

1 **LONDONDERRY, NH PLANNING BOARD**
2 **MINUTES OF THE MEETING OF MAY 22, 2013 AT THE MOOSE HILL COUNCIL**
3 **CHAMBERS**
4

5 Members Present: Art Rugg; Mary Soares; Lynn Wiles; Laura El-Azem; Chris
6 Davies; Tom Freda, Ex-Officio; Rick Brideau, CNHA, Ex-Officio; John Laferriere, Ex-
7 Officio; Leitha Reilly, alternate member; Maria Newman, alternate member; Al
8 Sypek, alternate member
9

10 Also Present: Cynthia May, ASLA, Town Planner and Planning and Economic
11 Development Department Manager; John Trottier, P.E., Assistant Director of Public
12 Works and Engineering; Jeffrey Belanger, Planning and Economic Development
13 Department Intern; and Jaye Trottier, Associate Planner
14

15 A. Rugg called the meeting to order at 7:00 PM. He appointed L. Reilly to vote for
16 Scott Benson, M. Newman to vote for L. El-Azem until she arrived.
17

18 **Administrative Board Work**
19

20 A. Voluntary Merger – Thomas F. & Jennifer S. Byrne, Map 11 Lot 58-5 (55
21 Alexander Road) and Map 11 Lot 58-82 (1 Justin Circle), Zoned AR-I.
22

23 A. Rugg read a letter into the record from the applicant withdrawing this
24 request.
25

26 B. Discussions with Town Staff
27

- 28 • Gigi's Kouzina - Picnic Tables - 217 Rockingham Road, Map 15 Lot 22-1,
29 Zoned C-II Within the Route 28 Performance Overlay District
30

31 C. May referred to the Planning Board minutes of September 14, 2011,
32 which summarize the Board's decision to allow the change in use
33 associated with Gigi's Kouzina to be handled administratively. The Board
34 had agreed at that time that any further proposed change of use deemed
35 similar by the Senior Building Inspector to the approved retail use would
36 not require site plan approval. The Building Inspector is now requesting
37 confirmation from the Board that the recent request of the owner of Gigi's
38 Kouzina to place three picnic benches on the east side of the lot for the
39 summer months can be handled administratively and will not require site
40 plan approval. The consensus of the Board was to allow the Building
41 Inspector to handle the issue administratively.
42

43 [L. El-Azem arrived at 7:05 PM].
44

- 45 • Woodmont Commons Questions
46

47 C. May relayed a recent request of Town Councilor Tom Freda concerning
48 the list of questions generated by the Woodmont Commons proposal since
49 the applicant's first submission. Councilor Freda asked Staff to determine

1 which questions are still outstanding. C. May reported that Staff has
2 categorized the questions according to topic and determined that roughly
3 one third have been answered. Answers to the remaining questions are
4 largely available now because of the information that has been presented
5 in recent months. Staff will work with the Woodmont Commons
6 Development Team to produce a briefing document in the near future
7 with the complete list of questions and associated answers. Further
8 questions in response to the briefing contents will then be answered,
9 precluding the need for a meeting devoted entirely to Woodmont related
10 questions.

11
12 • Presentation by resident Jack Falvey

13
14 A. Rugg announced that a PowerPoint presentation which resident Jack
15 Falvey, 22 Cortland Drive, had asked to present at this meeting would not
16 be shown as another resident whose name appears in it objected to the
17 use of their name being associated with the presentation. After
18 consulting with the Town Attorney, the decision was made that due to
19 possible libel issues, the presentation would not be shown. Mr. Falvey
20 was welcomed to forward another presentation to staff and the Board, so
21 the contents could be vetted for any potential liable issues and to ensure
22 its contents are germane to the issues at hand.

23 24 Continued Plans

25
26 A. Pillsbury Realty Development, LLC, Map 10, Lots 15, 23, 29C-2A, 29C-2B, 41,
27 41-1, 41-2, 42, 45, 46, 47, 48, 50, 52, 54-1, 57, 58, 59, and 62 – Application
28 Acceptance and Public hearing for formal review of the Woodmont Commons
29 Planned Unit Development (PUD) Master Plan ***[Continued on April 10, 2013***
30 ***to May 8, 2013 and subsequently continued on May 1, 2013 to May 22,***
31 ***2013]***.

32
33 Ari Pollack of Gallagher, Callahan & Gartrell re-introduced developer Mike
34 Kettenbach and the Woodmont Commons Development Team members. He
35 requested that at the end of this evening's discussion, the Board continue the
36 public hearing to the June 5, 2013 meeting at which time the topic of land uses
37 and open space would be revisited to address outstanding comments and
38 questions from the Board. (A. Rugg asked Board members to forward any
39 additional comments and questions about open space to Staff so that they may
40 be addressed on June 5). A further continuance to the June 12 meeting will be
41 requested on June 5, at which time the Fiscal Impact Analysis, Development
42 Agreement, and a summary of the final subarea regulations will be addressed.
43 A third continuance will be requested at that time to a possible special meeting
44 on June 26 to review a draft of the final PUD Master Plan. A. Rugg asked Board
45 members to email Staff with their availability to attend a June 26 meeting.

46
47 Jim D'Angelo of TEC was joined by Joe Ducharme of CMA consultants to address
48 stormwater issues and public/private utilities respectively.

49
50 **UPDATE ON UTILITIES:**

1
2 (J. D'Angelo) "Last time we were here, we talked about the stormwater
3 management program and how our plan was to collect, direct, clean, detain,
4 then release stormwater at a rate no greater than what is being released over
5 our property lines now. That is our obligation. And in the course of that
6 discussion, we had a question from Ms. Chiampa (28 Wedgewood Drive) about
7 the effectiveness of not only the mechanical but the bio-filtration system that is
8 part of that cleaning process and whether that process was effective during the
9 winter. Unfortunately, Jeff Wilson, who is our environmental and wetlands
10 specialist, was not in the audience that night, so he has provided a very detailed
11 response to that question. But in summary, although in the winter, the fields
12 are covered with snow, the bio-filtration system is still functioning during the
13 freeze/thaw cycle. So that, in summary, is the answer to that question and a
14 more detailed analysis was provided by Jeff and submitted to the staff and to
15 the peer review consultant.

16
17 "Tonight, you're going to hear from Joe and he is going to go over the utilities
18 portion and then I'm going to talk about the other aspect of the stormwater
19 management because this particular 600+ acre site is located within the Beaver
20 Brook watershed area and there are particular constraints and impacts for
21 salting and maintenance operations on I-93 and the roadway systems which has
22 impacted that road and was discovered during the environmental study for the
23 I-93 widening. There are a host of requirements that are imposed on the DOT
24 and the municipalities because of that review and I'll talk about those impacts
25 and or our plan and strategies for assisting in meeting the goals set by the Town
26 for minimizing the impact of salting of the Beaver Brook watershed area.

27
28 (J. Ducharme) "We were brought into the project earlier this year to assist with
29 the utilities portion, particularly water and sewer and the ancillary utilities that
30 would serve a development of this size. CMA Engineers background is typically
31 municipal utilities, so this was a good fit for TEC and the project team.

32
33 "In evaluating what services there are today in Londonderry (see p. 2,
34 Attachment #1), the Town of Derry Water and Sewer Department, particularly
35 in this case, the Wastewater Department, was engaged; Manchester Water
36 Works for the supply side, which is Massabesic Lake; Pennichuck Water Works,
37 which handles the distribution here in Londonderry for the public water system;
38 we also contacted Public Service Company of New Hampshire on the power side;
39 Liberty Utilities for natural gas; Comcast for the cable TV and internet; and
40 Fairpoint Communications for landline telephone.

