



Town of Merrimack, New Hampshire

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Planning - Zoning - Economic Development - Conservation

MERRIMACK PLANNING BOARD

APPROVED MINUTES

TUESDAY, JUNE 19, 2012

Planning Board members present: Robert Best, Alastair Millns, John Segedy, Tom Koenig (left 8:55 p.m.; returned 9:32 p.m.), Nelson Disco, Michael Redding, and Alternate Pete Gagnon (arrived 7:34 p.m.).

Planning Board members absent: Lynn Christensen and Alternate Stanley Bonislowski (attended in capacity as Applicant).

Community Development staff: Community Development Director Tim Thompson and Recording Secretary Zina Jordan.

1. Call to Order

Robert Best called the meeting to order at 7:30 p.m. and designated Pete Gagnon to sit for Lynn Christensen.

2. Planning & Zoning Administrator's Report

Tim Thompson reported that Phase 3 of the Master Plan process is about to begin and should be finished by year's end. He recommends that the Planning Board hold a joint meeting with Town Council. Although the Planning Board adopts the plan, Town Council must take the recommended actions. Chairman Best suggested the Board have one month to review the materials. He likes the idea of a meeting to gather information rather than to make a decision. Nelson Disco agreed to a joint meeting as long as Town Council understands that the Planning Board is the body that is empowered to adopt the plan on behalf of the Town. The Planning Board should review and amend the plan before meeting with Town Council. Tim Thompson said there would be a public forum before the Planning Board and Town Council meet.

3. Presentation to the Planning Board by Emery & Garrett Groundwater, Inc. on behalf of Merrimack Village District Water Works regarding sodium chloride in district wells.

Jeff Marts, MVD Consultant, Emery & Garrett Groundwater, Inc., reported on the Merrimack Village District (MVD) Sodium Chloride Study. MVD gets all of its water from three major Wellhead Protection Areas and aquifers. The problem is increasing levels of sodium and chloride in the Aquifer. Sodium and chloride are not broken down in stormwater and stay there until pumped out. The NH Department of Environmental Services (NHDES) established a secondary maximum contaminant level for sodium chloride for taste and aesthetic reasons. Sodium and chloride in Wells 3 and 7 are consistently above health advisory levels

for those on a reduced sodium diet for the last 10 years. Their levels and those in Well 5 are increasing. Sources of salt in wells are roads, parking lots, residential driveways, septic systems, and atmospheric wet salt deposition. Most salt near Wells 2 and 3 comes from State, private and local roads, in that order. Jeff Marts provided the number of tons of salt in each type of road. Roads and parking lots represent the vast majority of the source of salt in Wells 3-8. After showing main salt loading locations for Well 3, annual mass loading calculations, and Well 3 sodium and chloride trends, Jeff Marts listed mitigation ideas: pre-construction design, protection of roads, parking lots, sidewalks and public roads; public education; and policy. Specific ideas are reducing the amount of pavement; directing runoff away from treated surfaces; designing surfaces to receive direct sunlight in winter; training and certifying operators; using calibrated spreaders, pre-wet salt, anti-ice and salt alternatives; keeping records, and reducing speed limits.

In response to Board questions, Jeff Marts stated that many towns reduce salt use in wetland protection areas and have salt application enforcement criteria. If no salt were used, it would take years or even decades to recover wells and reduce sodium and chloride levels. Sheet flow from road surface can infiltrate. 50% of salt can be jettisoned from the roadway and captured in the Well 3 area. He does not know the integrity of the system in Wells 4 or 5. A more detailed stormwater runoff study is needed.

Michael Redding posed a dilemma: can the Town wean itself from salt use within a decade and will recovery succeed until it finds a no-salt solution? Jeff Marts said it is achievable. Salt concentrations can be leveled. The detailed mitigation plan would reduce salt by 30%. A 30% or more reduction in salt use would lead to water quality improvement over time. The study used continuous conductivity logging data. Low and high spikes show that salt concentrations can change dramatically within hours. MVD collects data quarterly. The graphs show averages. One cannot pinpoint the reason for the spikes to a specific storm or year. If nothing is done in developed Wellhead Protection Areas, sodium and chloride concentrations will increase and the water will taste salty. Salt does not go away on its own. The Town can either dilute the water or use methods like reverse osmosis, which is not viable because it is extremely expensive. There is no correlation of the effects from large construction projects that use calcium chloride, but there are strict controls on sodium and chloride in recent developments.

