bennett well began dropping below the danger level Oct. 17.

"What happened is that the Bennett Well began shutting off," said Laney. "The first day (Oct. 17) it would shut off two or three times but by Sunday (Oct. 21), it shut off seven times during one 24-hour period. We knew we were getting close."

Laney said there was no choice but to turn to the town's water plant to meet the water needs of Newmarket last week.

Dixon agreed. "The wells haven't failed but they got to a dangerously low level last week and the staff recommended that we go on line with the water treatment plant," he said.

Among changes some water users may notice this week are discoloration of the water. The reason, said Dixon, is that the town will be flushing out the water systems in connection with putting the plant on line.

Newmarket has not flushed out its water pipes in the last 10 years because public works did not want to use the extra water needed to flush them.

But now, with the water supply increased because it is being pumped from the Lamprey River, the town has enough water to flush out its entire system, said Dixon.

The water plant has the capacity to produce a million gallons of water a day.

While the wells are being given a rest, he said, they will continued to be used to supplement the town's water supply.

Town gets a needed flushing

By Susan Nolan, snolan@seacoastonline.com

NEWMARKET — The town's municipal water users may notice a discoloration in their tap water in the next two weeks, but there is no reason to panic.

Water discoloration is expected in some areas as town water department crews flush the fire hydrants, said Public Works Director Rick Malasky.

Flushing the hydrants removes rust and other sediment from the water mains, and may temporarily leave sediment in the drinking water.

"That will leave within hours of the flushing," said Town Administrator Al Dixon.

The town's water mains have not been flushed since 1990, when the town stopped using the Packer's Falls Road water plant and began using the Sewall and Bennett wells as water sources, said Dixon.



Ed Mekus holds up a beaker of water processed at the Newmarket water treatment plant Tuesday afternoon. The plant is now back in operation full time for the first time in 11 years.

Staff photo by Emily Reily

The wells, he said, could not supply enough water to do a system flushing and, as a result, the mains went unflushed. The wells

were able to provide just enough water for the users themselves. But with the town's water plant now back online full-time for the first time in 11 years, said Dixon, there is finally enough water to do the pipe flushing. The process, which has already begun, will continue until the entire system is cleaned out.

Malasky said he expects the flushing to be completed soon. "I think in two weeks they'll have it wrapped right up," he said. "They're doing quite well."

The water plant was put back into full operation last Thursday and has been operating continuously this week.

While town officials had expected to put the plant online in January, a drop in the town wells to a dangerously low water level last week forced the water department to change its plans and rev up the plant early.

The Packer's Falls Road facility, with intakes on the Lamprey, the Piscassic and Follette's Brook, was retrofitted in 1990 at a cost of \$2.3 million. However, it has been used for only a few months over the past decade.

The reason is earlier town councils chose to use the wells because the water was cheaper, despite warnings more than a dozen years ago that continued pumping of those wells could pump them dry. In addition, the town did not have an experienced plant operator who was familiar with the technology in the water plant.

In anticipation of putting the plant online, however, the town hired an experienced water plant operator in June, and he has been preparing the plant for full operation.

Malasky said he and Water Superintendent George Laney had warned the town that it was necessary to prepare the water plant, since they did not know how much longer the Bennett and Sewall wells would hold out.

"There was no glass that you could look down and say, 'OK, we have this much water down there,'" he said. "You just can't see into an aquifer."

Malasky's and Laney's warnings turned out to be prophetic when the Bennett well stopped running last week because the water levels were too low.

Had they not pushed for the plant operator ahead of time, they would have been "scrambling," said Malasky.

The plant is currently drawing its water from the Lamprey River intake.

Because the water plant can provide as much as a million gallons of water per day, the town's water pressure is expected to be stronger and the supply higher. As a result, the flushing of the system does not make a dent in the water supply, said Malasky.

"Flushing puts a lot of stress on the wells," he said. "With the water plant, it hardly drops the tank."

Problems with water resolved

By Susan Nolan, Exeter News Letter. Nov 9, 2001

NEWMARKET — Newmarket officials say it should not be long before the town's water is back to normal.