41
42 "The typical utility corridors (p. 3) for all of these utilities as they exist today in
43 Londonderry follow the roadway networks primarily, unless there is cross
44 country departures for prior service. And in this case, utility corridors for the
45 Woodmont Commons development would be to follow development road
46 network. The traditional separation between water and sewer is a minimum of
47 ten feet horizontal separation. We would look to maintain that or more,
48 depending on the layout. Ancillary utilities typically follow the development road
49 network as well, as they do today. So we would look to see those utilities within
50 the roadway corridors as well, and then service individual service lines branching

1 off from there. And again, we would maintain in the planning and design phase
2 adequate separation for water and sewer for maintenance purposes.
3 Londonderry has a requirement for new development for underground utilities.
4 We understand from the Town Planner that that would apply to this
5 development, so that would be the premise of putting all the utilities
6 underground.

7
8 "The existing sanitary sewer system (p. 4) in Londonderry and particularly in
9 this southeastern section of Londonderry, the development would be served by
10 gravity sewers. Primarily, we'd connect to existing gravity sewers. There are
11 three existing pump stations. The Action Boulevard pump station, which is on
12 the east side, serves areas on the east side of I-93. The Charleston pump
13 station, both of which are owned and maintained by Londonderry, serves on the
14 western side of I-93. There is also a third pump station, the Tokanel pump
15 station, which is privately owned but does pump that sanitary waste to the
16 Charleston pump station. [John Trottier clarified that the Tokanel pump station
17 is also owned and maintained by the Town]. The Charleston pump station
18 pumps all of the wastewater to the Derry wastewater facility. And that
19 wastewater facility right now has within the facilities plan a recommended
20 reserve capacity of 864,225 gallons per day (GPD). [John Trottier clarified that
21 the 864,225 GPD reserve capacity identified in the 2005 Wastewater Facilities
22 Plan included only 191,250 GPD for the area east of I-93. The remaining
23 672,975 was allocated for other Town of Londonderry development. He said
24 there is no reason not to believe this 672,975 GPD will not occur]. The facility
25 currently can treat up to 1.9 million GPD with a permitted capacity of 4 million
26 GPD.

27
28 "From the records we obtained and talking to staff at the Department of Public
29 Works and Engineering, there is approximately on an average daily flow basis
30 about 91,400 GPD that gets pumped from the Charleston pump station over to
31 the Derry wastewater facility (p. 5). [L. Wiles verified later on with J. Trottier
32 that the 91,400 gallons referred to is the cumulative amount of the three
33 pumping stations, i.e. Action Boulevard, Charleston Avenue, and Tokanel Drive].
34 The current inter-municipal agreement has a capacity, already pre-purchased or
35 established with the Town of Londonderry of 200,000 GPD. So Londonderry
36 already has 200,000 GPD capacity inline at the Derry wastewater plant and is
37 using 91,400 GPD, so there is a net difference there of over 100,000 GPD.

38
39 "In doing the evaluation, staff at Public Works and Engineering shared with us
40 some documents, some sewer plans. There are some sections of sewer pipe
41 currently that the planned development would tie into that would have to be
42 upsized. There are some 10 and 12-inch pipe, some of which are at flatter
43 slopes and would not have adequate capacity. Those would need to be
44 upgraded as part of the development. At this conceptual level, 15 to 18-inch
45 sewer pipe is recommended, but we would have to see as we get into the
46 planning and site development phase specifically which size would be adequate.
47 Also on the pump station capacity, the Action Boulevard pump station currently
48 has a limited capacity if all of the development in Woodmont Commons were to
49 happen on the east side of I-93. There would be upgrades that would be
50 necessary there. The Charleston pump station, while it has adequate capacity

1 on paper, we understand from staff that the pump station equipment is aging
2 and with the added flow and over the period of time the development would
3 take place, we would anticipate some upgrades to that equipment. And also,
4 even though Tokanel was a private pump station [see J. Trottier's clarification on
5 page 4, lines 16-17), there should be some flow modulating to that because that
6 also pumps to the Charleston pump station. So once all the flow comes to
7 Charleston, the flow modulating at Tokanel pump station would be suggested
8 and recommended by staff to improve the operations at the Charleston pump
9 station.

10
11 "This Projected Sanitary Flow table (p. 6) was developed based on the concept
12 plan, the TND 3A and 1A concept plans, the exemplar plans. Looking at the
13 number of residential development units and looking at commercial, residential,
14 retail, I think there was a hospital development as well, and corresponding
15 subareas that were on the exemplar plan, these are estimated flows at a
16 conceptual level, as well as estimated inflow and infiltration on a conceptual
17 level. But clearly, what you can see is that if the PUD were completely built out,
18 it would not only consume that 200,000 GPD capacity that Londonderry already
19 has at the Derry wastewater facility, but it would go well beyond that. So part
20 of the master planning and agreements with Woodmont Commons would be to
21 enter into some negotiations and discussions with the Town of Londonderry and
22 the Town of Derry to make sure that the capacity is secured. And there would
23 be fees obviously associated with that.

24
25 "This plan (p. 7) shows some connection points for the wastewater. In the lower
26 left or southwestern portion, there's a connection point there to an existing
27 sewer, I believe which ties into Gilcreast and Nashua Road. There's another
28 connection point also to the southwest of that. Those two lower southwestern
29 areas would tie into the Charleston pump station directly through existing
30 gravity sewers or upgraded gravity sewers. The area at the top of the screen to
31 the north and east of I-93, that is the WC-12 subarea; if that were completely
32 built out, there is some added flow there that would connect to an existing
33 gravity sewer. And again, there would likely need to be some upgrades and
34 improvements to some sections of gravity sewer into that Action Boulevard
35 pump station."

36
37 Questions and comments from Board members at this point in the presentation
38 were as follows:
39

40 1. **J. Laferriere asked J. Ducharme to identify those areas where**
41 **sewer upgrades are anticipated.** J. Ducharme pointed to the area where
42 Gilcreast Road meets Nashua Road, as well as Action Boulevard where some
43 sections of gravity sewers near the pump station may require upgrades,
44 along with the pump station capacity wet well and possibly the force main
45 itself.

46
47 2. **J. Laferriere asked what the construction associated with the**
48 **upgrades would entail.** J. Ducharme replied that he anticipated it would
49 involve digging up existing sewer lines to upgrade them.
50

1 **3. J. Laferriere confirmed with J. Trottier that existing buildings on**
2 **the western side of Gilcreast currently use municipal sewer.**
3

4 **4. L. Wiles asked what the consequence would be if Londonderry to**
5 **exceed the aforementioned 200,000 gallon capacity.** J. Trottier replied
6 that an amount would be paid to Derry for the additional capacity which is
7 based on a formula contained in the current inter-municipal agreement. The
8 additional cost would be paid by users of the sewer system and not by other
9 residents who use private leachfields.
10

11 **5. J. Laferriere verified with J. Trottier that costs to existing**
12 **municipal sewer uses could increase as a result of the need to**
13 **increase capacity because of the Woodmont Commons project.**

14 **5a. T. Freda confirmed with J. Trottier that current users not**
15 **related in any way to the Woodmont Commons project may**
16 **have to bear some of that increase in costs.**

17 **5b. M. Soares noted that 1) some amount of maintenance and**
18 **upgrades would occur without the development of Woodmont**
19 **Commons which would increase the rates for current users, 2)**
20 **the increase caused by Woodmont would happen gradually**
21 **since the project would take upwards of 20 years to build, and**
22 **3) when capacity is increased by Woodmont Commons, the**
23 **increase in the base of users would temper the overall rate**
24 **increase.**
25

26 **6. M. Soares also verified with J. Trottier that users are only charged**
27 **for the amount the capacity they consume (currently 91,400 gallons)**
28 **as opposed to the entire 200,000 available capacity.**
29

30 **7. J. Laferriere asked at what point it is anticipated that the entire**
31 **200,000 gallons of current capacity would be used.** J. Trottier replied
32 that he would have to review the current inter-municipal agreement to find
33 out how the use is projected. The agreement, he added is set for
34 renegotiation in 2016.
35

36 **8. A. Rugg asked if the expansion of Route 102 (without the addition**
37 **of Woodmont Commons) was factored into the projected use in the**
38 **current inter-municipal agreement.** J. Trottier replied that it was and
39 that the projection provided to Derry was based on a worst case scenario
40 that included, among other things, the addition of Exit 4A.
41

42 **9. J. Laferriere asked if those who make use of the sewer capacity**
43 **purchased from Manchester could be affected by a rate increase**
44 **caused by Woodmont.** J. Trottier replied it was a possibility that they
45 would be impacted as well.
46

47 **10. J. Laferriere asked J. Trottier when the current inter-municipal**
48 **agreements were negotiated.** J. Trottier answered that the agreement
49 with Manchester was only recently adopted but that he would research when
50 the agreement with Derry was adopted.