Jeff Marts does not know the public health costs. The Environmental Protection Agency (EPA) set health advisory limits. Pre-treated brine moves salt at the same rate as rock salt. Anti-icing reduces the amount of salt used on roads and can be done in the daytime rather than in overtime, which saves manpower. The Town would probably break even in the long run. Accurate weather predictions make it work. NH Department of Transportation (NHDOT) expanded the number of weather stations and information from trucks, but there is a cost to that equipment.

Jeff Marts suggested a partnership with DOT to reduce salt use near wells. Landowners' water rates would decrease over time. Education is a key component of public acceptance. Emery & Garrett recommends using automatic data loggers

as an important component for identifying spikes. They can report hourly and take many more measurements yearly. One costs \$700-\$2,000.

Less salt use would stabilize the situation and prevent increased salt levels. Maintaining current quality while trying to improve it is attainable. It is State policy to bring roads to black pavement shortly after a storm, so they apply salt heavily. Towns do not apply so much salt on their smaller roads. Discharge from Naticook Brook can be measured. Wells are probably 5%-30% off balance. When the Planning Board reviews applications, it should know that 30+ tons of salt per year would have a measurable impact. Other variables the Board should consider besides application rate: a wet year can dilute salt concentration; there is more salt from rivers in the summer and more runoff in the winter, but it is less concentrated.

Emery & Garret recommended that MVD monitor wells be tested for salt. There are about 10 and sometimes 20 monitor wells in each Wetland Protection Area.

Asked whether there is a close correlation within the Wellhead Protection Area from well to well, Jeff Marts stated that spikes do not always coincide at each well because they catch water with different flow paths. Another variable is how much a well is pumped. Production wells get water from all directions; monitor wells show salt concentration in discrete points of flow paths. In addition to requiring applicants to install monitor wells, the Planning Board should be more concerned with proximity to a production well. If stormwater runs outside the area, monitor wells are of less concern. The Planning Board must know the history of groundwater before construction begins in order to identify changes attributable to construction and to change construction operations. Any action taken in a site already developed with a monitor well that shows an increase in sodium and chloride would be voluntary. MVD would work with the contractor and the Planning Board would determine the appropriate action. The reason for requiring an applicant to install a monitoring well if there is no salt use is to find out where the salt is coming from, then decide what to do. Shutting down a site is not enforceable. MVD can only notify the contractor; it cannot require remediation if there is too much salt.

Pete Gagnon added that soil type and Town maintenance of roads outside the Wellhead/Aquifer area (Route 3) are other variables the Planning Board should consider. Jeff Marts said the Route 3 area has little recharge from surface water. 70% of the water pumped from wells is from rain infiltrated under the soil, so not all recharge should be limited. Groundwater chemistry and quantity should be protected. Water from outside the area (Nashua) flows into Wells 6-8, but it is good that there is a lot of recharge through the wetlands from surface water, which is not particularly salty.

There was no public comment.

- 4. Parker Village Condominium Association** – Review for consideration for Final Approval of a request to modify a condition of a previous site plan approval regarding de-icing operations at Parker Village. Parcel is located off of Front Street in the R (Residential) and Aquifer Conservation Districts, and the Elderly and Planned Residential Overlay Districts, and the Wellhead

Protection Area. Tax Map 5D-2, Lot 004. **This agenda item is continued from the May 15, 2012 meeting.**

Tim Thompson referred to his January 2012 memo, which recommended that the Board balance resident safety and water quality.

Attorney Amy Manzelli, Baldwin & Callen, listed her environmental credentials. She said that Parker Village wants reasonable accommodation that balances protecting and enhancing Merrimack groundwater and protecting the condo residents. To continue the Note 2 on the approved residential site plans that “no ice-melting compounds shall be used for de-icing operations” is not appropriate for Parker Village. Some de-icers are better than others. Parker Village’s property manager was not aware of the notes until 2010 and was using a little bit of liquid salt. He decided he must use de-icers for the safety of the residents in the 55+ community and reduced the amount of road salt. Technical non-compliance spurred this modification request. The Planning Board can approve the requested change if a specific set of circumstances indicates that modification would properly carry out the purpose and intent of the Master Plan and of the Subdivision Regulations, whose intent is “to provide for and protect the public health, safety and general well being”. The purpose of site plan review is “to assure that sites will be developed in a safe and attractive manner and in a way that will not involve danger or injury to the health, safety or prosperity of the abutting property owners or the general public”. Allowing limited de-icing use fits the purpose. The Master Plan does not recommend a ban on all de-icers; it recommends limiting the use of road salt and storing it properly. Jim Lambert, Parker Village Snow Removal Contractor, Lambert Brothers, is an extremely well trained, cutting-edge snow and ice manager who knows how to use de-icers optimally. He uses the liquid Magic Minus Zero mixed with Magic Salt, which is different from road salt. It can reduce road salt by 50%-70%. It is more expensive, but Parker Village is willing to pay the extra expense. Attorney Manzelli described Magic’s components. Wet Magic salt is preferable to brine and road salt.