Municipal water users have complained that the town's water smells like "chlorinated swamp water" since the town began producing water from the Packer's Falls Road water plant two weeks ago.

Town officials say the smell and taste are caused by flushing of the water pipes, which have collected sediment in the last 11 years because they were not flushed out annually.

Town Administrator Al Dixon said the taste and smell should "dissipate" when the flushing is completed, but the water is safe to drink, he said, even with the bad smell.

Dixon initially said it would only be two weeks until the problem was resolved but the problem has continued longer than expected, he said. The water department is now on the second round of flushing, said Dixon.

"We're optimistic that within the next couple of weeks that problems that have surfaced with the water treatment plant going on-line will be resolved," he said.

The water plant was put on-line two weeks ago after the water levels in the Bennett Well dropped so low that its pumps shut off.

The town produced water from the Packer's Falls plant during most of the last century, later using the Bennett and Sewall wells for backup.

However, when the water plant was taken off-line in 1989, for a \$2.3 million retrofit, the town wells, the Bennett and Sewall wells located on Route 152, became the sole source of water.

When the retrofit was completed, the Town Council at the time decided not to use it, choosing to continue to draw water from the wells. The selectmen were warned in 1989, and the Town Council in the early '90s, that the wells could be pumped dry if they were used full time.

The Town Council last winter agreed to put the water plant on-line because of the diminishing supply in the wells that had been predicted and, as a result, a plant operator was hired in June. However, the plant was not due to go back on-line until January. It was only started up two weeks ago because of the "dangerously low" water level in the Bennett Well.

Meanwhile, Dixon said that complaints to Town Hall have diminished over the past week. While his office received as many as 80 calls last week, it only received a few this week, said Dixon.

"I take my hat off to the people," said Dixon. The public has been gracious in their calls to Town Hall, he said.

"I would ask them to continue to be patient with us. We're doing everything humanly possible," he said.

"I would also like them to be assured that the water is good, potable water, good for human consumption. It has a different taste, no question, but it's nothing that's going to harm anybody," he said.

Water woes flow in warm weather

By Jennifer E. Manley , Exeter News Letter, April 8, 2005

Editor's note: This is the first of a two-part look at the water situation in Newmarket.

NEWMARKET - As the prospect of yet another summer of outside water bans creeps closer, state and local officials say a permanent fix for the town's water needs remains an expensive and distant reality.

What's old is becoming new again and the possibility of restoring historic Follett's Brook is emerging as a possible solution. But in an area the town has approved for athletic fields and known as ecologically unique, can the town manage to do it all?



Treated drinking water from the Lamprey, shown here in its springtime abundance from the footbridge below the Main Street mills, has been found to be in violation of the Safe Drinking Water Act and the town has been forced to seek alternative water sources.

Cesar Miseses photo

The water potential of Follett's Brook won't be known until the fall and the latest interim solutions for the mothballed water-treatment plant have been tabled by the Town Council. Now it is a game of wait and see, while officials hope that Mother Nature and local gardeners

will cooperate to see the town through the summer.

The Department of Public Works reports the current daily demand for water is 400,000 gallons, with summer demand upwards of 600,000 gallons. The Bennett and Sewall wells are currently pumping 17 hours per day at their maximum capacity and are meeting that demand, as they have since the Aug. 14, 2004 plant shutdown.

Director of the Department of Public Works Rick Malasky reports that the most the wells can produce, running 24 hours per day, is 604,000 gallons daily. So far, no major crises have occurred at the wells, says Malasky, but he warns, "If we lose one of them wells, the town's in big trouble."

A new pump is on order to serve as a backup should one fail; however, the storage tank can hold only a day's worth of water.

The treatment plant is not equipped even temporarily to treat Lamprey River water rife with the organic matter that combines with chlorine to produce TTHM (Total Trihalomethanes). This carcinogen is dangerous to humans and regulated under the latest strict standards of the Federal Safe Drinking Water Act.

The test that precipitated the shutdown measured 255 parts per billion over the acceptable levels. This caused the last eight months of research and debate, as the town searches for an intelligent long-term solution.

