

2A

Poquetanuck Rd

Shingle Point Rd

Cider Mill Rd

Arrowhead Dr

Barn Rd

Robert Rd

Sunset Ave

Jean Bl

Michael Ln

Louis Ave

Hillcrest Ave

Willow Ln

Avery Hill Rd

Windward Ln

Colony Ledyard Hwy

117

Bolduc Dr

# EXTENSION of WATER to ALJEN HEIGHTS

**Water Pollution Control Authority  
Ledyard, Connecticut**

© 2009 Tele Atlas

© 2009 Tele Atlas

2017 ft

43°14' 33" N 72°52' 27" W

© 2009



**EXTENSION of WATER  
to  
ALJEN HEIGHTS**

**Water Pollution Control Authority  
Ledyard, Connecticut**

913 ft

31" N 72°02'46.76" W

Oct 2006

Eye alt 31

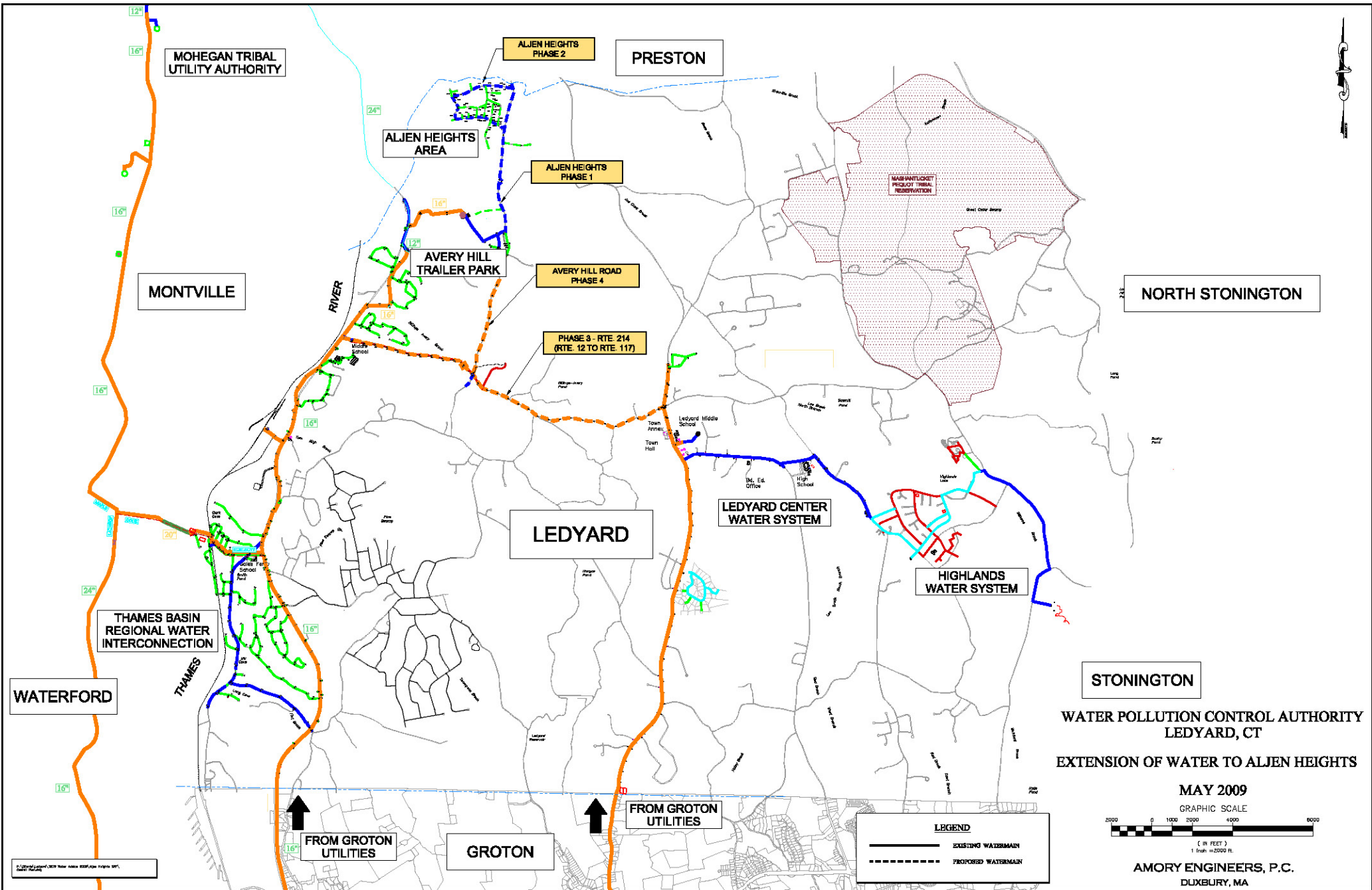
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## Project Description

