



CITY OF CONCORD
New Hampshire's Main Street™
Community Development Department

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City Planner

TO: Planning Board Members
FROM: Beth Fenstermacher, Assistant City Planner
DATE: March 20, 2019
SUBJECT: Addendum to February 20, 2019 Memo to the Planning Board

At the February 20, 2019, the Planning Board heard public testimony on the proposed ordinance amendments to address solar development. The Board asked Staff to provide additional information on co-location of solar collection systems and agriculture, and whether to increase the proposed 25 acre maximum solar development size.

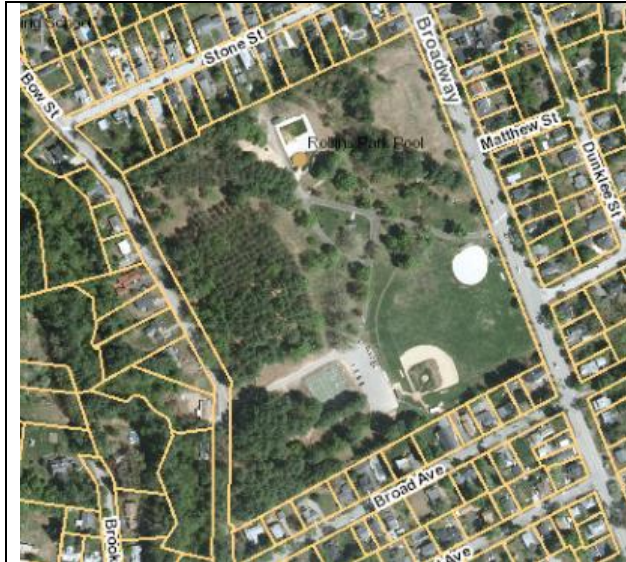
Maximum Solar Collection System Size

The ordinance amendment proposes that no development shall exceed 25 acres of solar land coverage, with the exception of developments in the Industrial (IN) District. Public testimony was provided indicating that 25 acres is too restrictive. The Energy and Environment Advisory Committee recommends that the size be increased to 50 acres.

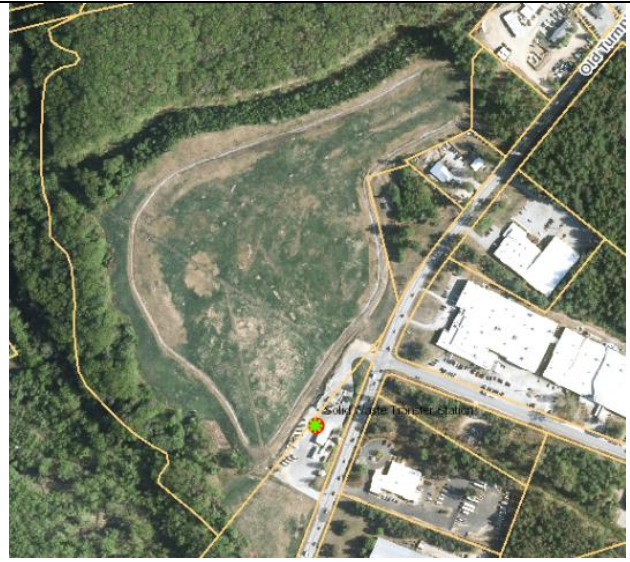
Staff feels the cap is not overly restrictive and should remain as proposed. The City has received a conceptual plan for the capped landfill on Old Turnpike Road, which indicates that the 16 acre capped area can support up to a 5 megawatt (MW) facility. The owners of Lewis Farm have received a proposal from a solar developer for a 13 acre solar collection system which will support 5 MW. According to the January 16, 2019, NHPR article about the Lewis Farm proposal, this would be the largest solar array in the state, although there are larger developments proposed in other municipalities that have not yet been approved.

Further, the Master Plan supports small scale solar (1 MW) and with the current net-metering laws, larger systems will not help the City meet the renewable energy goals. Staff recommends that the community's desire for larger scale, commercial solar collection systems be addressed during the Master Plan update process in the next couple of years. If it is the desire of the community, the ordinance can be amended at that time.

In order to provide some understanding of the scale of what is proposed, below are images of known, developed areas within the City.



Rollins Park - 22 acres



The capped landfill (cleared area) - 16 acres (can support up to 5 MW)



25 acres Downtown (outlined in red)



50 acres Downtown

Agriculture

Public testimony was presented at the February hearing requesting relief on setbacks and size requirements for large scale co-location of agriculture and solar facilities, or “dual-use” systems. At the request of the Board, Staff conducted additional research into co-location, and found that Massachusetts has been working on this issues for several years.

In November 2018, the Massachusetts Department of Energy Resources established an incentive program for “dual-use” systems, which refers to agricultural production and electricity

production from solar photovoltaic panels occurring on the same piece of land. The program has specific criteria for sites that can be considered for the program, and it limits the solar system to 2 MW. The program requires annual reporting on productivity of crop or herd, crop management, and potential changes for future years in order to maintain the incentives for dual-use arrays. The National Renewable Energy Laboratory (NREL) is partnering with Enel, an energy company, on a three year study to discover how solar and plant life interact and to find effective ways for solar arrays and agricultural lands to co-exist. This study should be completed in 2021.

While not actively incentivized as in Massachusetts, co-location of agriculture and solar installations is already permitted in the current zoning proposal and accommodated for specifically in the proposed amendments to the Site Plan Regulations. Since co-location is a relatively new practice about which little is yet known, Staff is not in support of making further allowances with regard to setbacks and solar land coverage to incentive the practice. Staff feels that there is already sufficient permissibility written into the ordinance to allow the practice to occur, even at a greater scale than is permitted by other municipalities attempting it. Further, as is modeled by the program in Massachusetts, there should be accountability for any dual use system that takes advantage of incentives. Also, please note, if the City chooses to go this route in the future, it will require additional resources to enforce and review the reporting.

When drafting the proposed ordinance and Site Plan Regulation amendments, Staff researched best management practices for low-impact solar development to reduce the impact of solar collection systems on adjacent undeveloped properties. The proposed amendments require protection of soil and farmland, planting of pollinator habitat, and encourage co-location of agriculture.

Therefore, Staff recommends that the Massachusetts program be observed, along with any new projects in Concord that utilize co-location, to determine what further changes should be made to the regulations to accommodate this practice, if any. Further, Staff feels that the current proposal allows for the use sufficiently, and that the proposal should move ahead as is