A new water-treatment facility would do the trick, but the multimillion dollar price tag has curbed enthusiasm. The existing plant was originally built in 1830 as a spool, shuttle and bobbin factory and despite upgrades over the years,

including a \$1 million retrofit in 1990, further revamping is not feasible, according to Metcalf & Eddy, the engineering firm enlisted to study the problem.

Some \$88,000 has been paid to Metcalf & Eddy since January, 2004, reports the town administrator's office, yet the studies seem to have yielded little more than information.

The latest memo from Metcalf & Eddy (dated Jan. 26, 2005) discussed three \$500,000 interim fixes for treating Lamprey water in the existing facility. Further discussion of the interim solutions was soon tabled by the Town Council.

Lesson in history

Despite the big bucks and engineering expertise, the solution emerging as the most viable is more a lesson of history than hydrology.

Leo Filion says he "took it upon himself to gather 100 signatures" and force an initiative petition last year for the establishment and funding of a Follett's Brook Restoration Commission to investigate restoring the gravel filtration beds that provided potable water intermittently since 1894.

The commission enlisted The Rockingham County Conservation District to draw up plans and a budget for the restoration of the gravel beds and submit the application for the construction to the N.H. Wetland Bureau for approval. According to RCCD officials, the application should be completed and submitted by today.

Engineer Gerald Lang of the Rockingham Conservation District estimates, based on a statistical analysis of a similar brook, that a restored Follett's Brook is capable of producing water to meet the town's demands for nine months out of the year. Water flow predictions for the other three months, July, August and September come in under the daily need. The total cost of the project, including dredging, laying new pipe and upgrading the existing gravel bed is \$47,984.76.

Follett's hasn't been tapped since 1987, though at the time, says Filion, the water was of far superior quality with regard to color and magnesium content at least, than Lamprey water. Lang agrees that based on the available late '80s data, the water is "considerably cleaner" than the existing source.

But Metcalf & Eddy have never studied this option. Marc Morin, project manager for the town's ongoing studies, says his firm has never been asked to assess Follett's Brook and therefore can offer no comment as to whether it could serve as a viable water source.

Not the answer

Filion is as optimistic as DPW Director Rick Malasky is skeptical. "I honestly don't think it's the answer," Malasky said, pointing out that when demand is highest, Follett's is running at its lowest.

Real data on the quantity and quality of potable water from Follett's won't be available until after the summer, and it is clear that even under the best of circumstances; water treated at the plant from Follett's can't be the sole provider.

Filion said that a water management plan would be required. An unused well already exists in the Follett's area and the possibility of digging addition wells is being explored by the commission.

Town Administrator Al Dixon said the wells are as healthy as they've ever been and he, for one, does not look forward to having to ask the town for millions of dollars for a new treatment plant.

"If there's an easier, cheaper solution that can produce safe, functional (water), we should be going for it. I'm hoping Follett's Brook is going to be that solution, I hope Leo's right."

In the meantime, as the Follett's Brook Commission waits for approval from the Wetlands Bureau to begin construction beyond the logging that has already been done, the watershed has garnered the attention of state environmentalist and a town recreation department planning to build fields.

The question then becomes, can such a unique wetland support be a source of drinking water, endure the influx of hundreds of active children and still maintain its environmental integrity?

Candidates: Water supply a problem

By Lisa Tetrault-Zhe, Portsmouth Herald, May 5, 2005

NEWMARKET - The town's water supply, future development, a possible new school building and taxes were the hot topics at a Meet the Candidates event Tuesday night.

Nine residents are vying for three open seats on the Town Council: Rod Bowles, Herbert Dalrymple, incumbent Wilfred Hamel, William Harless, incumbent chairman Brian Hart, Doreen Howard, Jennifer Jarvis, Edward Thorne and Eric Weston.

All but Jarvis, who was out of town, attended the open forum to discuss their goals if elected. Councilor Scott Foster is not seeking re-election.

One common theme among the candidates was the need to fix the town's water supply situation. Currently the town relies on two wells for water and doesn't permit outdoor watering.