1
2 **11. C. Davies asked what the duration of the Manchester agreement**
3 **is.** J. Trottier replied that he believed it is 20 years and thought the
4 agreement with Derry has a similar duration. The next agreement would
5 need to address the potential impacts of Woodmont Commons, along with
6 the rest of projected growth in the area to ensure capacity is not exceeded.

7
8 **12. T. Freda confirmed with J. Trottier that the rate in the inter-**
9 **municipal agreements is locked in for the duration of that contract.**

10
11 **13. J. Laferriere asked at what point resizing of the current sewer**
12 **system would need to take place.** J. Ducharme said it is difficult to
13 answer without knowing the order of the development of the subareas.

14
15 **14. L. Wiles asked for a definition of the "I & I"** (in the third column of
16 the Projected Sanitary Flow chart on p. 6). J. Ducharme replied that it
17 stands for "inflow and infiltration," which is any extraneous flow that enters
18 the system (e.g. through the manhole covers) and is something that is
19 accounted for in any proposed development to avoid exceeding anticipated
20 capacity. The standard used in Londonderry, in accordance with NH
21 Department of Environmental Services (DES) standards, is 150 gallons per
22 acre of undeveloped land.

23
24 (J. Ducharme) "On the water side (p. 8), we did contact Manchester Waterworks
25 and Pennichuck Waterworks. The water that is supplied by Pennichuck through
26 their distribution system comes from Manchester Waterworks and from
27 Massabesic Lake. We did contact Tom Bowen, the engineer there, and there is
28 sufficient capacity to serve the Woodmont development. The distribution and
29 maintenance by Pennichuck Waterworks, the entire distribution system, is
30 operated by them. They maintain it, they operate it. They operate some
31 booster stations in Londonderry and elsewhere through the other communities
32 they serve. One unique thing that we did find and we weren't expecting is there
33 are no water storage tanks in Londonderry. Most communities have a water
34 storage tank for buffering and additional fire flow capacity. They don't exist in
35 Londonderry today. [J. Trottier clarified that it is Pennichuck Waterworks
36 specifically does not have any water storage tanks in town]. So for this area,
37 for Woodmont development, there are no water storage tanks that would serve
38 Woodmont development. So what that means is all flows and all pressures are
39 provided by pumping by their booster stations. The water main sizes
40 throughout existing vary by the service area. There are 12, 16, 24-inch pipe,
41 depending on the service area.

42
43 "In looking at the Woodmont development, as I mentioned, Massabesic Lake has
44 adequate supply (p. 9) to increase flow for the Woodmont development. The
45 distribution system capacity has a 25-gallon per minute (GPM) pumping capacity
46 and that has some limitations that would need to be addressed as the
47 development went forward. Initially, for probably about one third to one half of
48 the development, there would be no upgrades needed to the Pennichuck
49 distribution system but ultimately, they would need to make, if there were no
50 water storage tank installed as part of the development or within the

1 development, then ultimately they would need to make some improvements to
2 their booster station and some of their piping. Right now, accessing the
3 Woodmont development are two pressure zones. Water systems typically
4 operate at what they call a 'hydraulic grade line,' or pressure zone, created to
5 provide equalized pressure throughout that section of the distribution system.
6 There are two pressure zones; the optimum pressure zone for Woodmont would
7 be the higher pressure zone. If the full built out of Woodmont happened,
8 Pennichuck would either need to put in a water storage tank or upgrade booster
9 station intake piping and some distribution system piping. Pennichuck did point
10 out if there were an opportunity to put a water storage tank in, and they did
11 indicate that they would be interested in having one in Londonderry, because of
12 the different grades and elevations that range throughout the Woodmont
13 Commons property, they would see benefits to having a water storage tank for
14 fire suppression, having the added capacity in the system, because right now,
15 any fire suppression has to come from their booster stations and they do have
16 ways to manipulate the existing booster stations in an emergency. But having a
17 water storage tank would equalize pressure in the area, provide better fire flow
18 protection and ultimately...right now, Pennichuck pays and the rate payers pay
19 demand charges for peak flow usage; having a water storage tank in the area
20 would also help temper that. So in the summer months, for example, if people
21 are irrigating, washing cars and things like that, creating peak demands, there's
22 a demand charge that gets paid and passed through to the rate payers, so
23 having a storage tank would help with that as well. If we go to the map, I'll
24 point out some of these things which might be a little clearer on the map.
25

26 "So over to the left here (p. 10) is the Mountain Homes booster station. There
27 is some color coding to the map; there's kind of a purple color coding that goes
28 along with the piping. There are other color codes as well. This Mountain
29 Homes booster station provides a hydraulic grade line (HGL) of 600 or 620 feet.
30 And that would tie into the Woodmont development right here. So this would be
31 one connection point to get to that higher HGL. And that would be needed
32 because the elevation difference within the entire development is between, I
33 think, 450 and 550 feet or so. So we would need a higher pressure zone to
34 serve equalized pressure within the Woodmont development. There is another
35 HGL, or lower pressure, system also into Pennichuck's system, which I believe is
36 480 feet. And that would be a potential connection point to the lower pressure
37 zone but ultimately, as Woodmont got developed, this connection would be
38 terminated and it would all be served by the higher pressure line. Any questions
39 on the map or connection points?"
40

41 **1. Al Sypek confirmed that the low pressure zone is supplied by the**
42 **Gilcrest Road pumping station.**
43

44 **2. Art Rugg asked what degree of pressure is typical for water flow**
45 **in an average household, particularly for fire protection.** J. Ducharme
46 said the industry standard is 45 psi at the tap but during fire demand, it can
47 drop to the lower recommended threshold of 20 psi. The Mountain Homes
48 booster station, he added, could provide 50-55 psi to the portion of
49 Woodmont Commons it would serve, while the southeastern portion could
50 expect 45-50 psi from the lower HGL service point.

1
2 3. Although it was understood that the map on page 10 was conceptual in
3 nature, **M. Soares requested that the realignment of Pillsbury Road**
4 presented in an earlier hearing **still be included in the plan** since it was
5 not shown on this particular map. J. D'Angelo said the intent is still to
6 realign the road as discussed previously.

7
8 (J. Ducharme) "Regarding ancillary utilities (p. 11), we did contact PSNH,
9 Fairpoint, Comcast, and Liberty Utilities. Those are utilities that currently serve
10 residents in Londonderry. They do indicate that they have adequate capacity for
11 partial buildout. Each of them would be engaged early in the process to
12 understand how the development would be phased over 10 or 20 years so that
13 they would know what upgrades they need to make. Liberty Utilities, for
14 example, has an eight inch high pressure gas main on Nashua Road. They
15 might want to extend that at some point to loop it into the gas distribution
16 system they have in Derry, which would normalize pressure and actually give
17 them better capacity. PSNH, in order to put their power underground, would
18 need to upgrade some transformers at some point and change some of the
19 three phase wiring that they have to be compatible with that, but again, that
20 depends on how much gets built and how quickly. They do have capacity to do
21 two or three subareas, but looking at the entire development, they would need
22 to make some upgrades. Same with Comcast and Fairpoint; they would look at
23 getting master plan documents and once it gets into perhaps building one or two
24 of the subareas, look at the subdivision plans and then start to map out when
25 they would need to make some changes. Most of these utilities have ways to
26 absorb the cost of the installation and upgrade of the utilities based on
27 spreading it out over the rate payers and actually adding new rate payers to the
28 system. They do a kind of a pro forma and look at how that balances out. So
29 it's unknown today as to how this gets phased and how quickly it gets built, as
30 to whether there would be any impact fees to Woodmont or to any of the
31 residents in general. Most of the utilities would look at adding customers. So
32 they would recoup costs by adding customers. In all cases, they would follow
33 predominantly the roadway network and then branch from there.