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- Extend municipal water from the Gales Ferry area of Ledyard to the Aljen Heights section of Town – Multi-Phased Project
  - Immediate Need
    - Phase 1 - Avery Hill Trailer Park to Ledyard/Preston Town Line.
    - Phase 2 – Aljen Heights subdivision area.
  - Longer Term Need
    - Phase 3 – Route 214 - Interconnects Gales Ferry (Rte. 12) and Ledyard Center (Rte. 117) water systems.
    - Phase 4 – Connects Rte. 214 to Aljen Heights extension.



MOHEGAN TRIBAL UTILITY AUTHORITY

ALJEN HEIGHTS PHASE 2

PRESTON

ALJEN HEIGHTS AREA

ALJEN HEIGHTS PHASE 1

MASHANLUCKET RESQUOY TRIBAL RESERVATION

MONTVILLE

AVERY HILL TRAILER PARK

AVERY HILL ROAD PHASE 4

NORTH STONINGTON

PHASE 3 - RTE. 214 (RTE. 12 TO RTE. 117)

LEDYARD

LEDYARD CENTER WATER SYSTEM

HIGHLANDS WATER SYSTEM

STONINGTON

WATERFORD

THAMES BASIN REGIONAL WATER INTERCONNECTION

WATER POLLUTION CONTROL AUTHORITY LEDYARD, CT

EXTENSION OF WATER TO ALJEN HEIGHTS

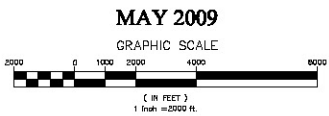
FROM GROTON UTILITIES

GROTON

FROM GROTON UTILITIES

**LEGEND**

- EXISTING WATERMAIN
- - - PROPOSED WATERMAIN