Tom Koenig left at 8:55 p.m.

Attorney Manzelli said that Jim Lambert participated in the MVD Sodium Chloride Study (see above) and showed MVD how to provide accurate data and calibrated his machinery to spread more slowly. The Commons, which is also managed by Harvard Property Management, has no salt limit, yet Parker Village does. Since he does both properties, it is easier for Jim Lambert to do the same at Parker Village as at the Commons for a net combined decrease in road salt from road salt only before 2010. He measures the percent of reduction per storm rather than the number of tons. Even with no salt use at Parker Village and full salt use at the Commons prior to 2010, compared to Best Management Practice today, there is a 50%-70% net decrease in the amount of road salt used. 50%-20% of what used to be used at the Commons is now used for both sites. There are no alternative products. Attorney Manzelli listed them and explained why they cannot be used.

Attorney Manzelli proposed the following language: “Limited ice-melting compounds shall be used for de-icing operations. All snow and ice management shall be performed by individuals certified in the use and mixture of liquid salts,

who have the proper spraying equipment, and whom the Merrimack Village District has approved.”

Parker Village is willing to make two additional commitments: 1) prepare a document, file it with the Registry of Deeds, pay recording fees, and submit copies to the Town; 2) James Lambert will provide the MVD with records of de-icing applications at Parker Village. Attorney Manzelli said the proposal dovetails exceptionally well with the MVD Sodium Chloride Mitigation Plan. It would be the first private use in Merrimack that is enforceable and follows all Best Management Practices. Parker Village seeks permanent relief rather than doing a pilot study. MVD would review any change in operator. The study is completed. It is too onerous to return each year for permission to continue.

Magic is not a zero salt application. Sodium and chloride are in Magic Salt, which is magnesium chloride mixed with sodium chloride rock salt. The problem with quantifying the ice-melting compounds in the Note rather than limiting them is that there are no data prior to 2010 that are accurate enough to put in the language. Having the MVD approve the operator solves that problem.

Tim Thompson said MVD has made no official position to this point. He reiterated the following language from his January 2012 memo: “De-icing operations on the site shall be limited to those described by the applicant at the January 3, 2012, Planning Board meeting, and shall be approved by the Merrimack Village District. The Parker Village Association shall be required to renew this condition with the Planning Board at the first regular meeting of the Merrimack Planning Board in June of 2014 and every two years thereafter. At any such time that the Merrimack Village District determines that the use of de-icing compounds is detrimental to Wells 4 and/or 5, the project shall be restricted to the previous condition of no ice-melting compounds being permitted for de-icing operations.” Providing a document indicating the above language and attaching the documents to the previously recorded plans to be recorded at the Registry would memorialize changes in the Note. Attorney Manzelli added that it would make it more enforceable by the Town. Chairman Best explained that violating site plan approval means that the Community Development Department would levy *per diem* fines and make the applicant return to the Planning Board. There really is no good enforcement. Attorney Manzelli said that MVD would be on top of things and would talk to Parker Village, Community Development and the Planning Board if there were a violation.

Jim Lambert said the dilemma is that no one knows the source of all the pollutants. The MVD study advises everyone to cut back. Jim Lambert described his training. He reduced road salt use by 50%-70% per snowstorm. Magic breaks down corrosives/chlorides from salt. He recommends that the Town use it. Jim Lambert is not certified by Green SnowPro at the University of New Hampshire (UNH) Stormwater Center. He and his son will attend classes this summer. When asked what he would look for when hiring someone, he said he never hired anyone else. It is hard to find people who do what they say they will. He plans to keep his company small. He would ask a new hire for UNH certification. It took him three

years to get used to Magic's nuances. Pre-treating with Magic without road salt allows him to plow three times before ice bonds to the road.