34
35 "In conclusion (p.12), all of the utilities have some existing capacity to
36 accommodate a partial build. Again, phasing would make a difference. Sewer
37 improvements and additional treatment capacity are needed for full buildout.
38 That's evident even at the conceptual level. There would need to be
39 negotiations and discussions with the Town of Derry to look at treatment
40 capacity. Clearly, as subdivision plans were submitted and in looking at hard
41 design numbers, then I think it would be evident as to how much sewer gets
42 replaced and with what sizes. The water supply, the supply side from
43 Massabesic Lake from Manchester Waterworks is adequate, but again, the
44 Pennichuck Waterworks distribution system would have some limitations for full
45 buildout and that would need to be reviewed as the project went forward.
46 Power, natural gas, phone, cable; again, they have adequate capacity for partial
47 build. They would look at making improvements as the project goes forward.
48 They would also look, each of them, at how many rate payers they are adding
49 and what that cost means to them versus the revenue stream as to whether
50 there would be any financial impacts."

1
2 Questions and comments from Board members at this point in the presentation
3 were as follows:

4
5 **1. L. Wiles confirmed that gas lines would be placed in the**
6 **Woodmont Commons development and that they would support both**
7 **the residential and commercial areas.**

8
9 **2. C. Davies asked that it be made clear that costs associated with**
10 **changes to municipal infrastructure needed to support the full**
11 **buildout of Woodmont Commons would be the responsibility of the**
12 **developer.**

13
14 **3. C. Davies expressed the importance of the developer's**
15 **commitment to install all utilities underground as presented.**

16
17 **4. C. Davies asked that Pennichuck be consulted as to where a water**
18 **tower might be located and what design could be anticipated.** J.
19 D'Angelo replied that a location is difficult to address at this stage, but that
20 the high point in the northwest part of the development would be logical and
21 that the design could be above ground, below ground, or some combination
22 of the two. He noted that other existing residential, commercial, and
23 industrial areas outside of Woodmont Commons could benefit from such a
24 water tower. A. Rugg added that input from the Fire Department should be
25 sought if and when a water tower is being considered. J. Ducharme stated
26 that Pennichuck Water Works would be part of the discussion as well, since
27 they employ a water system model to calculate any additional use of their
28 system.

29
30 A. Rugg entertained comments and questions from the public. They were as
31 follows:

32
33 **1. Ann Chiampa, 28 Wedgewood Drive, asked that if a water tower**
34 **were to be placed at the high point in the northwest area as**
35 **discussed above, it either be placed underground or located**
36 **somewhere away from the cemeteries in that area.** She added that if
37 the tower was placed on land in that area owned by Pennichuck, that the list
38 of abutters associated with Woodmont Commons be expanded to her
39 neighborhood since it abuts the Pennichuck land.

40
41 **2. A. Chiampa asked if water pressure in her neighborhood would be**
42 **affected by the addition of a connection point north of the existing**
43 **point at Gilcreast and Pillsbury Roads.** J. Ducharme said the pressure
44 would be maintained and regulated by the Pennichuck booster, although
45 upgrades to the booster station and piping or installation of a water tower
46 would likely be needed at full build out of Woodmont Commons.

47
48 **3. A. Chiampa asked where water from Manchester Water Works**
49 **enters Londonderry.** J. Trottier said the flow comes down Mammoth Road

1 and continues both south on Mammoth as well as east on Rockingham Road,
2 under I-93, to Derry.

3
4 **4. A. Chiampa asked if a map of the water distribution will be made**
5 **available to the public via the website.** J. Ducharme replied that utility
6 companies typically do not make such maps available to avoid contamination
7 issues. He offered instead to contact Pennichuck about the possibility of
8 having the map available in the Planning Department.

9
10 **5. Joe Maggio, Cortland Drive, asked how existing wells would be**
11 **impacted by construction of the development and/or installation of**
12 **the water connections.** J. D'Angelo said that since the development will
13 not be drawing from the water source used by residential wells around it,
14 existing wells should not be affected. A. Rugg said any blasting would
15 include a pre-blast survey to surrounding properties.

16
17 **6. Joe Maggio confirmed that the flow from the "pond" just south of**
18 **the intersection of Pillsbury and Gilcreast will not be changed**
19 **because of the development.** J. D'Angelo added that the intent is to
20 improve the wetland, but that would not include changing the direction of the
21 flow.

22
23 **7. Mary Tetreau, 15 Isabella Drive, asked what entity will pay for the**
24 **costs associated with the development, e.g. utility upgrades.** J.
25 Ducharme said that overall costs will be part of the fiscal impact analysis
26 discussion to tentatively take place in June. Costs associated with the
27 upgrades to utilities and infrastructure caused by the need to increase
28 capacity, he said, will be the responsibility of the developer. M. Kettenbach
29 confirmed this and said it would continue through the duration of the
30 development. Simply put, he said, if individual improvements cannot be paid
31 for, that portion of the development will not take place. If a piece of land
32 within Woodmont Commons is sold off to another developer, the master
33 developer will ensure that the new developer pays their share of any needed
34 improvements.

35
36 **8. M. Tetreau stated that the Woodmont Commons development will**
37 **be tax negative and will result in higher property taxes for existing**
38 **residents.** It was restated that any certainty of current users of municipal
39 sewer having to pay increased rates for upgrades is unknown at this point.
40 J. D'Angelo noted that unlike the relatively low amount of taxes coming from
41 the orchards in their current use, they will contribute much more to the tax
42 base once they are developed. Costs and revenue streams will be addressed
43 when the fiscal impact of the project is discussed.

44
45 **9. M. Tetreau stated her objection to the idea she found in local**
46 **papers that the developer has made a legal attempt to avoid paying**
47 **impact fees associated with the project.** Town Attorney Michael
48 Ramsdell clarified that no claim, petition, or action is pending in any
49 administrative or judicial forum related to Woodmont Commons and impact
50 fees.

1
2 **10. Ray Adams, 22 Devonshire Drive, asked if the public has access**
3 **to correspondence related to Woodmont Commons under The Right**
4 **to Know Law (RSA 91-A).** It was confirmed that the public does have that
5 right. A. Rugg and M, Soares said Board members do not email one another
6 or the developer and only discuss the topic at the public hearings. Emails
7 received by Board members from the public, A. Rugg added, are read at the
8 meetings. **R. Adams asked to whom any request under RSA 91-A**
9 **should be directed.** He was told such a request should be submitted to the
10 Town Manager.

11
12 **UPDATE ON STORMWATER:**

13
14 (J. D'Angelo) "Normally, we would have to be concerned about topography and
15 how we would capture and direct and clean and store and detain before we
16 released and use best practices to produce the cleanest water possible, but in
17 this instance, we have another overlay issue. And that is that this particular
18 development lies within the Beaver Brook watershed. I did not know that when
19 I first came here, but John [Trottier] has enlightened me to a number of reading
20 tasks. The first was the DES chloride reduction implementation plan for Beaver
21 Brook and it summarizes the fact that the brook has been impacted by salting
22 operations on highways and local roadways in the towns of Derry, Londonderry,
23 Chester, and Auburn. And this document lays out a slew of alternatives, all
24 aimed at improving the way that the roads are taken care of within this
25 watershed area. And not only improving it, but monitoring it to see how well
26 each community is doing against their goal.