AMORY ENGINEERS, P.C.  
DUXBURY, MA

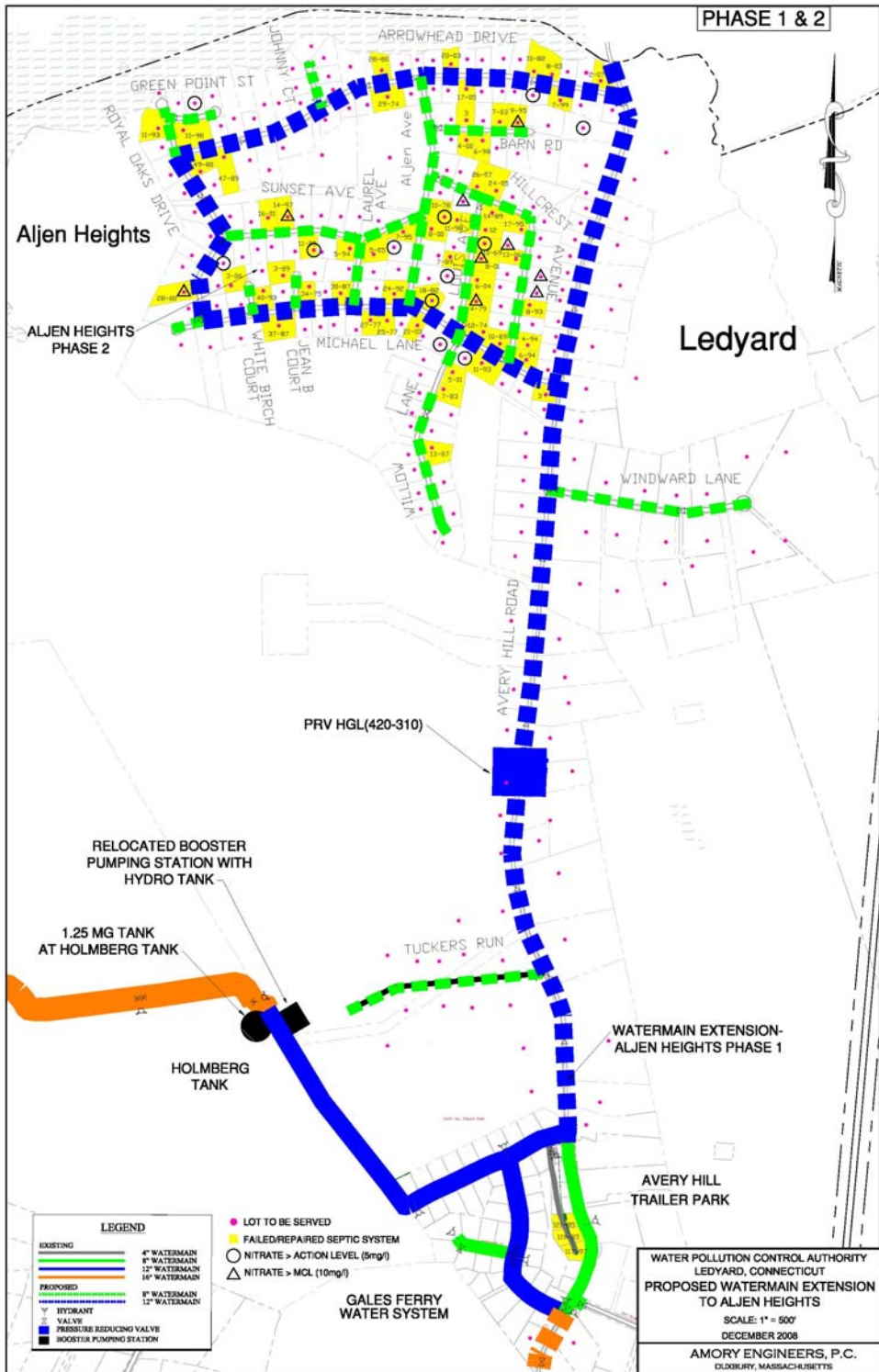
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## Project Benefits

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- Extension of Water to Aljen Heights will address a number of health-related issues that threaten the residents of this area:
  - Current supply source (single community well) for Avery Hill Trailer Park has been noted to have a number of sanitary survey violations.
  - Approximately sixty-three (63) properties (23 percent of properties served in Phases 1 and 2), have had a failed on-site septic system (subsequently repaired). It is only a matter of time when these on-site systems will fail.
  - Private wells have water-quality concerns. High nitrate levels (5-15 mg/l) were noted in twenty-one wells. Occasional total coliform (including fecal) and other bacteria have been noted. Marginal water quality, including excessive iron, manganese, sodium, chloride, hardness and low pH, has resulted in use of in-home treatment systems.



- LOT TO BE SERVED
- FAILED/REPAIRED SEPTIC SYSTEM
- NITRATE > ACTION LEVEL (5mg/l)
- △ NITRATE > MCL (10mg/l)