"I feel the biggest issues we face are the tax rate that keeps growing, the water situation (that) still has not been resolved and the growth of our community," Dalrymple said. "There are answers to our problems ... that need to be presented to the voters, not just keep talking about it."

Hamel and Howard concurred, saying water is at the top of their lists of priorities.

Paul Robinson, a candidate for School Board, asked if there would be a cohesiveness between the council and the School Board in the future. He also asked the candidates their feelings on whether a new school is needed.

"I think we should work together," Harless said. "As for a new school, the current facilities are inadequate. Something has to be done for the future of the town."

Bowles agreed that communication between the council and School Board is key.

"These shared resources are the most important. I only have one wallet, I only have one tax dollar," he said. "It cannot be multiplied. We really need to plan for the future and figure out where we want to go. ... It might not be a \$20 million new school, but in my world, it is a new school."

"I agree there should be some commonality with the issues," Thorne said. "One example is the athletic fields: I would like to see togetherness in that effort."

When asked by resident Larry Pickering what needs to be fixed, Hart and Westin agreed that communication between the council and town residents could be improved.

"I think the council does not get out and talk to the town enough," Westin said, pointing out that closed-door sessions seem to add to the problem.

"I'd like to see a focus on communication," Hart said. "One possibility would be a quarterly newsletter put out by the council for residents."

In addition to the council candidates, three residents running for two seats on the Planning Board also participated in Tuesday night's event: Debbie Berger, Robert Pruyne Jr. and Keith Rayeski.

Elections are scheduled for Tuesday, May 10, at Town Hall.

Conservation vs. recreation

By Jennifer E. Manley , Exeter News Letter, April 12, 2005

Editor's note: This is the second of a two-part series on Newmarket's water situation.

NEWMARKET - Two "mom and apple pie" groups - conservationists and children - represent competing interests as Newmarket looks toward Follett's Brook for its potential water needs.

While the Follett's Brook Commission waits for approval from the state Wetlands Bureau to begin reconstruction work, the recreation department seeks to move forward with a playing fields project. Meanwhile, both weekend and professional conservationists are taking stock of the area's natural inventory and are raising concerns.

Will the throngs of children threaten the potential of drawing water from the brook? Proponents of the recreation plan, which has received support from the Open Space Commission, the Recreation Master Plan Committee and the Town Recreation Department, seem to think not.

In February, the Town Council denied a citizen's petition to restrict use of the town-owned Leary property and halt the recreation fields project. At that time, Chris Hawkins of the School Board pointed out that there is "no evidence that construction of ball fields is going to negatively impact the quality of water."

Leo Filion Follett's Brook Commission tends to agree, and his opinion is endorsed by Rockingham County Conservation District engineer Gerald Lang. Lang said that the location of the fields is key and ditching the runoff downstream is certainly possible. If done right, said Lang, the fields would have a "minimal impact" on the brook.

According to Recreation Department director Jim Hilton, the most recent conceptual drawings of the plan place the edge of the field approximately 200 feet from the brook at the location of the gravel filter bed.

Hilton points out that the \$100,000 Land Water Conservation Fund grant, which will enable the building of the fields, is "basically used to protect water." In other words, if Land Water Conservation Fund officials thought the project would jeopardize Follett's Brook, the money would not be granted and the project would be basically dead.

Home to vernal pools

At least one environmentalist who has studied the area is not so quick to endorse either recreational development or the water draw. Doug Becktel of the Nature Conservancy said the wetlands area is home to six rare plant species, 49 species of conservation concern and a multitude of the fleeting but essential vernal pools.

An ecological inventory conducted by the Nature Conservancy and others on the Cocheco and the Follett's Brook watersheds confirm the claims of many residents that the area is, in fact, pristine.

When asked about the possible effect of field construction in the area, Becktel has said it would clearly "diminish the natural resource value" of the area.

One of the unique elements discovered when field workers hit the ground were the vernal pools - seasonal collections of water from rain and runoff that are unconnected to the larger wetland system. The pools provide the sole habitat for wood frogs and a whole species of salamanders that are born, become tadpoles and emerge full grown from the pool before it dries up.

