



*The Commonwealth of Massachusetts*  
*Executive Office of Energy and Environmental Affairs*  
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July 6, 2018

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS  
ON THE  
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Greenwood II Residential Subdivision  
PROJECT MUNICIPALITY : Holden  
PROJECT WATERSHED : Wachusett  
EEA NUMBER : 15868  
PROJECT PROPONENT : Jackson Woods Investments, LLC  
DATE NOTICED IN MONITOR : June 6, 2018

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR) based on impacts disclosed in the Environmental Notification Form (ENF). If subsequent review of the project by the Town of Holden results in changes that increase environmental impacts, in particular the amount of impervious area, the Proponent must file a Notice of Project Change (NPC).

Project Description

As described in the ENF, the project involves the construction of an 88-lot residential development on an undeveloped parcel of land zoned for residential use. The project involves the construction of a main access loop drive (Deanna Drive) which will be accessed via Union Street at two locations. The access drive will require two wetland crossings. Additional project components include the installation of a stormwater management system, sewer and water mains and the construction of a new pump station. All of the lots will be served by municipal water and sewer. The project is proposed to be constructed in four phases over a 5-year period.

### Project Site

The 63.2-acre project site is bounded by Union Street to the North and residential uses to the west. Watershed Protection Areas associated with the Wachusett Reservoir, which are regulated by the Watershed Protection Act (WsPA), are located to the east and south. The site is located within the Wachusett Reservoir Outstanding Resource Water (ORW) and is regulated by the WsPA. A portion of the land has been commercially logged. The project is not located within mapped *Estimated or Priority Habitat of Rare Species* according to the 14<sup>th</sup> edition of the Massachusetts Natural Heritage Atlas.

### Environmental Impacts and Mitigation

Environmental impacts associated with the project include the alteration of 41.9 acres of land, creation of 9.7 acres of impervious surface, impacts to 10,436 sf of Bordering Vegetated Wetlands, generation of 941 new average daily trips (adt), increase in water demand by 33,680 gallons per day, generation of 33,680 gpd of wastewater and construction of 2.49 miles of sewer main.

Measures to avoid, minimize and mitigate damage to the environment include wetlands replication, construction of a stormwater management system and implementation of an erosion and sedimentation control plan to prevent construction-related impacts to downgradient wetlands.

### Permitting and Jurisdiction

This project is subject to MEPA review and preparation of an ENF pursuant to 301 CMR 11.03(1)(b)(1), 11.03(1)(b)(2), 11.03(3)(b)(1), and 11.03(5)(b)(3) because it requires a State Agency Action and involves the direct alteration of 25 or more acres of land; creation of five or more acres of impervious area; alteration of 5,000 sf or more of BVW; and construction of ½ or more miles of new sewer main not located within existing roadway right-of-way (ROW). The project requires a 401 Water Quality Certification from the Massachusetts Department of Environmental Protection (MassDEP) and a Watershed Protection Act (WsPA) Determination of Applicability from the Department of Conservation and Recreation (DCR). The project may require a Variance from the WsPA.

An Order of Conditions from the Holden Conservation Commission was issued on October 12, 2017 (MassDEP file No. 183-612) and was not appealed. The Town has indicated that the Order of Conditions does not reflect a change in the project the Proponent made to reduce impervious area (i.e., use of gravel rather than asphalt for driveways of 32 lots). The project will require additional review by the Conservation Commission and may require an amended Order of Conditions. It will require a Pre-Construction Notification (PCN) from the U.S. Army Corp of Engineers (ACOE) and National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the U.S. Environmental Protection Agency (EPA).

The project is not receiving Financial Assistance from the Commonwealth. Therefore, MEPA jurisdiction is limited to those aspects of the project that are within the subject matter of any required or potentially required State Agency Actions that may cause damage to the environment as defined in the MEPA regulations. In this case, jurisdiction is extended to land alteration, wetlands, water quality, water supply, wastewater and stormwater.

## Review of the ENF

The ENF provided a description of existing and proposed conditions, detailed project plans, and identified measures to avoid, minimize and mitigate project impacts.

### *Alternatives Analysis*

The Alternatives Analysis analyzed six alternatives including a No-Build Alternative, Reduced Build Alternative, Alternative Layout 1, Alternative Layout 2, Open Space Residential Development Alternative, and the Preferred Alternative as described herein. The alternatives are described below:

**No-Build Alternative:** This Alternative would leave the project site undeveloped. This option would result in no environmental impacts; however, the Proponent dismissed this alternative because it would not provide economic benefits associated with a residential development in the Town of Holden.