Jim Lambert and Chairman Best reviewed statistics comparing square footage, acreage, and tons of de-icers used at Parker Village and at the Commons. Jim Lambert reiterated that savings from the Commons is enough to save 50%-70% at both properties yearly. He uses 30-50 tons of Magic Zero per year vs. 189 tons before 2010.

Tom Koenig returned at 9:32 p.m.

To protect water, Alastair Millns does not want any more salt in the wells. He wants a convincing reason to use Magic. Chairman Best saw the choice as being 5% out of balance at the wells vs. a 130-150 ton savings. It is not as good as zero, but a huge leap to get mass loading back in balance.

Attorney Manzelli said Wells 4 and 5 are closest to the property; she does not know the location of the monitor wells. If there is an increase in salt levels in Wells 4 and 5, it could be either from the amount of time salt goes from the road to the Aquifer to the well or from the path from Parker Village to Wells 4 and 5. She does not know how much stormwater runoff from Parker Village goes to the River vs. into the groundwater. She cannot guarantee that using Magic will reduce salt in the wells. Pete Gagnon said it is difficult to tell what comes from Route 3 vs. what comes from Parker Village. Fertilizer, which is a salt, leaches quickly in this soil. One can control the amount of fertilizer, but it is hard to identify what else comes into the area. He suggested installing test wells.

Attorney Manzelli said that Parker Village may be penalized for salt that is applied elsewhere. Its offer is reasonable and fair. MVD is serious about improving the salt contamination problem in groundwater. The study report recommends that MVD purchase and use continuous data loggers to generate data rather than have Parker Village install test wells.

Michael Redding suggested changing the proposed wording to: "All snow and ice management shall be performed by individuals certified in the use and mixture of liquid salts in accordance with the stormwater management plan approved by the Planning Board". He suggested reference to UNH Stormwater Center/State definition or practices rather than "limited ice-melting compounds". Attorney Manzelli agreed to Chairman Best's request for a plan with figures, such as tons per square foot, to be on record.

Attorney Manzelli said that Parker Village would participate in future MVD studies. Nelson Disco is concerned about adding to the sodium level in water and wants to see a plan and hear from MVD officially. Attorney Manzelli reiterated that Best Management Practices would reduce salt use by 30%.

Chairman Best summarized MVD Superintendent Ron Miner's February 17, 2012, letter stating that MVD will develop a mitigation plan to reduce sodium and chloride levels in Wellhead Protection Areas based on the study. It will identify stormwater key flow paths and patterns. It recommends making Parker Village approval temporary and having it reapply every year. The Commons must participate

because Parker Village is not part of the study. MVD will use the data from the two sites, share them with the Town and determine the amount of reduction per storm event.

Public comment

MVD Superintendent Ron Miner said MVD opposes additional sodium chloride going into the Aquifer. The proposal would create an increase. Jeff Marts stated that Jim Lambert's numbers are for the 2010-2011 winter. 84 tons at Parker Village is a 20% of total salt use in the Wellhead Protection Area, which is a significant amount of salt. The study is incomplete. Groundwater flows from Parker Village to the production wells, but he does not know where it goes or whether that is the source of sodium chloride in the wells. There is a significant amount of sodium chloride in the Parker Village pond. MVD must learn whether water leaks would go into production wells. The Parker Village property line is 40' from MVD production wells. Another monitor well would be prudent. Jeff Marts recommends temporary approval. If the test is approved, one year would be sufficient to reduce salt, but it would take 3-5 years to affect water quality. Jim Lambert said his numbers are a "guesstimate" before the 2010-2011 reduction. Peak use was 190 tons. Attorney Manzelli added that winters vary; the figures are averages.

MVD Distribution Foreman Dave Fredrickson said the baseline of what Jim Lambert put down is an excessive amount of salt. 84 tons at Parker Village and 105 tons at the Commons were for a year with excessive snowfall. Jim Lambert has more control now. He measures pounds per acre per application during the year. Less salt use, new technology and this year's light snowfall made for a 42% reduction per application. Chairman Best noted that barely breaks even for Parker Village if the numbers are only from the Commons. Dave Fredrickson said 1,880 pounds per application for the Commons and 1,602 pounds per application for Parker Village is an increase. Jeff Marts said 24 tons per acre per year vs. 6.4 in studies elsewhere is a very high rate. It was a bad winter. Not enough data exist to allow MVD to endorse a permanent reversal of the salt ban. He suggested gathering data for two years and comparing them before making a decision, and putting a monitor well near the detention pond or in line with groundwater flow paths.