It is exactly this kind of information that helps the Nature Conservancy in its goal to prioritize areas deserving of land protections.

"Our hope is that the info we provide is an educational tool and a planning tool for both the town and private land owners," said Becktel.

The possibility of drinking water and recreation fields in the area, however, may force the Nature Conservancy to "set new priorities and maybe not achieve land protection" he said.

Nothing found in the inventory triggers federal protections, so the responsibility of what to do with the data remains in town hall.

As part of this precarious balancing act, the town council did decide recently to retract a prime wetlands designation application submitted to the state. The application originated in the Conservation Commission but commission Chairman Wilfred Hamel said he supported pulling the application when it became apparent that the Follett's Brook Commission would be pursuing a construction permit.

It was suggested at one meeting by Councilor Scott Foster and later confirmed by Hamel that measures that accompany a drinking water source, such as a well head protection, might prove to be stronger than the prime wetland designation anyway.

Forced to be largely reactionary to this water problem, the town can be credited for taking some proactive steps. The first assessments of the water treatment facility were conducted in late 2003 (long before the plant was closed). The Planning Board is working to establish an urban service boundary line and the town is exploring a private-public partnership.

Private landowner Lionel Labonte may be in possession of a significant water source, and early tests were optimistic. However, the project seems to have stalled while the town waits for Labonte to deliver a proposal.

The Urban Service Boundary Line is making more progress. It would set capacity reservation areas in town, guaranteeing new customers access to water and sewer.

Town Planner Clay Mitchell reports that the latest plans include capacity reservations for already-established developments, the downtown mills and the newly approved elderly housing development.

Deciding what kind of water reservations would be available necessitates an establishment of the total availability. This task was circumvented by using the town's wastewater system capacity, which Mitchell cites as a safe measure, instead of the drinking water capacity, which is more easily changeable.

Cutting to the heart

The concept of an urban service boundary cuts to the heart of water distribution as a policy issue. It's about "distributing limiting resources in an equitable fashion" says Mitchell. As it stands now, the boundary line naturally encourages in-town development as opposed to peripheral expansion. Should the town go ahead with it, it will be good news for such potential investors as Peter Egelston of the Smuttynose Brewery.

Ban on its way

In the midst of a rainy season, when the banks of Follett's Brook are impassable with mud and the Lamprey threatens to overflow its banks, it is perhaps difficult to imagine the very real possibility of drought and a town's inability to provide potable water.

After summer, a slightly different Town Council will decide on what steps to take. The Follett's Brook Commission hopes to have compiled usable information on the brook's quality and quantity. Also by the fall, the grant for the recreation project will have likely been either accepted or denied, with additional engineering insight. In addition, the three interim plant fixes proposed by Metcalf & Eddy will be revisited.

In the meantime, there will be no outside watering or car washing, and a whole lot of hoping that the Bennett & Sewall wells can hold their own.

Water ban could be lowered

By Kathleen D. Tobin and Susan Nolan , Exeter News Letter, July 12, 2005

NEWMARKET - The director of Public Works is recommending a let-up in the Stage 4 water ban for Newmarket.

Rick Malasky said he has asked Town Administrator Al Dixon to bring that suggestion to Town Council. It was not discussed Wednesday night.

Newmarket has been under a Stage 4 water ban for several weeks. It prohibits all outside water use, including washing cars and watering lawns.

The ban is a precautionary measure, meant to preserve the water levels in the town wells while town officials seek alternatives to the town's water woes, said Malasky. The town's water plant is shut down because it cannot produce water that is up to Safe Drinking Water Act standards.

Malasky said heavy spring and summer rains have kept the water levels up at the town wells, which are currently supplying all the town's water.

The Public Works director said he believes some outside use of water is warranted at the moment.

"The wells are in pretty good shape right now," he said. "We're talking about going odd, even (days)."

The town's water management plan has four levels of ban. Stage 1, the lowest level within the plan, states that "the public is requested to refrain voluntarily from watering lawns, and encouraged to conserve water in all practical ways."

Stage 2 restricts watering to every other day based on the resident's address and the calendar day. Stage 3 restricts watering to two days a week between the hours of 5 and 8 a.m. and 6 and 9 p.m. Stage 4 bans all outside usage.