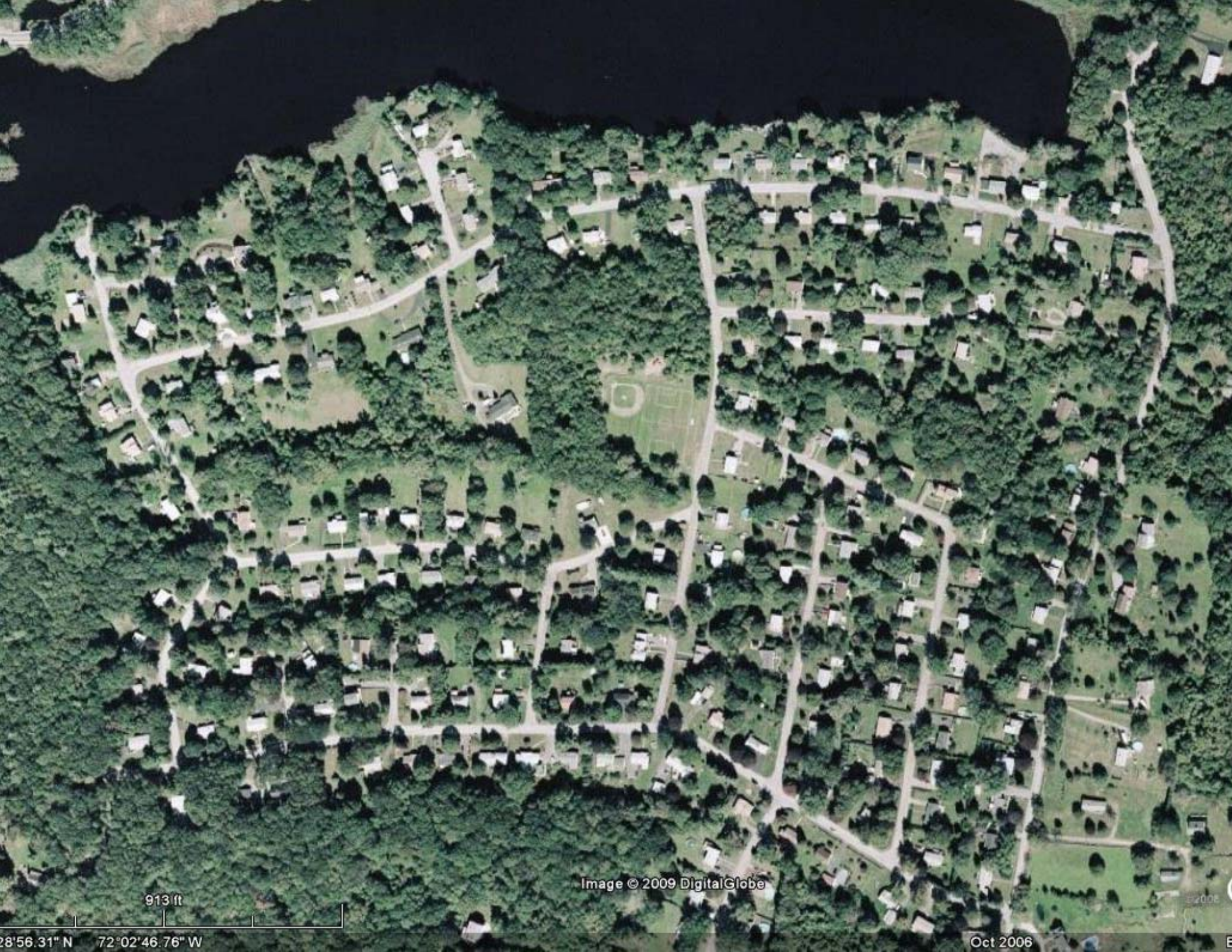


Image © 2009 DigitalGlobe

913 ft

28'56.31" N 72°02'46.76" W

Oct 2006



## Project Benefits (continued)

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- Extension of Water to Aljen Heights will address a number of health-related issues that threaten the residents of this area:
  - Provision of municipal water from a known quality supply source (Groton Utilities) that is adequately protected will eliminate concerns over “water from where and of what quality”.
  - Extension to Aljen Heights will interconnect the two major water systems in Ledyard (Gales Ferry and Ledyard Center/Highlands). System interconnection (Phases 3 and 4) will improve overall reliability.
  - Extension of Water to Aljen Heights would provide options for local communities to meet future water supply needs.