27
28 Londonderry produced their specific salt reduction plan [document] and the
29 Town of Londonderry committed to a host of actions that are Londonderry
30 strategies that are on the slide now (p. 14), taken from that document which
31 says 'These are the kinds of things that we can do to reduce our impact on this
32 watershed.' And first and foremost is equipment upgrade and that has the
33 biggest impact because I think last time that I was here, we talked a little bit
34 about salting and how salt is an effective tool for dealing with icing between a
35 certain number of degrees. And I think traditionally, it was easier to 'more salt
36 is better.' You know, 'What's the salting formula?' 'Well, we want to have bare
37 roads around here and we want to have them as passable and safe as possible,'
38 so there are some communities that said 'We have a bare roads policy.' And it's
39 a function of when they hit those roads, and how long their routes are in order
40 to clear roads and when they call that equipment out. Maintenance operation on
41 the surface looks like 'Well, we just put a plow on the front of a truck and off we
42 go,' but it has been becoming a more and more sophisticated operation. And in
43 this particular watershed, it necessarily has to be because we can't afford to just
44 spread salt the way that we have traditionally done in the past and allow it to
45 bounce off of pavement and hit the sides and then come back and hit it again or
46 wait, not hit the road early and end up with a pack of snow on there and then
47 try to deal with the pack by throwing salt on it.

48
49 "So Londonderry's first strategy is 'we're going to upgrade our equipment and
50 invest in equipment that has been identified in this implementation plan. And so

1 I think that they've already invested in new underbelly discharge, six wheel
2 trucks with pre-wetting and ground speed monitors. Now, just that in itself will
3 have a dramatic impact on how much salt goes down and how effective it is.
4 But that's one component. "There is improved calibration, which says 'Not only
5 I'm pre-wetting, but how much wetting am I doing?' And 'Should I hit this
6 roadway with brine early on so I'm pretreating the road as opposed to trying to
7 de-ice the road after it has been set?' And the last item is this Improved
8 Weather Systems; knowing, 'It looks like its 31 and rising. I'm going to make a
9 bet that it's rising and so I'm not going to hit this roadway with salt.' And the
10 importance of that, the value of that information, how it's gathered and how it's
11 shared, not just in Londonderry but in Derry and Chester and Auburn, as well as
12 I-93 and DOT. So there is improved weather system monitoring and
13 maintenance to better recognize what the appropriate treatment is and hit that
14 road with the appropriate treatment at the appropriate time with the appropriate
15 amount. And again, the cheapest stuff is calcium chloride. But it gets more
16 expensive when you use other versions of chloride. All of them have the same
17 impact on the water system, but each of them are effective between different
18 temperatures. But upgrading the equipment and improving the calibration and
19 understanding the weather systems will have a dramatic impact on how much
20 salt is applied.

21
22 "Londonderry has agreed to reduce their total demand in the watershed area by
23 18% through the next three years and DES and DOT will monitor it each and
24 every year because it's a ten year average that they look at because you may
25 have one year that was 'Oh, we didn't have much snow. Great, we met our
26 criteria.' The next year you have more snow, so you have to use a ten year
27 running average. And DES and DOT will monitor it each year and then revisit it
28 in 2016 and determine how effective we have been and what other steps. It is
29 meant to be a dynamic plan and John [Trottier] enlightened me to
30 Londonderry's dynamic plan.

31
32 "But you see, the third bullet on there is private sector outreach. And that's
33 where we fall. We're a private development within this watershed area and
34 there are a host of other private developments already in this watershed area
35 and the way that the water flows, we're at the end of it. So all the stuff that's
36 happening in Derry and Chester and Auburn comes down the watershed and
37 comes through our property and then gets released. But all those existing
38 roadways and parking lots are treated with their concern for liability. 'I don't
39 want anybody slipping and falling over here on my retail development or my
40 sidewalk in front, so more is better.' And there are certain actions that DES and
41 DOT are trying to do with the legislature to try to, not eliminate liability, but
42 redefine liability for best practices that recognizes the impact of 'more is better.'
43 And maybe not get a bare roads policy but get something which is serviceable,
44 functional and the public is informed that 'I'm sorry, I know that you're used
45 to traveling on this I-93 stretch at 60 mph right after the truck goes by,' but
46 flashing message signs are going to tell you that this is 35 to 45 mph and that's
47 the way that it's got to be because you're going through just like you go through
48 Franconia Notch. There's no salt that goes through Franconia Notch because
49 that is the way the Environmental Impact Statement (EIS) said in order to build
50 through Franconia Notch.

1
2 "So we fall in that private sector outreach area and it comprises over 40% of the
3 impact on Beaver Brook. We've said 'Let's see what kind of strategies that we
4 can come up with because we're a private development.' And yes, you have a
5 problem and the State has a problem, but I think you have a problem. But I'm
6 going to make it your problem, too. So you have to help me solve our problem
7 9p. 15).

8
9 "At first and foremost, I think that Woodmont can develop private contractor
10 training and equipment requirements, so we have a specification for people who
11 are going to be plowing and salting and sanding and scraping these roadways;
12 that the only people who can do that are people who have gone to the UNH
13 technology transfer training program and are certified. They understand how
14 sensitive it is to operate this equipment properly and in that specification, as we
15 look to our contractors who are going to be taking care of our roads, it will be a
16 requirement, not only that this is a kind of certification that they have, but this
17 is the kind of equipment that they must have.

18
19 "And as far as improved weather system information sharing, this is the network
20 of information sharing; social network connecting to DOT and to Londonderry so
21 that we all make informed decisions about how we're going forward and treating
22 these roads. I think the next one, this "Increased Mechanical Capabilities," this
23 is the most dramatic. This has the greatest impact because when the Town
24 sends out a truck, you have a route which is defined for that truck, so you can
25 do all the best that you can and try to pretreat and wet the material so it
26 doesn't bounce off, but that route is usually something of substantial length and
27 the truck usually gets sent out under certain criteria like DOT has. It has to be
28 four inches before we send a truck out. Well, we're a private entity. We don't
29 have to deal with waiting for four inches, nor do we have to deal with having a
30 long route to take care of. We can define shorter routes and the sooner that
31 you hit it with the blade, and if the blade is pressurized, that's why they have
32 the belly system, because you don't want shoes under the plow blade, you want
33 a strong blade under pressure hitting the surface so you get down to bare
34 ground. And the more that you can do that, the less that you need salt. So this
35 increased mechanical capabilities is something that we believe is an important
36 aspect for our development and developing a set of specifications that we will
37 procure services for.

38
39 "I think the last thing, which is again an important aspect, is we're going to have
40 sidewalks in this development. And sidewalks are where people walk. And
41 sidewalks are where people are concerned about slipping falling. And
42 sometimes in front of each development in each alcove, because people are
43 coming to your business, you will see a big pile of salt there and they're
44 throwing it on their walkways. So we're going to require that that sidewalk be
45 cleared as part of the contract agreement to clear the streets. And as we take
46 material out, because in some areas we will have parking lots and you will see
47 big parking lots like Market Basket's parking lot, for instance, we pile it up. We
48 push it and pile it up. And over time in the springtime we lose some parking
49 spaces and over time, it melts away. For this development, we're going to have
50 to haul it away because some of the streets that we are talking about in this

1 palette don't have room to push it all over the place. It's going to have to be
2 taken out as they do in Portsmouth. They take it out, pile it up and then get it
3 out and when it leaves, it has to go to some place which is outside the
4 watershed area. So those are the kinds of things that we're investigating and
5 identifying as our strategies to help the town deal with the salting issue on
6 Beaver Brook. And we're hoping that Woodmont can become a model that
7 potentially can be used for the other 40% of the private developments in the
8 watershed area. And right now there is no overlay requirement. There is
9 nothing that says 'If you have a private roadway, you must contract with
10 somebody who is certified as a provider or has gone through the UNH T-Square
11 program.' But in 2016 if this, or even in the annual monitoring, the Town and
12 the State and the private outreach is not being successful, then some other
13 strategies will be defined. But I think we've accomplished what we were
14 supposed to accomplish and the Town Staff and peer review consultant have
15 assured that we do that, which is understand what you're getting into. You just
16 don't have to clean and take care of your water onsite. There is another
17 element that is associated with development in this area because of the existing
18 conditions at Beaver Brook."