**Reduced Build Alternative 1:** This Alternative consists of the development of a 66-lot residential subdivision with one main access drive off of Union Street and four cul-de-sacs. The Town's Subdivision Control regulations prohibit a dead-end street from being longer than 500-feet. Therefore, the Proponent determined that secondary access was required for project viability. The Proponent analyzed several secondary access points including where the main access road extends from Union Street through the site and connects to Highland Avenue or Harrington Avenue. This alternative would require one wetland crossing and would impact approximately 2,584 sf of wetlands. However, creating secondary access via Highland Avenue or Harrington Avenue would require extensive earthwork due to topographical conditions and the allowable slope associated with the Town's Subdivision Control regulations could not be achieved.

**Reduced Build Alternative 2:** This Alternative consists of the development of a 10-lot residential subdivision. The subdivision would consist of two cul-de-sacs with five lots with access off of Union Street. This option would also require one wetland crossing and would result in approximately 2,584 sf of wetlands impacts. This option was dismissed because it would prevent access to the upland portion of the site which would remain undeveloped.

**Maximum Build Alternative:** The Maximum Build Alternative consists of the Proponent's original plan to develop a 96-lot residential subdivision with a large loop roadway extending from Union Street. This alternative would have required five wetland crossings and approximately 45,000 sf of wetland impacts. This Alternative was dismissed due to the extensive wetlands impacts.

**Open Space Residential Development Alternative:** The Open Space Residential Alternative consists of a 25-lot development with a minimum lot size of 10 acres. The lots would be accessed by a main loop road off of Union Street. This alternative would also require two wetland crossings associated for the access drive and its wetland impacts would be similar to the Preferred Alternative while providing fewer residential units.

The Preferred Alternative was selected to maximize the number of residential lots while substantially reducing wetlands impacts compared to the Maximum Build Alternative.

### *Land Alteration*

As noted earlier, the project will result in New alteration of 41.9 acres of land and creation of 9.7 acres of impervious area associated with clearing, grading, landscaping, sidewalks, buildings, roadways and driveways. As currently proposed, roadways will be public and the Town will be responsible for roadway maintenance. Comments from the Holden Department of Public Works (DPW) raise concerns with the proposal to use gravel on 32 of the lot driveways. The comment letter from the DPW supports the Proponent's effort to reduce impervious surface associated with the project; however, it also indicates that gravel access driveways present maintenance and safety concerns including the possibility of washouts during storm events due to the steepness of the driveways. The DPW indicates that the Proponent should pursue other measures to reduce impervious surface or develop the project with private roadways. Comments from the Holden Fire Department identify serious concerns regarding the difficulty of providing emergency access to homes with steep, unpaved driveways.

The Town has identified significant concerns with the project design and it appears highly likely that the project will change to address these local concerns. If the Town does not approve changes to the project design, including the use of gravel driveways, impervious area would increase above 10 acres and the project would exceed a mandatory EIR threshold pursuant to 301 CMR 11.03 (1)(a)(2). If changes to the project result in an increase in environmental impacts (e.g., land alteration, impervious area, wetlands impacts) compared to the project identified in the ENF, the Proponent must file a Notice of Project Change (NPC). If cumulative impacts exceed an EIR threshold then the NPC will be followed by a Draft EIR.

### *Wetlands and Stormwater*

The project requires a 401 WQC because it will permanently alter 7,241 sf of BVW. This alteration is associated with wetland crossings required for the construction of the main access road loop. Wetland Crossing #1 is expected to impact 2,584 sf of BVW and Wetland Crossing #2 is expected to impact 4,567 sf of BVW. The Proponent is proposing to use 48-inch reinforced concrete pipes (RCP) for each of the crossings. At the request of MassDEP and the Holden Conservation Commission, the Proponent analyzed the use of box culverts instead of the RCPs. The ENF included an impact and cost analysis of several crossing designs including the Preferred Alternative (described above), 18-foot box culverts with and without retaining walls, and 10-foot box culverts with and without retaining walls. Permanent wetland impacts associated with each alternative are described in the following table:

Alternative		Impacts at Crossing #1 (sf)	Impacts at Crossing #2 (sf)	Cumulative Impacts (sf)
A	48" RCP (Preferred Alternative)	2,583.69 sf	4,658.03	7,241.72
B	18' Box Culvert w/ Retaining Walls	1,191.71	3,442.69	4,634.40
C	18" Box Culvert w/o Retaining Walls	2,242.29	4,473.68	6,715.97
D	10" Box Culvert w/ Retaining Walls	1,158.87	3,442.74	4,601.61
E	10" Box Culvert w/o Retaining Walls	2,166.85	4,481.55	6,648.40

The box culvert with retaining walls (Alternative B and D) resulted in the least impact to wetlands; however, they were dismissed because the Proponent indicated that local regulations prohibit the use of retaining walls within roadway ROWs. The box culvert alternatives without retaining walls (Alternative C and E) resulted in less permanent impacts to wetland resources but were determined by the Proponent to be cost prohibitive.