# Project Scoring

(Ledyard requests reconsideration of scoring basis)

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## ■ Phases 1 & 2

■ SWTR Groundwater Under the Influence (AHTP Well)	50
■ Main Extension to Private well w/ health code violation (Nitrate)	20
■ Source Deficit / System Capacity (AHTP Well)	40
■ Interconnection (to Gales Ferry system to AHTP system)	15
■ Pumping Facilities (BPS relocation)	5
■ Main Extension for Interconnection (Gales Ferry to Aljen Heights)	5
■ Source/Distribution Violation	<u>10</u>
■	
	<b>Subtotal</b>
	<b>145</b>

## ■ Phases 3 & 4

■ Interconnection (to Gales Ferry system to AHTP system)	15
■ Main Improvement Rte. 214 (Rte.12 to Rte. 117 & replace AC main)	5
■ Main Extension for Interconnection (Gales Ferry to Aljen Heights)	<u>5</u>
■	
	<b>Subtotal</b>
	<b>25</b>
■ <u><b>TOTAL Phases 1 through 4</b></u>	<u><b>170</b></u>



## Project Scope

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- Project consists of 4 phases:
  - Phase 1: 6,600 l.f. of 12-in. and 2,600 l.f. of 8-in. watermain in Avery Hill Rd.; booster pumping station relocation, and PRV.
  - Phase 2: 6,150 l.f. of 12-in. and 8,750 l.f. of 8-in. watermain in Aljen Heights.
  - Phase 3: 15,400 l.f. of 16-in. and 475 l.f. of 12-in. extension in Stoddard Wharf Road (Rte. 214) and PRV.
  - Phase 4: 5,500 l.f. of 16-in. watermain in Avery Hill Road.



# Project Schedule

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- Schedule

- Phases 1&2

- Design of Phases 1 & 2 is on-going to be complete August 1, 2009.
- Bidding through September 1, 2009.
- **“Shovel-Ready” by September 15, 2009.**
- Construction complete Summer 2010.

- Phases 3&4

- Design of Phases 3 & 4 will proceed after funding is secured (estimated 3 mos.).
- Bidding through November 30, 2009.
- **“Shovel-Ready” December 1, 2009**
- Actual start construction by March/April 2010.
- Construction Completed by Fall/Winter 2010.



## Project Permitting

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- **The Town of Ledyard does not anticipate any problems in applying for and receiving all of the required permits for the Aljen Heights project proposal as is being proposed in this funding request.**
  
- Local
  - “planning/zoning/building” type permits utilizing “conceptual level” design.
  - For inland wetlands, the Ledyard WPCA would obtain the necessary permitting during the bidding period.
  - **All local permits would be in-hand by August 15, 2009 for Phases 1 and 2 and by October 15, 2009 for Phases 3 and 4.**
  
- State
  - Permission to Construct
  - Diversion Permit
  - DOT
  - It is anticipated that **all state permits would be in-hand by August 15, 2009 for Phases 1 and 2 and by October 15, 2009 for Phases 3 and 4.**



## Project Costs

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- **Immediate**

- Phase 1 \$1,950,000

- Phase 2 2,900,000

- **Immediate Need Cost: \$4,850,000**

- **Longer-Term**

- Phase 3 \$3,860,000

- Phase 4 1,230,000

- **Longer Term Cost: \$5,090,000**

- **Total Project Costs (Ph. 1-4) \$9,940,000**



## Conclusions

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- **Extension of Water to Aljen Heights will address health-related issues that threaten residents of this area:**
  - Allow replacement of community well in Avery Hill Trailer Park.
  - Allow for additional lot area should on-site septic systems need replacement.
  - Provide high quality water and eliminate water-quality concerns.
  - Eliminate concerns of “from where and of what quality”.
  - Interconnect Gales Ferry and Ledyard Center/Highlands water systems.
  - Provide options to meet future water supply needs of the Town.



## Conclusions (continued)

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- The Town believes Phases 1 and 2 require **immediate action** and it is prepared to have these projects **“shovel-ready” by September 15, 2009.**
- Given these difficult financial times, any assistance provided to the Town will benefit all citizens of Ledyard.