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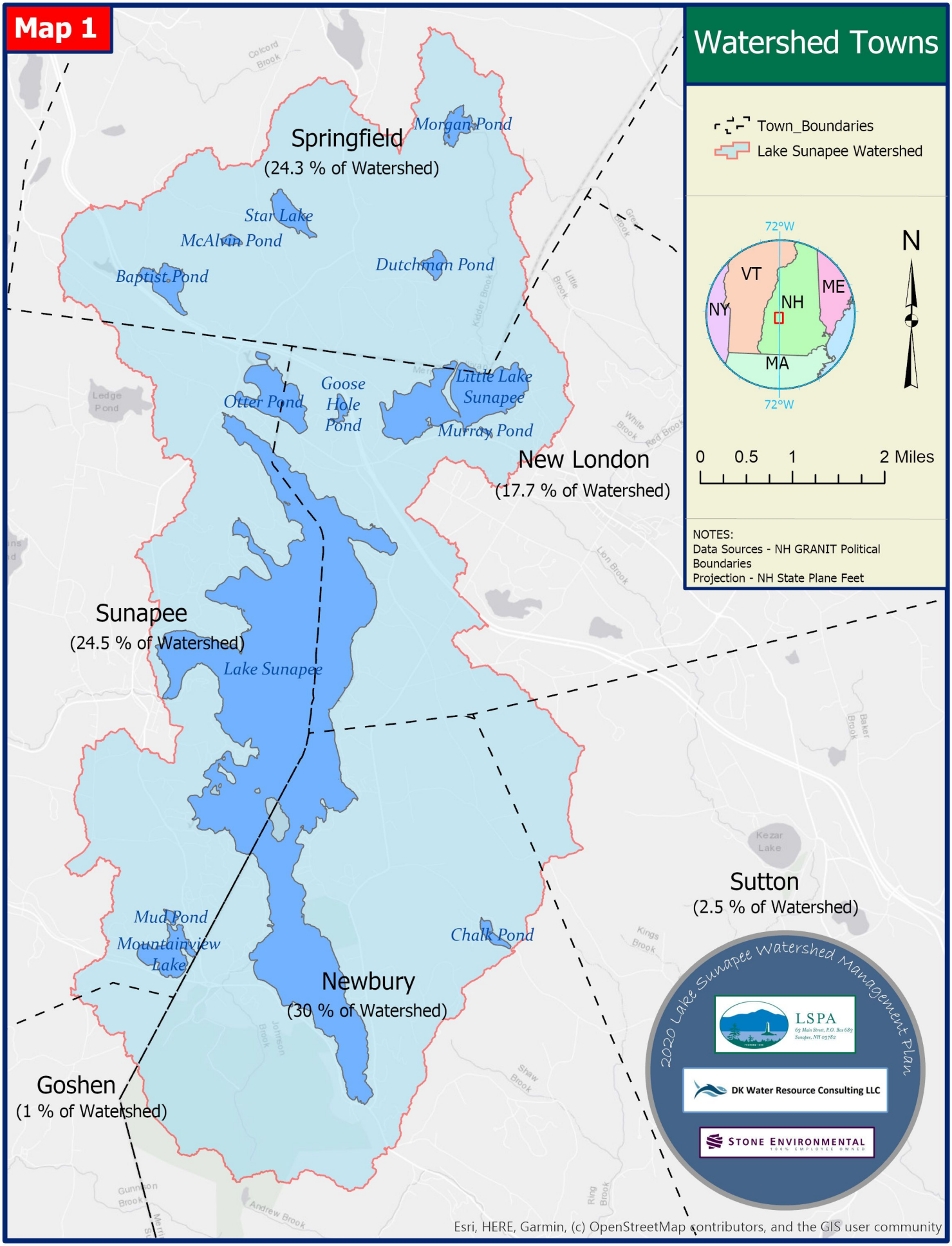
Map 1
Watershed Towns
Town_Boundaries
Lake Sunapee Watershed
72°W
VT
NH
ME
NY
MA
72°W
N
0 0.5 1 2 Miles
NOTES:
Data Sources - NH GRANIT Political Boundaries
Projection - NH State Plane Feet
Springfield
(24.3 % of Watershed)
Morgan Pond
Star Lake
McAlvin Pond
Baptist Pond
Dutchman Pond
Otter Pond
Goose Hole Pond
Little Lake Sunapee
Murray Pond
New London
(17.7 % of Watershed)
Sunapee
(24.5 % of Watershed)
Lake Sunapee
Sutton
(2.5 % of Watershed)
Mud Pond
Mountainview Lake
Chalk Pond
Newbury
(30 % of Watershed)
Goshen
(1 % of Watershed)
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Map 2