Impacts associated with the installation of the 48-inch RCP crossings will be mitigated through the creation of a 14,485 sf wetland replication area identified in the ENF. The replication area will be monitored for two full growing seasons following completion of the work. An additional 3,195 sf of BVW will be temporarily impacted during the construction of the roadway crossings. This area will be restored in place.

As noted earlier, a portion of the project site is regulated by the WsPA. The WsPA and its implementing regulations (313 CMR 11.00) regulate land use and activities within critical areas of the Quabbin Reservoirs, Ware River and Wachusett Reservoir watersheds for the purpose of protecting the source supply of drinking water that is treated and distributed by the Massachusetts Water Resources Authority (MWRA). The Law is administered by DCR's Division of Water Supply Protection. An application for a Watershed Determination of Applicability has been submitted to DCR to demonstrate that there will be no work within the Primary Protection Zone of the tributary stream (200-foot buffer zone) and all work within the Secondary Protection Zone (400-foot buffer zone) will be in compliance with the WsPA standards. Comments from DCR indicate that the plans submitted by the Proponent show a different location for an unnamed perennial stream than the location identified in the official WsPA map. The project has been designed to avoid work within 200-ft protection zone (Primary Protection Zone) based on the location identified in the ENF. If it is determined that the location of the stream identified on ENF plans is incorrect, the Proponent will require a variance from the WsPA for work within the Primary Protection Zone.

Stormwater runoff from the development will be collected by a drainage conveyance and treatment system consistent with MassDEP's stormwater management standards (SMS) for discharges near an ORW. The stormwater management system includes several detention basins and subsurface infiltration systems. Stormwater runoff water quality will be improved with Stormceptor hydrodynamic separators. All discharges include a Stormceptor unit or sediment forebays for pre-treatment.

DCR has identified concerns with potential erosion and sedimentation and MassDEP has noted the importance of including phasing plans and measures to control erosion and sedimentation in its project application. These concerns are shared by the Town. Comments from the Conservation Commission and Planning Board identify serious concerns regarding the exposed soils during the construction phase of the subdivision due to the steep slopes within the project area. They also indicate that the Order of Conditions previously issued for the project includes paved driveways for each building lot. Revised plans currently under review by the Holden Planning Board substitute gravel for paved driveways for 32 lots. As a result of this change, additional review will be required by the Holden Conservation Commission and an amended Order of Conditions may be required.

*Water and Wastewater*

Water for the development will be supplied by the Town of Holden. The Town is regulated through MassDEP's Water Management program to withdraw a maximum of 1.45 million gallons per day (MGD). The baseline volume for Holden is 0.9 MGD. Actual withdrawals from 2013 through 2017 ranged from 0.79 to 1.02 MGD. The Water Management Act (WMA) regulations require mitigation of withdrawals over a baseline volume. The Proponent should work with the Town of Holden to record details of any potential work performed at the site that may qualify as mitigation when renewing the Town's WMA permits.

Wastewater generated by the development will be collected by a gravity sewer main system and conveyed to a pump station at the low point of the property along Stephanie Drive. A force main will convey sewage to the existing sewers located on Highland Street. The proposed Stephanie Drive Pump Station will also accept flows from the existing Winthrop Lane Pump station which will be taken offline to address capacity issues with the existing sewage collection system. A portion of the sewer connection between the two neighborhoods will run cross-country. The Stephanie Drive pump station was designed to handle flows from the Winthrop Lane Pump Station (74 homes) and the Greenwood II subdivision (88 homes). The design capacity accounts for approximately 5,989 gpd of infiltration and inflow (I&I). An emergency backup diesel generator and 595 gallon fuel tank will be located inside of the pump station building. The Proponent has committed to replacing approximately 450 linear feet (lf) of downstream sewer main in need of upgrades near Main Street and Boyden Road. Comments from MassDEP request that the Proponent clarify whether the pump station will remain under private ownership and whether a financial assurance mechanism is needed for operation and maintenance of the pump station.

*Greenhouse Gas Emissions (GHG)*

I encourage the Proponent to voluntarily undertake measures to minimize the GHG emissions of the project by incorporating energy conservation measures into the project design. Energy efficiency measures may also reduce the heating and cooling costs for the future residents of the homes. Measures that may be suitable for the project include:

- Roof and wall insulation with high R-values and energy efficient windows;
- Increased furnace efficiency or use of high-efficiency condensing boilers;
- Efficient water heater (heat pump, combination with condensing boiler, and on-demand);
- Use of energy efficient appliances (i.e., Energy Star);
- Installation of low-flow plumbing fixtures;
- Use of LED lighting;
- Air-source or ground-source heat pumps for heating and cooling; and
- Rooftop solar photovoltaic (PV) systems.