Malasky said the decision to change the water ban level must be made by Town Council.

"I'm suggesting it now, actually," he said Tuesday. Malasky said he has made the suggestion to Dixon.

"The grass is growing like crazy and we've been getting a lot of showers every night and every day," he said. "With all the rain people shouldn't have to be watering their lawns and gardens, but they might want to wash their car," said Malasky.

Because of the heavy rains, the town's wells - Bennett and Sewall wells - have been able to rest as many as eight hours a day, he said. That allows the wells to recharge.

"If they're running 24 hours a day, it's not good," said Malasky.

This is the second consecutive summer Newmarket has been under a Stage 4 water ban.

"We probably could lower it to a 3," said Town Council Chairwoman Lorrienne Caprioli at a June council meeting. She added, however, that she believed the town should remain at a Stage 4 as a precaution. Besides, said Caprioli, given the amount of rain that has fallen recently she didn't see the need for people to water their lawns.

Dixon acknowledged that the council has discussed relaxing the ban, but to "make sure we have ample water" in upcoming months, he said, councilors decided to stay at Stage 4.

"I don't even think, at a time like this, watering the lawn is even an issue," he said, explaining that Newmarket's water table is at an all-time high as a result of the amount of rain and snow that has fallen in the past 12 months.

The town's water restrictions are based on an evaluation of the ability to maintain the level in the water storage tank at 45 feet, the demand for water by consumers and the aquifer levels.

The plant has been out of use since July 2004.

According to Malasky, a new water plant - at a cost of between \$9 million and \$15 million - would solve the problem.

Dixon said that the town could operate the existing plant if it wanted to, but it would have to issue warnings stating that the water doesn't meet state and federal regulations, something he and other officials don't want to do.

Currently, the town is relying on the Sewall and Bennett wells for all of its water.

Newmarket allots \$40K to drill wells

By Lisa Tetrault-Zhe , Portsmouth Herald, July 22, 2005

NEWMARKET - Anybody need his or her thirst quenched?

For Newmarket residents, the water supply continues to be a hot topic as councilors voted Wednesday night to earmark up to \$40,000 from the fund balance to drill research wells at Follett's Brook.

George Laney, superintendent of the Water Department, presented a bid to drill three wells in an effort to find out if Follett's Brook would be a viable water source for the town. The town currently relies on Bennett and Sewall wells for municipal water.

The wells will go roughly 500 feet deep, said Laney, adding that he's optimistic that the results will be good news. "Hopefully we can hit a few good wells," he said. "There are a lot of options for what we could do with this water. ... I think about 50 gallons a minute would be good."

Councilor Dana Glennon asked whether the town would still need to build a new water-treatment plant if Follett's Brook is found to be a suitable water source.

"We don't know until (the testing is) done what is the quantity and quality of the water," explained Town Administrator Al Dixon. "If the wells and the combination of the fund balance cost us a half-million (dollars) or even \$1 million, and we end up not having to build a new plant, that's money well spent." According to Dixon, the town received quotes ranging from \$12 million to \$16 million for construction of a new water treatment plant.

The board voted unanimously to approve allocating up to \$40,000 from last fiscal year's fund balance to put in the three test wells. However, the board rejected a separate proposal to research another possible water source at the Wade Farms condominium complex. "It sounds like a lot of money for a very little amount of water," said Councilor Jennifer Jarvis.

Profits drying up, thanks to water ban

By Kathleen D. Tobin , Exeter News Letter, July 15, 2005

NEWMARKET - As the town faces its second consecutive summer under a stage-four water ban, some local businesses are struggling to cope with the effects.

"It's really impacted us," said Rob Carpenter of Carpenter's Old English Greenhouse, which sells a variety of outdoor plants and flowers.



Linda Carroll, an employee of Carpenter's Olde English Greenhouse & Florist in Newmarket goes through her daily watering routine. Newmarket's water ban is having a direct impact on the business, according to owner Rob Carpenter.