Chairman Best said the wide discrepancy in data makes it confusing for the Board to decide. Alastair Millns said the data compared two different winters. 2011-2012 was the most peculiar winter in at least 15 years. He would support the application if there were a real long-term reduction. Nelson Disco agreed; he is not convinced there would be a net reduction.

Parker Village Condominium Association President Stanley Bonislowski said Parker Village did not want to start with numbers, but MVD wanted them. They suggested a 2011-2012 baseline and guesstimate, which is why the numbers do not match up. Pounds per use is a new measure that is not the same as tons. Data about pounds were unavailable years ago. Chairman Best said a baseline is necessary to make a decision. Dave Fredrickson said Green Snow Pro information is derived from Salt Institute data. He is Green Snow Pro certified.

The class is for eight hours on one day. Certification is permanent; retraining and re-certification are not required.

Attorney Manzelli saw no need for temporary approval. Parker Village is committed on record with a binding condition to participate in MVD studies, have certified people remove and manage snow and ice, keep records, ask MVD to approve operators, and use all Best Management Practices. That would suffice to improve the situation. Parker Village is willing to make a strong management plan. That is a lot of assurance.

Alastair Millns said other properties that people 55 and over patronize are coming before the Planning Board and will not be allowed to use any salt. Merrimack Premium Outlets and Dunkin Donuts agreed unconditionally to use no de-icers. Dunkin Donuts will have electric heat in the sidewalks. He could not give long-term unconditional approval. Attorney Manzelli said that Parker Village's restriction is to use no de-icers rather than no salt. Either the innovation did not exist or was not taken advantage of when the Board made the restriction. The Association has the same high liability for injury as the shops. Chairman Best said the goal is safety and the limit is necessary to protect wells. If Parker Village were built today, the Planning Board would probably approve non-sodium chloride ice-melting compounds, but it would not approve 50-80 tons of salt. Previous approval was based on the no-salt promise. There must be something unique or special about Parker Village or other communities will want the same deal. The Board needs more information. The original applicant never kept the promise not to use salt, but his no-salt promise is a hurdle.

Attorney Manzelli would accept temporary relief, although permanent relief is fair. The amount of salt can be substantially reduced. She can commit both for Parker Village and the Commons, which have the same management company.

Nelson Disco was uncomfortable with the numbers and with granting the request. He is concerned about Town drinking water. He would entertain an experiment sanctioned by MVD for a temporary period of time with details about tonnage, etc.

Tim Thompson said these conditions are "grasping at straws". It would be sensible to give him time to talk to the applicant and MVD on which conditions all sides can agree. Chairman Best said Parker Village should have relief and be safe but not by adding salt to the Well. There is a discrepancy in numbers; he wants numbers he can rely on (tons per acre or per storm). Dave Fredrickson suggested including driveways and sidewalks rather than just roadways, type of precipitation and ground and air temperature. Chairman Best noted that these two properties represent almost half the salt load in the Wellhead Protection Area. The application exceeds Dr. Marts's model. Dr. Marts said he used Jim Lambert's tonnage numbers in the final MVD report. Sodium chloride increased over the last 10 years at two production wells and affects water quality. He measures in tons rather than in pounds and factors in the winter's severity. Alastair Millns suggested MVD and Community Development meet to find conditions agreeable to all and present them to the Planning Board. Chairman Best preferred a test program to permanent approval. He wants MVD's opinion about monitor wells, how they are tested and what the goals are.

The Board voted 7-0-0 to continue this item to August 21, 2012, in the Town Hall Meeting Room, at 7:30 p.m., on a motion made by Nelson Disco and seconded by Pete Gagnon.

5. Discussion and possible action regarding other items of concern

Tim Thompson asked whether the June 5, 2012, vote about funds Dunkin Donuts must pay in lieu of a sidewalk should be based on installing one in the right-of-way or on its own property. The Planning Board said it intended it to be based on the right-of-way model.

6. Approval of Minutes

None.

7. Adjourn

The meeting adjourned at 10:42 p.m., by a vote of 7-0-0, on a motion made by Alastair Millns and seconded by John Segedy.