I also encourage the Proponent to consult with local utilities about rebates or consider other incentives for implementing energy efficiency measures. For more information, I recommend that the Proponent consult the Executive Office of Energy and Environmental Affairs website: <http://www.mass.gov/eea/energy-utilities-clean-tech/energy-efficiency/ee-for-your-home>.

### *Construction*

The Proponent will prepare a Stormwater Pollution Prevention Plan (SWPPP) to identify soil erosion and sedimentation control BMPs that will be employed. Erosion and sedimentation control measures should be implemented, inspected, and maintained throughout the construction period, and repairs to these measures should be made in a timely and effective fashion, as necessary. Comments from DCR and the Town express concerns regarding erosion and sedimentation during the construction period due to the site's steep slopes and indicate that significant monitoring should be required during the construction period. The ENF states that the project will be completed in four 18-month phases over a 5-year period. The Proponent should limit overlapping phases to avoid the amount of soil to be exposed simultaneously.

All construction should be managed in accordance with applicable MassDEP Solid Waste and Air Pollution Control regulations pursuant to M.G.L. c.40, §54. The Proponent should review the MassDEP comment letter for guidance on construction period waste management and demolition BMPs. I encourage the Proponent to require contractors to install emission control devices on all off-road construction vehicles in an effort to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). All construction activities should be undertaken in compliance with the conditions of all State and local permits.

### Conclusion

Based on a review of the ENF and comments received, and in consultation with State Agencies, I have determined that the ENF has sufficiently defined the nature and general elements of the project for the purposes of MEPA review and demonstrated that the project's environmental impacts will be avoided, minimized and/or mitigated to the extent practicable. The project may proceed to permitting.

Final plans approved by the Town of Holden and Holden Conservation Commission, which confirm that impervious area does not exceed 10 acres, must be provided to MassDEP and DCR before these agencies can take Agency Action on the project. As noted previously, if changes to the project design increase environmental impacts compared to the project identified in the ENF, the Proponent must file a NPC and, if cumulative impacts exceed an EIR threshold, a DEIR will be required.

July 6, 2018

Date



Matthew A. Beaton

### Comments received:

06/22/2018	Board of Underwater Archaeological Resources (BUAR)
06/25/2018	Holden Fire Department
06/26/2018	Department of Conservation and Recreation (DCR)

06/26/2018

Holden Department of Public Works (DPW)

06/26/2018

Holden Department of Planning and Development

06/27/2018

Massachusetts Department of Environmental Protection – Central Regional Office  
(MassDEP CERO)

MAB/EFF/eff





The COMMONWEALTH OF MASSACHUSETTS  
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June 19, 2018

Secretary Matthew A. Beaton  
Executive Office of Energy and Environmental Affairs  
Attention: Erin Flaherty, MEPA Unit  
100 Cambridge St., Suite 900  
Boston, MA 02114

RECEIVED  
JUN 22 2018  
MEPA

RE: Greenwood Residential Subdivision, Union Street, Holden (EEA #15868)

Dear Secretary Beaton,

The staff of the Massachusetts Board of Underwater Archaeological Resources has reviewed the above referenced project's ENF (EEA #15868) and supporting materials prepared by Lucas Environmental, LLC, on behalf of Jackson Woods Investments, LLC. We offer the following comments.

The Board has conducted a preliminary review of its files and secondary literature sources to identify known and potential submerged cultural resources in the proposed project area. No record of any underwater archaeological resources was found. Based on the results of this review and the nature of the project, the Board expects that this project is unlikely to impact submerged cultural resources.

However, should heretofore-unknown submerged cultural resources be encountered during the course of the project, the Board expects that the project's sponsor will take steps to limit adverse affects and notify the Board, as well as other appropriate agencies, immediately in accordance with the Board's *Policy Guidance for the Discovery of Unanticipated Archaeological Resources*.

The Board appreciates the opportunity to provide these comments as part of the review process. Should you have any questions regarding this letter, please do not hesitate to contact me at the address above, by email at [victor.mastone@state.ma.us](mailto:victor.mastone@state.ma.us), or by telephone at (617) 626-1141.

Sincerely,

A handwritten signature in blue ink, appearing to read "Victor T. Mastone".