19
20 J. Trottier expanded on the DES Total Maximum Daily Load (TMDL) study,
21 explain that the resulting percentages of salt allocated to the Town and private
22 development that is introduced into the Beaver Brook watershed does not take
23 into account any future development, Woodmont Commons or otherwise. He
24 said it is impossible to adhere to the percentages allocated to the Town and
25 private development with any new development occurring.

26
27 (J. D'Angelo) "And I apologize for not emphasizing that. That's right. Because
28 that plan has a line item in it. This (TMDL) plan is done without any estimate for
29 growth. So any development that happens as a private entity within this
30 watershed area, whether it is in this town or the other town, will impact that
31 watershed. I think as I read more closely; now, we're trying to achieve 18%,
32 but if you truly did all the items that have been identified in the DES study,
33 there are some countermeasures that get you to 30% reduction. So there is
34 room to achieve greater than 18%. You have picked 18%. What we're saying
35 is that we can help you as a mechanism to take care of the 40% and we should
36 do our fair share and perhaps as best we can to become a model and to more
37 than take care of our roadway network as it is planned. And, as I said, I think
38 of all those things that are on there, this "Increased Mechanical Capabilities" and
39 taking the material offsite and out of the watershed area, those are the two
40 biggest things that we can do. And if we could get our neighbors to participate
41 in pretreating, brining, as opposed to just dumping salt down, it would have a
42 dramatic impact on the watershed."

43
44 A. Rugg asked for additional input from Staff. There was none.

45
46 A. Rugg asked for questions and comments from the Board. They were as
47 follows:

- 48
49 **1. C. Davies asked what the legal consequences are if the Town does**
50 **not meet the standards set by the State regarding salt limitations. J.**

1 Trottier replied that the Town's MS-4 permit is based in part by the Town's
2 plan to reduce salt use. He added that the Federal government has made
3 local governments responsible for private development salt use. Exceeding
4 the limitation would place the Town in violation of the Clean Water Act.
5

6 **2. C. Davies and J. Laferriere asked how realistic long term**
7 **enforcement of salt limitation within private developments could be.**

8 J. D'Angelo said monitoring and accountability would be the key. A. Pollack
9 stated that while enforcement will be a challenge, legal constraints will be put
10 in place as conditions of approval of the PUD Master Plan as well as individual
11 site and subdivision plans. Restrictive covenants can be employed to
12 obligate future owners within the development regarding salt use.
13

14 **3. J. Laferriere stated that salt use by individuals needs to be**
15 **considered as well, particularly with the residential density being**
16 **considered for this project.**

17 J. D'Angelo said that the majority of that use
18 will be controlled and regulated by the associations of the residential areas,
19 which will be responsible for such things as winter maintenance. Again,
20 containment and treatment of the water will play a large part as well.

21 **4. L. Wiles asked about stormwater management techniques other**
22 **than those related to salt use.**

23 J. D'Angelo said the plan will rely on
24 capturing and directing stormwater to swales where both mechanical and
25 bio-filtration techniques will be utilized to treat the water before it is released
26 past the property boundaries. Rain gardens will also be used to treat
27 stormwater from subareas with high impervious surface such as WC-1 and
28 WC-2 before entering the proposed pond on WC-3.

29 **5. L. Wiles stated that mitigation to the impact on the watershed**
30 **with regard to runoff and increased potential for flooding must be**
31 **addressed.**

32
33 **5. L. El-Azem stated the importance of public awareness and**
34 **education about salt reduction,** noting that the methods developed by
35 Woodmont Commons could have a very significant and positive impact on
36 that awareness and education for the rest of the town.
37

38 A. Rugg asked for questions and comments from the public. They were as
39 follows:
40

41 **1. Russ Lagueux, 2 Fiddler's Ridge Road, commended the**
42 **development team for consulting the UNH stormwater runoff**
43 **program.** Training of private contractors about salt use is something not
44 only the developer should consider, but the Town as well. Monitoring, he
45 said, should also be considered like that done for the development of Map 7,
46 Lot 40-5 where pre and post development runoff was measured both during
47 winter and summer months to monitor the amount of runoff and its quality.
48

49 **2. Roy Bouchard, 19 Buttrick Road, noted that even if Woodmont**
50 **Commons limit's the use of salt within the development, it will still**

1 **be a significant increase considering very little salt is used within**
2 **that total acreage now.** Training of private contractors, he added, is vital
3 to reducing salt use.

4
5 **3. Gary Vermillion, Planning Board Liaison to the Budget Committee,**
6 **asked if the Planning Board is considering restricting the number of**
7 **site plans that can be approved in a year as they have done in the**
8 **past.** A. Rugg explained that the method being referred to from the 1980's
9 was deemed arbitrary by the Courts and stopped. He stated that the Town
10 now uses a Growth Management Ordinance as well as a phasing ordinance
11 to control the rate of growth in town.

12
13 A. Rugg and M. Soares also read three letters from the public into the record:

14
15 1. **Jack Falvey, 22 Cortland Drive, asked in his letter that the Board**
16 **help to preserve the Town's heritage by reserving subareas WC-4 and 5**
17 **as open space (in the form of decorative, maintained orchards). The**
18 **residential use currently planned there could be shifted to WC-12 and**
19 **the open space planned for WC-12 could then be reduced.** A. Rugg stated
20 that the discussion about open space is not complete, but noted that this
21 specific request favors open space for only one set of the many abutters to the
22 project. Abutters in other areas have made similar requests, he added, that also
23 have to be considered.

24
25 2. **J. Falvey also wrote to other residents via email stating that as of yet,**
26 **the Board has not required anything of the developer, nor have**
27 **concerns and questions made by the public and others been addressed.**
28 He stated that he would be sending a letter to the Board (see above), asking
29 that it be read into the record. The email was then mailed to A. Rugg and M.
30 Soares by **Walter and Marilyn Stocks of 39 Gordon Drive who added that**
31 **they agreed with J. Falvey's statements.** A. Rugg noted that the Board is
32 still in the stage of taking in information from the applicant as well as input from
33 Staff and residents, and that no decisions have been made to date.

34
35 3. In an email to Board member L. Reilly, **Mary Tetreau, 15 Isabella Drive,**
36 **stated her concern for the number of residences compared to earlier**
37 **plans, potential impacts to existing roads based on the number of car**
38 **trips discussed, and the tax negativity the development would have on**
39 **the town.**

40
41 M. Tetreau asked to speak again. She asked that the minutes reflect that J.
42 Falvey had intended to make a presentation, to which she intended to add her
43 own comments. Mr. Falvey's first amendment rights, she said, were denied by
44 the Planning Board Chair because he was denied the opportunity to make the
45 presentation based on the mention of legal possible action by a former owner of
46 Woodmont Orchards (see item under Board Discussion, p. 2). The presentation,
47 she added, was made available to A. Rugg and Town Staff on the morning of
48 May 22. She asked the Chair to address the issue. Town Attorney Michael
49 Ramsdell replied that the assertions were factually inaccurate. He said that he
50 and the Chair told J. Falvey he was welcome to speak at the meeting as long as

1 what he said or asked about was relevant to the proceedings of the meeting.
2 His first amendment rights were therefore not violated. Instead of speaking, he
3 explained, J. Falvey chose to provide M. Ramsdell with a disk that he asked be
4 reviewed prior to the next public hearing on June 5. J. Falvey stated he would
5 contact M. Ramsdell about the disk before that meeting. M. Tetreau stated she
6 still felt J. Falvey's first amendment rights were violated. She added that there
7 has been an overall lack of public input in this entire process. A. Rugg replied
8 that the public has had more than enough opportunity to make comments
9 and/or ask questions.

