
GREENHOUSE AND COGENERATION FACILITY BACKYARD FARMS, LLC

Madison, Maine

Project Duration

2005 – Present

Key Sevee & Maher Engineers, Inc. Staff

Peter Maher, P.E.; John Kennedy, P.E.;
Mark Bergeron, P.E.; Brian Pierce, P.E.

SUBCONTRACTOR

Albert Frick & Associates (Wastewater)

References

Matt Smith 207.482.2104

OVERVIEW

The Backyard Farms project involved development of approximately 75 acres of greenhouse structures and related infrastructure for growing of tomatoes and other vegetables. The site is located in a small town in Central Maine and has provided numerous jobs to support the local economy. Backyard Farms has permits for construction of five greenhouses, a wood-fired boiler facility, two irrigation ponds, access roads and parking areas, loading and shipping areas, office buildings, fuel tanks, water storage tanks, a subsurface wastewater disposal system, stormwater management facilities, and other associated support utilities. Currently, Backyard Farms has constructed two of the greenhouses and the associated infrastructure. Backyard Farms began selling their first tomato products in 2007.

ACCOMPLISHMENTS

SME's services involved site design and permitting for:

- Five greenhouses (three production greenhouses varying in size from 17.7 acres to 29.6 acres, an experimental greenhouse (6.2 acres), and a research and development greenhouse (2.1 acre));
- Three packing houses comprising approximately 4.1 acres;
- A 5.0 acre wood boiler cogeneration facility that will provide heat and electricity for the greenhouses;
- Two irrigation ponds covering 10.3 acres and having a capacity of over 29 million gallons;

SME

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- Over 1,000 linear feet of gravity sanitary sewer, two pretreatment systems, 3,100 linear feet of force main and an engineered subsurface wastewater disposal system with a capacity of 6,000 gallons per day;
- 9,500 linear feet of access and service roads, parking for over 330 vehicles, three truck loading areas, and a materials storage area;
- Location and development of two on-site water supply wells for domestic drinking water;
- Innovative stormwater management that collects all rain runoff from the greenhouse roofs for reuse in irrigation;
- Two stormwater ponds that provide treatment and detention of parking lot runoff; and
- A Site Location of Development (Site Law) Permit and multiple permit modifications to accommodate this growing business.

SME also provided on-site inspection services for construction of stormwater management structures, erosion/ sedimentation control measures and the subsurface wastewater disposal system.