Victor T. Mastone  
Director

/vtm



# **TOWN OF HOLDEN FIRE DEPARTMENT**

1370 Main Street Holden, Massachusetts 01520

Phone: (508)210-5650 Fax: (508)210-5657

June 25, 2018

RE: EEA# 15868 Greenwood II Residential Subdivision - Holden

The Holden Fire Department has been involved with the preliminary review process for the above referenced proposed subdivision. The department has specified concerns to the planning board pertaining to many aspects of emergency access to the proposed homes within the subdivision plan. The current layout and grades of the driveways to the homes causes potential issues for the fire department when responding to calls for emergencies. Any delay or inability to position an apparatus can lead to delays in emergency care or firefighting tactics. It has come to our attention that the developer has proposed a percentage of the project utilizing gravel driveways to remain below a certain threshold of paved surfaces. The fire department is adamantly against any unpaved access points to these homes. With the significant grades, retaining walls proposed on both sides of some driveways and the difficulty holding the gravel in place, the department anticipates that it will lead to the inability of the apparatus to effectively gain access to these properties. Below are excerpts from the letter sent to the Holden Planning Board sent 6/8/2018 that pertains to the driveways and paved surfaces:

1. *Driveways should be a minimum of 12' in width and paved to facilitate emergency vehicle access.*
  - a. *Any lot which has retaining walls on both sides of the driveway greater than 2 feet in height will need to be wider than the minimum. It is recommended that the width be increased to 14 feet to accommodate fire department apparatus. With retaining walls in place at a 12 foot width, firefighters and EMS personnel will not be able to open the doors of the apparatus to get out or to get equipment due to the width of the vehicles.*
2. *Driveways should be connected to all structures to facilitate emergency operations both fire suppression and ambulance service. The need to position apparatus for fire suppression tactics and patient removal makes this an imperative need.*
3. *With the proposed road width at 24 feet, on street parking should be restricted to a single side of the street to allow for emergency vehicle access and placement. On lots that the aerial device can be used the department tower ladder setup is an 18 foot jack spread and is required to be on the paved area.*

If you have any questions, please feel free to contact me at 508-210-5651 or by email, [rhall@holdenma.gov](mailto:rhall@holdenma.gov).

Respectfully Submitted:

Russ Hall  
Fire Chief





June 26, 2018

Secretary Matthew A. Beaton  
Executive Office of Energy and Environmental Affairs  
MEPA Office, Attn: Erin Flaherty  
100 Cambridge Street, Suite 900  
Boston, Massachusetts 02114

RE: MEPA File No. 15868, Greenwood II Residential Subdivision, Union Street, Holden, Massachusetts

Dear Secretary Beaton:

The Department of Conservation and Recreation ("DCR" or "the Department") is pleased to submit the following comments in response to the Environmental Notification Form ("ENF") filed by Jackson Woods Investments, LLC for the Greenwood II Residential Subdivision, ("the Project") in Holden. As proposed, the Project includes the creation of eighty eight lots on 63.2 acres with a single family dwelling proposed for each lot. This project is located within the watershed of the Wachusett Reservoir.

It is unclear at this time if an Application for Variance is needed under the Watershed Protection Act ("WsPA"). An Application for Watershed Determination of Applicability has been submitted but is incomplete pending receipt and review of a signed and stamped plan from a registered land surveyor. This new plan is required because the stream location on the submitted plans is in a different location than the official Watershed Protection Act map. If the signed and stamped surveyed plans show the location of the stream is as shown on the official WsPA map, then an Application for Variance will be needed due to alteration within the Primary Protection Zone.

While DCR is not certain that an EIR is necessary, there are concerns of potential environmental impact to downstream resources due to the steepness of the slopes and the amount of land proposed to be altered. As a result, DCR believes that significant monitoring of this site will be required.

Thank you for the opportunity to comment on the Environmental Notification Form. Should you have any questions, please do not hesitate to contact Nancy McGrath of the Division of Water Supply Protection at (508) 792-7806 ext. 314. Ms. McGrath may be contacted at [Nancy.McGrath@state.ma.us](mailto:Nancy.McGrath@state.ma.us). Thank you.