10
11 There was no further public input.

12
13 **M. Soares made a motion to continue the Woodmont Commons PUD**
14 **Public Hearing to the June 5, 2013 Planning Board meeting. L. Wiles**
15 **seconded the motion. No discussion. Vote on the motion, 9-0-0.** A. Rugg
16 stated that the public hearing was continued to June 5, 2013 at 7PM.

17
18 **Other Business**

19
20 M. Soares asked if the letter recently sent to the Town Manager by Stantec
21 would be discussed by the Board. A. Rugg said the letter had been provided to
22 the Board for informational purposes only. M. Soares asked if had been read
23 into the record at the May 20 Town Council meeting. T. Freda said it had not
24 been.

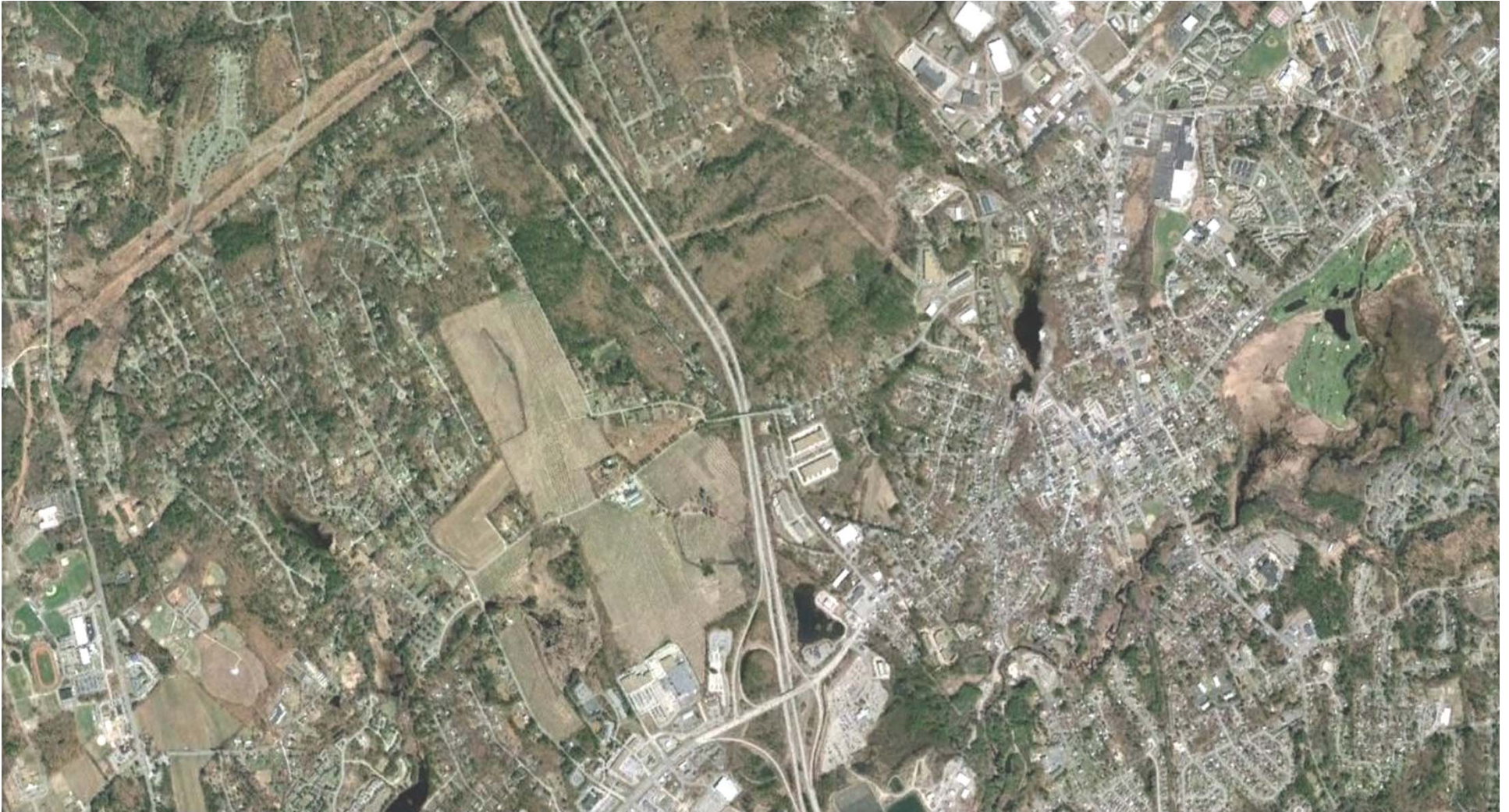
25
26 **Adjournment:**

27
28 The meeting adjourned by consensus at 9:40 PM.

29
30 These minutes prepared by Jaye Trottier, Associate Planner

31
32 Respectfully Submitted,

33
34
35 Lynn Wiles, Secretary



UTILITIES BRIEFING

Utilities Serving Londonderry

- Town of Derry Water & Sewer (wastewater)
- Manchester Waterworks (supply)
- Pennichuck Water Works (distribution)
- Public Service Company of NH (power)
- Liberty Utilities (natural gas)
- Comcast (cable TV / internet)
- FairPoint Communications (telephone)

Utility Corridors

- Water and Sewer to follow development road network with minimum 10-ft horizontal separation
- Ancillary utilities will follow development road network with adequate separation from water & sewer
- Londonderry's requirement for underground utilities will require permanent easements for power, natural gas, cable and telephone

Existing Sanitary Sewer System

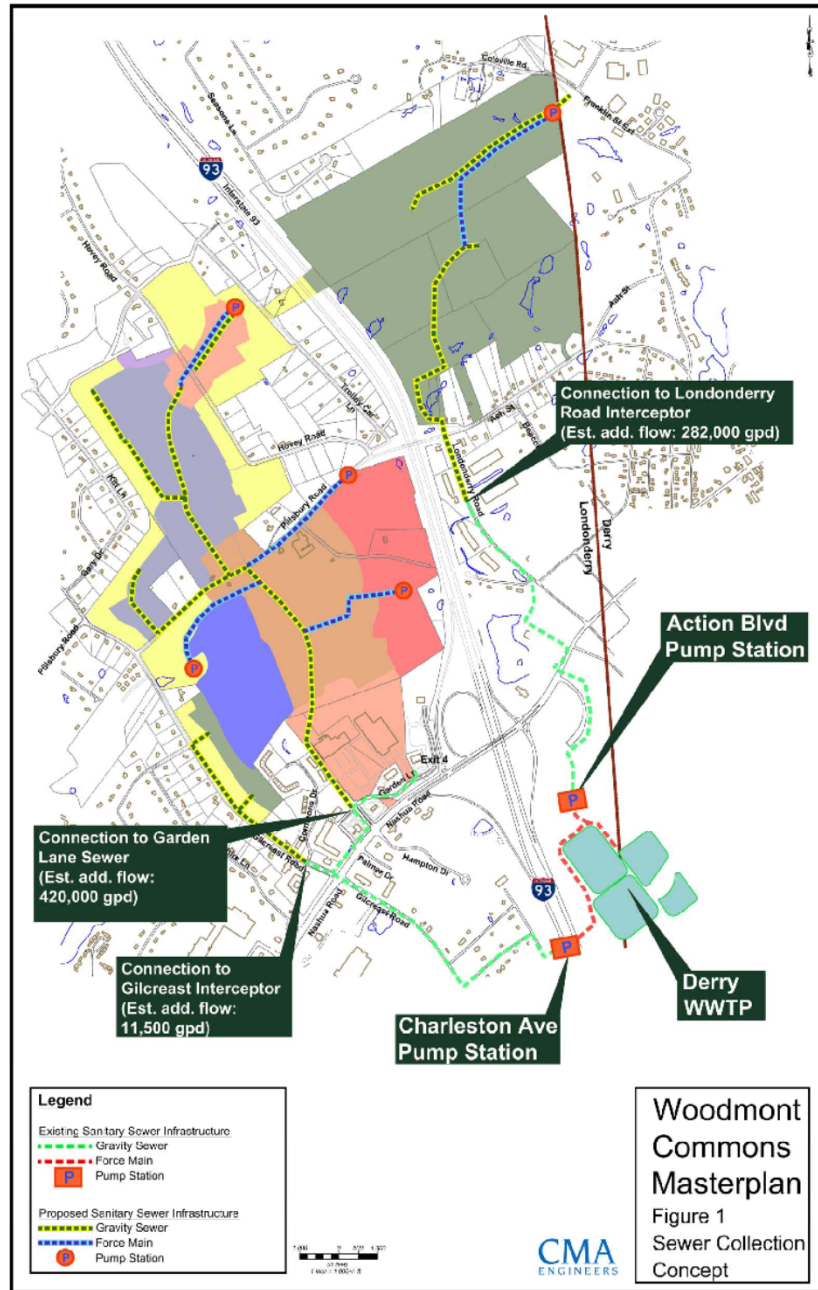
- Development area served by gravity sewer and 3 pumping stations
- Action Boulevard PS and Charleston PS owned and maintained by Londonderry
- Tokenal PS privately owned
- All wastewater pumped to Derry WWTF for treatment via the Charleston PS
- 2005 Wastewater Facilities Plan recommends that Londonderry reserve 864,225 gal per day capacity at the Derry WWTF