Photo by Jay Reiter

According to Carpenter, by the end of last summer his sales were down about 40 percent compared to previous years.

Though he does not know how low sales are currently, Carpenter said they are "definitely down" again this year.

Similarly, Frank Deal, manager at Houghton Hardware, which has been in Newmarket for 12 years, said that sales of gardening materials are also lower this year. According to Deal, however, his business did not feel the impact last year when the ban was initially put in place because the ban was not enforced as strongly as it is now.

"We can't water our lawn, just like everyone else," said Deal, adding that the town does allow him to water his store's plants that are for sale. According to both Carpenter and Deal, Newmarket residents are not purchasing as many flowers and other gardening materials as they have in the past because they are not permitted to use the water necessary to nourish them.

Like town residents, all Newmarket business are prohibited from using water outside, with some exceptions, according to Director of Public Works Rick Malasky. Houghton's Hardware and Carpenter's Old English Greenhouse can water plants that are for sale, while Rockingham Country Club on Route 108 may water its golf course.

"It just plain made sense" to impose a water ban last year during drought conditions, Carpenter said. Carpenter, however, does not believe it is fair or smart to continue the ban this year when the town is no longer experiencing a severe water shortage, because it takes "the seriousness away from the situation."

Instead, Carpenter believes the town should thoroughly educate residents about Newmarket's water situation so they will be more willing to conserve voluntarily, rather than imposing a ban on the entire town.

Though Carpenter said he is not currently considering a lawsuit against the town, he said he has thought about "having discussions" with the Town Council and going from there.

"You just can't stay in a stage four for years," Carpenter said. "You're punishing a small percentage of people who don't use much water."

Carpenter said he has concerns because even though there is a total outdoor water ban, the town continues to allow new apartments, condominiums and other buildings, which will consume water, to be built.

According to Malasky, most of the new buildings being constructed do not use town water or are being built with permits that were issued in the 1980s, which the town cannot revoke.

"How can we keep building these units, but my customers can't water their flowers?" asked Carpenter.

Wade Farm water project ruled out

By Kathleen D. Tobin, Exter Newsletter, July 26, 2005

NEWMARKET - As the town proceeds under a Stage 4 water ban for the second consecutive summer, Newmarket's water woes were again on the Town Council's agenda.

After a motion on Wednesday night by councilor Brian Morrison, the Town Council voted not to pursue a relationship with Wade Farm for potential water use in the future.

According to George Laney, the superintendent of sewer and water, a well project at Wade Farm would only yield about 50,000 gallons of water per day at a cost of about \$140,000.

This price does not include easement fees or the cost of replacing the existing pump if it does not perform adequately on the town system due to pressure differences.

Though Laney said he did not personally have a recommendation regarding the situation, Town Councilor Dana Glennon said he did not believe such a small amount of water was worth the money.

Before leaving the meeting, Kenneth Nelson of Wade Farm called the Town Council's decision "short-sighted," but said he would respect it nonetheless.

The Town Council on Wednesday night also authorized the use of an additional \$40,000 for the ongoing project at Follett's Brook. Previously, the council allotted \$50,000 for the project. According to Laney, the additional funds are needed to install and test three new wells.

Concerned about the amount of money being spent on the Follett's Brook project, Glennon asked Town Administrator Al Dixon and Laney if they felt the project would solve the town's water problems.

According to Dixon, no one will know if the project can produce adequate amounts of water until the work is complete.

"One could only hope that will be the outcome," Dixon said, adding that if the town's spends even \$1 million to repair Follet's Brook and it produces enough water, this is still a considerable savings when compared to the \$12 million to \$16 million required for a new water treatment facility.

Glennon also asked the council and Dixon if they were in a position to lower the current water ban to a Stage 3. "I think that's (a discussion) for another day," Dixon said, adding that he and Town Council chairwoman Lorrienne Caprioli have discussed the possibility but felt it was better to take a more cautious, preventative approach and remain at Stage 4.

In other business, the Town Council unanimously decided it would follow the recommendation of Police Chief Kevin Cyr in support of separate Hampton and Exeter district courts. If this is not possible, the council recommended that a joint court be built in a central location.