Sincerely,

Leo P. Roy  
Commissioner

COMMONWEALTH OF MASSACHUSETTS · EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS

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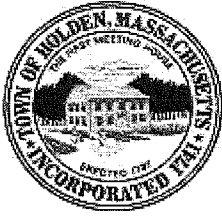


Charles D. Baker  
Governor

Karyn E. Polito  
Lt. Governor

Matthew A. Beaton, Secretary, Executive  
Office of Energy & Environmental Affairs

Leo Roy, Commissioner  
Department of Conservation & Recreation



# Town of Holden

## Department of Public Works



John R. Woodsmall, III, P.E.  
Director of Public Works

June 26, 2018

Secretary Matthew A. Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Erin Flaherty, MEPA Office  
100 Cambridge Street, Suite 900, Boston, MA 02114

Re: EEA #15868  
Environmental Notification Form  
Greenwood II Residential Subdivision

Dear Secretary Beaton:

The Holden Department of Public Works (DPW) welcomes the opportunity to provide comments on the Environmental Notification Form (ENF), EEA #15868 for the Greenwood II subdivision in Holden (the "Project"), as submitted by the Project proponent, Jackson Woods Investments, LLC of Rutland, MA. This Project has been under review by the DPW, via the Definitive Subdivision process of the Holden Planning Board, for a number of years now. Indeed, the DPW first submitted comments on this Project to the Planning Board on October 22, 2015, and there have been numerous changes and updates made to the Project since that time. We note that while the Project has been issued an Order of Conditions by the Town's Conservation Commission, the review of the Project's Definitive Subdivision Plan with the Planning Board continues.

Through the subdivision permitting process, the Project has consistently been proposed as creating more than ten (10) acres of impervious cover, through the installation of sidewalks, roadways, wastewater structures, and driveways for houses to be built. The Project's stormwater management system has been designed to treat and attenuate the runoff for a project disturbing greater than ten (10) acres of impervious cover. Working with the Planning Board and the DPW, the Project's proponent has been able to reduce the overall amount of impervious cover, due to design of the Project's roadways as 24-foot wide, rather than the 28-foot width required in the Town's Subdivision Rules and Regulations. Final approval of this Project will require a waiver for this reduction in pavement width of the proposed roadways, but this waiver is fully supported by the DPW. This Project proposes to have the Town accept the roadway upon completion of construction and buildout.

The Project proposed under the ENF filing differs substantially from the one currently under review by Town staff, in that a change in driveway surfaces for thirty-two (32) lots

is now being presented. Over 35-percent of the lots on the site are now proposed to have gravel driveways, rather than paved surfaces.

The DPW objects to the fact that the Project presented through the ENF process is significantly different than the project that has been reviewed for almost three (3) years. While the DPW supports the efforts to reduce impervious area wherever possible, as currently proposed in the ENF, we do not support the conversion of the proposed driveways to gravel.

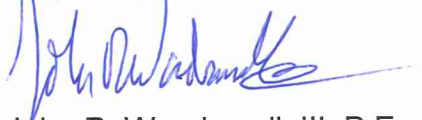
Properly constructed gravel driveways essentially act as impervious surfaces. Very little stormwater runoff actually permeates through the gravel, due to the high level of compaction of the gravel material. Further, gravel driveways, when located on any type of mild to severe slopes, is extremely prone to washing out in moderate to heavy rainfall. Given that this Project involves creating numerous steep driveways, as well as steep roadways, any installation of gravel driveways will lead to constant maintenance concerns for both the property owners as well as the Town. Gravel driveways which wash out will be frequently depositing sediments into the roadway and into the stormwater collection and management system. Further, the vast majority of driveways in Holden are made of impervious material. It is fully expected the future owners of the lots with gravel driveways will wish to convert to hot mix asphalt or other types of impervious surfaces for their driveways. It is not the Town's role to police future homeowners and prevent them from converting their driveways; nor is it the Town's role to perform frequent sediment removal maintenance activities. As presented, the proposal to install gravel driveways to reduce the amount of impervious area for this Project is not a realistic option. Future homeowners will ignore and eventually convert their driveways to impervious cover; the gravel driveways are either steep or on steep roadways and will create frequent washouts, creating a maintenance headache for both the homeowners and the DPW; the stormwater management system is not sized to deal with the amount of sediment that would be generated by the gravel driveways, and; gravel driveways essentially act as impervious surfaces anyway, thus obviating any perceived reduction in the amount of impervious surfaces.

If the Project proponent is actually serious about reducing the impervious surfaces proposed for this Project, and not just making proposals so as to avoid a further permitting burden, other options should be explored for such a reduction. Such options should include decreasing the length of proposed roadways and sidewalks by reducing the number of lots to be built; examining the slopes of the roadways and proposed lots and only building on lots that are not steeply sloped, and; installing pervious asphalt or concrete driveways and placing deed restrictions on properties. An additional option for the Project proponent is for the project to be designed as a private roadway and development, which would not become a public accepted way. Constructing a private development could allow the Project to be developed to less intense standards, and would not place an operations and maintenance burden on the Town for the stormwater management system.