Sewer and Treatment Capacity

- Londonderry currently generates 91,400 gpd
- Derry WWTF capacity is adequate with fees to be paid for increased wastewater flow above 200,000 gallons per day
- Gravity sewer capacity is adequate in most areas with sections of 10" and 12" pipe to be upgraded to 15" to 18" sewer pipe
- Pump station capacity – Action Blvd PS upgrades needed; Charleston PS equipment to be replaced; Tokenal PS flow modulating

Projected Sanitary Flow

Projected Sewer Flows from the Proposed Woodmont Commons PUD.				
Sub-Area	Estimated Flow from Development (gpd)	Estimated Flow from I&I (gpd)	Total Estimated Flow for Each Sub-Area (gpd)	Total Estimated Flow (cumulative) (gpd)
WC-1	174,500	11,850	186,350	186,350
WC-1-GL	13,750	6,000	19,750	206,100
WC-2	93,770	7,950	101,720	307,820
WC-3	-	-		307,820
WC-4	6,130	1,500	7,630	315,450
WC-5	2,310	1,500	3,810	319,260
WC-6	3,360	2,250	5,610	324,870
WC-7	5,040	3,600	8,640	333,510
WC-8	48,300	10,800	59,100	392,610
WC-9	10,500	4,800	15,300	407,910
WC-10	13,800	2,550	16,350	424,260
WC-11	5,040	2,100	7,140	431,400
WC-12	251,500	30,450	281,950	713,350

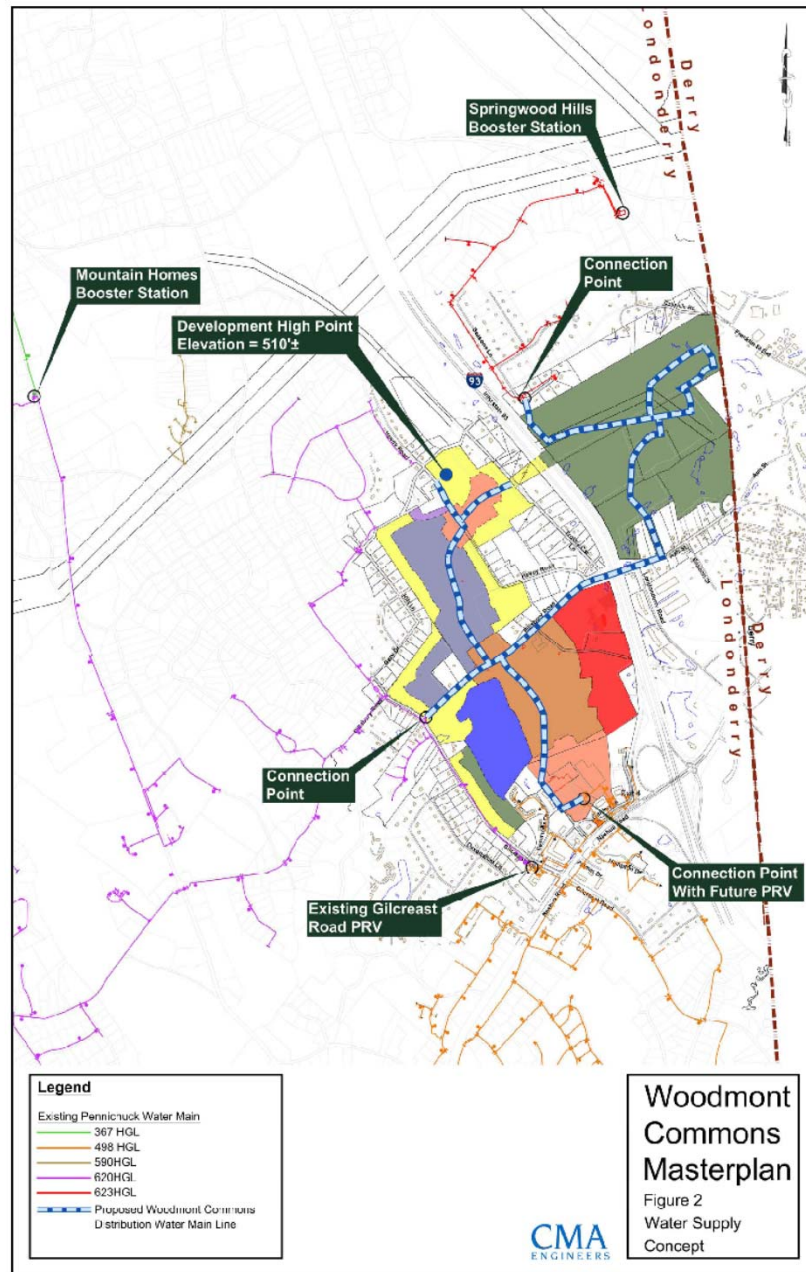


Existing Water System

- Water supplied by Manchester Waterworks from Massabesic Lake
- Distribution and maintenance by Pennichuck Water Works, Inc.
- No water storage tanks in Londonderry
- All peak demands met by pumping
- Water main size varies by service area

Water System Capacity

- Adequate supply from MWW Massabesic Lake
- Distribution system adequate for partial development with 2500 gpm capacity
- Two pressure zones adjacent to the development
- Optimum service from higher pressure zone at full build-out
- Storage tank would improve fire flow and domestic use



Ancillary Utilities

- Each utility currently serves customers surrounding the development
- Adequate capacity for partial build with upgrades required for full build-out
- Each utility will need to analyze sequence of development and full-build demand
- Utility corridors expected to follow development roadway network

Conclusions

- Capacity exists with all utilities to accommodate partial build
- Sewer improvements and additional treatment capacity needed for full build-out
- Water supply is adequate but distribution improvements required for full build-out
- Power, natural gas, phone and cable have adequate capacity for partial build with each utility requiring some level of improvements to meet full build-out

Beaver Brook Watershed

Salt Reduction Plans

Londonderry Strategies

- Equipment Upgrade
- Improved Calibration
- Private Sector Outreach
- Improved Weather Systems

Woodmont Commons Strategies

- Private Contractor Training and Equipment Requirements
- Improved Weather System Information Sharing
- Increased Mechanical Capabilities
- Monitoring On-site