Lake Sunapee Watershed Relief

The Sugar River Flows into the Connecticut River which discharges into Long Island Sound

Watershed Boundary

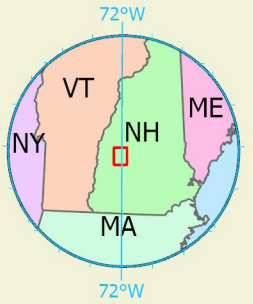
Elevation

2730 Feet

930 Feet

Drainage Network

Watershed Area:
12,072 Hectares or
46.6 Square Miles



N

0 0.5 1 2 Miles

NOTES:
Data Sources - NH GRANIT LiDAR
Projection - NH State Plane Feet

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Map 3

Lake Sunapee Watershed 2018 Land Cover

Watershed Boundary

Land Cover Classification

Class Name (NH GRANIT Based)

- Residential
- Commercial
- Outdoor Recreation
- Maintained Open Areas
- Row Crops
- Hay/Pasture
- Forest
- Disturbed Forest
- Water
- Forested Wetland
- Open Wetland
- Barren
- Paved and Unpaved Roads

Land cover data represents land surface features or characteristics for a distinct period in time and is usually based on remote sensing technology. In this assessment, data from USGS Landsat 8 satellite was used. The predominant value for each 30 meter cell or pixel (resolution of satellite sensors) is shown here. It is important to note that factors such as sensor resolution, equipment calibration and human errors during data processing are limitations of this technology.

0 0.25 0.5 1 Miles

N

NOTES:
Data Sources - NH GRANIT LiDAR & Roads, USGS 2018 Landsat 8 Satellite Image
Projection - NH State Plane Feet

Kolelemook Lake
Colcord Brook
Morgan Pond
Star Lake
McAlvin Pond
Dutchman Pond
Baptist Pond
Little Brook
Ledge Pond
Otter Pond
Goose Hole Pond
Little Lake Sunapee
Murray Pond
Messer Pond
Sugar River
Sunapee
Lake Sunapee
Mud Pond
Mountainview Lake
Chalk Pond
Kings Brook
Ring Brook
Crate Brook
Lane River
Shaw Brook
Lion Brook