The Holden Department of Public Works appreciates this commenting opportunity. We hope that these comments help clarify the current Project status as it pertains to the DPW's review and recommendations to the Planning Board under the Definitive Subdivision Plan approval process. We do not believe that the proposal for gravel driveways is a serious or viable option for the reduction of new impervious surfaces for this Project. Therefore, other options for the reduction of new impervious surfaces should be explored.

If you have any questions regarding these comments, please contact me at (508) 210-5550 or by email at [jwoodsmall@holdenma.gov](mailto:jwoodsmall@holdenma.gov).

Very Truly Yours,

A handwritten signature in blue ink, appearing to read "John R. Woodsmall, III", with a stylized flourish extending to the right.

John R. Woodsmall, III, P.E.  
Director of Public Works

Cc: Peter Lukes, Town Manager  
Pamela Harding, Director of Planning and Development  
Isabelle McCauley, Senior Civil Engineer



# TOWN OF HOLDEN MASSACHUSETTS

## DEPARTMENT OF PLANNING AND DEVELOPMENT

Pamela Harding  
Director

June 26, 2018

Secretary Matthew A. Beaton  
Executive Office of Energy and Environmental Affairs  
Attn: Erin Flaherty, MEPA Office  
100 Cambridge Street, Suite 900  
Boston, MA 02114


Re: EEA #15868  
Environmental Notification Form  
Greenwood Residential Subdivision

Dear Secretary Beaton,

I am writing you regarding the Environmental Notification Review for the Greenwood Estates Subdivision consisting of 87 lots in the Town of Holden. Both the Conservation Commission and the Holden Planning Board have serious concerns about the exposed soils during the construction phase of this subdivision. The subdivision contains steep slopes with numerous cuts and fills that will be difficult to maintain, the expansive infrastructure work and pump station limits the amount of Phasing that can occur and there will be numerous acres of soil exposed simultaneously. Extensive erosion control measures will be needed and monitoring done on a daily basis. The long term stability of the slopes post construction is also a concern. Steep slopes abutting public ways will require permanent stabilization measures in addition to the typical loaming and seeding.

The Order of Conditions issued by the Conservation Commission is for paved driveways, a permit for gravel driveways would require an amendment to the existing Order of Conditions and revised plans currently under review by the Holden Planning Board. Thank you for the opportunity to comment on this extensive project, if you have any questions please contact me at (508) 210-5541.

Sincerely,



Pamela Harding, AICP  
Director

BUILDING INSPECTION /ZONING  
(508) 210-5538

HEALTH  
(508) 210-5542

PLANNING/CONSERVATION  
(508) 210-5539



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Central Regional Office • 8 New Bond Street, Worcester MA 01606 • 508-792-7650

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Karyn E. Polito  
Lieutenant Governor

Matthew A. Beaton  
Secretary

Martin Suuberg  
Commissioner

June 27, 2018

Secretary Matthew A. Beaton  
Executive Office of Environmental Affairs  
100 Cambridge Street, 9<sup>th</sup> Floor  
Boston, MA 02114

Attention: MEPA Unit – Erin Flaherty

Re: Environmental Notification Form (ENF)  
Greenwood II Residential Subdivision  
Holden  
EEA #15868

Dear Secretary Beaton,

The Massachusetts Department of Environmental Protection's ("MassDEP") Central Regional Office has reviewed the ENF for the Greenwood II Residential Subdivision Project (the "Project") in Holden. The Project is proposed by Jackson Woods Investments, LLC (the "Proponent"). The Project consists of the development of an 88 single-family home subdivision on 63 acres of land. The Project is expected to result in the 41.9 acres of new land alteration, creation of 9.7 acres of impervious area, impacts to 10,436 square feet (sf) of Bordering Vegetated Wetlands (BVW) of which 7,241 sf will be permanent, generation of 941 new average daily trips (adt), creation of 176 new parking spaces, increase water demand by 33,680 gallons per day (gpd), generation of 33,600 gpd of wastewater, construction of 1.46 miles of water main and construction 2.49 miles of sewer main. The site is located within an Outstanding Resource Water (ORW) identified as the Wachusett Reservoir ORW and a Watershed Protection Area for the Wachusett Reservoir. The subdivision will be serviced by municipal water and sewer.

This Project is under MEPA review because it meets or exceeds the following review thresholds:

- 11.03(1)(b)(1) - alteration of 25 or more acres of land
- 11.03(1)(b)(2) - create five or more acres of impervious surface
- 11.03(3)(b)(1)(d) - involves the alteration of 5,000 or more sf of BVW
- 11.03(5)(b)(3)(c) - construction of ½ or more miles or new sewer main not located within in an existing ROW



The Project requires the following permits:

- 401 Water Quality Certification from MassDEP
- Request for a Watershed Determination of Applicability from the Massachusetts Department of Conservation and Recreation (DCR)

MassDEP offers the following comments on the Project:

## **Wetlands**

The ENF states that the Project has been designed to avoid, minimize, and mitigate for impacts to wetland resource areas. Unavoidable impacts will occur in two locations where Deanna Drive crosses vegetated wetlands. Four alternative options for access to the site for each crossing were originally evaluated, based upon comments from various Town of Holden boards. Additional alternatives were evaluated based upon preliminary comments from MassDEP.

The proposed roadway will cross BVW (designated as an ORW) at two locations, permanently altering approximately 7,241 sf of BVW. The first road crossing will permanently impact approximately 2,584 sf of BVW. The second roadway crossing the wetland will permanently impact approximately 4,657 sf of BVW. In addition, approximately 3,195 sf of temporary wetland impacts are proposed near the wetland crossings. These areas will be restored in place.

Permanent alterations will be mitigated by the creation of one wetland replication area totaling 14,485 sf. The replication area will be established south of the existing impacted resource areas, creating a hydrologic reach to the existing wetland. The wetland replication area will be monitored for two full growing seasons following completion of work.

Stormwater runoff is collected by a drainage conveyance and treatment system designed in compliance with the MassDEP Stormwater Management Regulations. Peak runoff rates are attenuated through several detention basins (open and subsurface), and subsurface infiltration systems. Water quality is improved primarily with Stormceptor hydrodynamic separators. All discharges to the infiltration systems include a Stormceptor unit or sediment forebays to provide the required pre-treatment as all discharges within the project are located near areas designated as an ORW.

A Notice of Intent (DEP File # 183-612) was previously filed and the Holden Conservation Commission issued an Order of Conditions on November 13, 2017 permitting the Project. The local Order was not appealed. The Project requires a 401 Water Quality Certification be obtained from MassDEP. The Water Quality Certification will include an additional wetland resource area identified since issuance of the Order of Conditions. MassDEP suggests that the Proponent contact the Holden Conservation Commission to determine whether the Town will require any additional filings for the area that was not included in the original filing. The Water Quality Certification will also include the phasing plan and erosion/sedimentation controls described in the ENF.

## **Wastewater**

The Project is expected to generate approximately 18,295 gpd of wastewater based on a calculation of 77 gallons per capita per day (gpcpd) and estimating 2.7 persons per household. No sewer extension or permit is required by MassDEP. The Town will be responsible for all sewer permitting.

Flow from the subdivision will be directed to a new pump station located on Stephanie Drive. A force main will convey sewage to the existing sewers located on Highland Street. To improve capacity issues of the Town's existing collection system, all existing homes located on Winthrop Lane and Highland Avenue will be connected to the new Stephanie Drive pump station. This will result in an additional flow of 15,385 gpd to the Stephanie Drive pump station.

The Proponent should clarify who will be the owner of the pump station at the conclusion of the Project. If ownership and control of the pump station will remain under a form of private ownership by the residents of the 88-lot subdivision, the Town should consider during its permitting whether a financial assurance mechanism is necessary for the proper operation and maintenance of the pump station.

Due to capacity problems in the downstream receiving sewers, the Proponent has committed to replacing three sections of pipe near Main Street and Boyden Road that require upgrades. The Proponent will be upgrading approximately 450 linear feet of 8-inch lined VC pipe with 10-inch SDR-35 PVC pipe.

### **Water Supply**

The Project is proposed to need 33,680 gpd of drinking water to be supplied by the Town of Holden. The Town of Holden is regulated through MassDEP's Water Management Program to withdraw a maximum of 1.45 million gallons per day (MGD). Actual withdrawals from 2013 through 2017 ranged from 0.79 to 1.02 MGD. The Water Management Act (WMA) regulations require mitigation of withdrawals over a baseline volume. The baseline volume for Holden is 0.90 MGD. When the renewed WMA permit is issued to Holden, an approved mitigation plan is required to be in place prior to withdrawing more than the baseline volume. Activities conducted at private developments such as this may qualify as mitigation projects for Holden. Examples are storm water improvements that exceed regulatory standards and I/I removal. The Proponent should work with the Town of Holden to record details of any potential mitigation work performed at the site for future submittal to MassDEP for consideration as mitigation.

MassDEP appreciates the opportunity to comment on the Project. If you have any questions regarding these comments, please do not hesitate to contact Stella Tamul, Central Regional Office MEPA Coordinator, at (508) 767-2763.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Mary Jude Pigsley", is written in a cursive style.

Mary Jude Pigsley  
Regional Director

cc: Commissioner's Office, MassDEP