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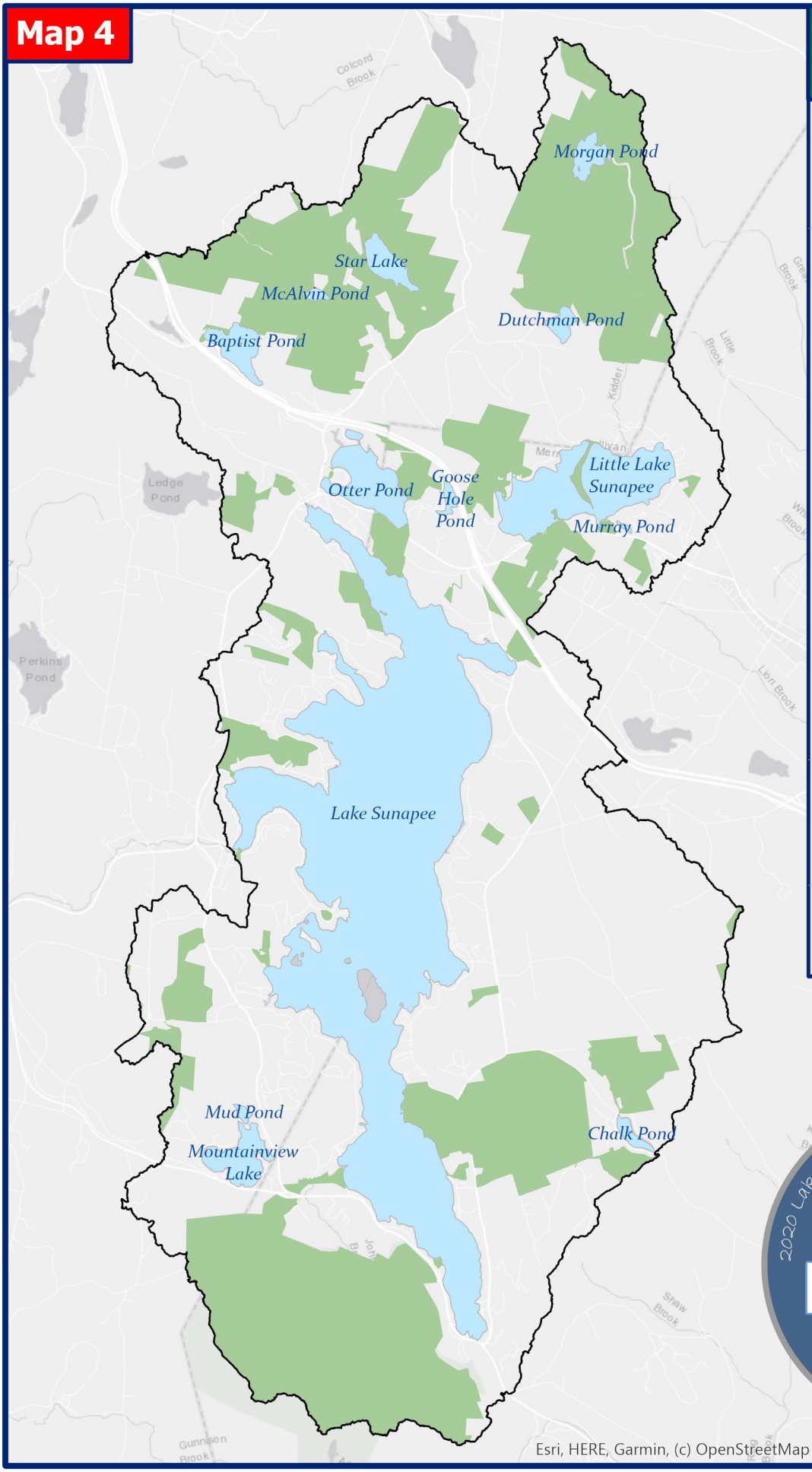
Map 4

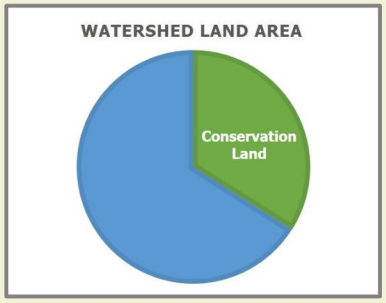


Conservation Land

Watershed Boundary

Conservation Lands

Conservation Land are parcels two or more acres in size that are mostly undeveloped and protected from future development through easements and other legal means. About 34% of land (excluding pond and lake area 10 acres or greater in size) in the Lake Sunapee Watershed is protected.



0 0.5 1 Miles

N

NOTES:
Data Sources - NH GRANIT Conservation Lands, last revised in 2013
Projection - NH State Plane Feet

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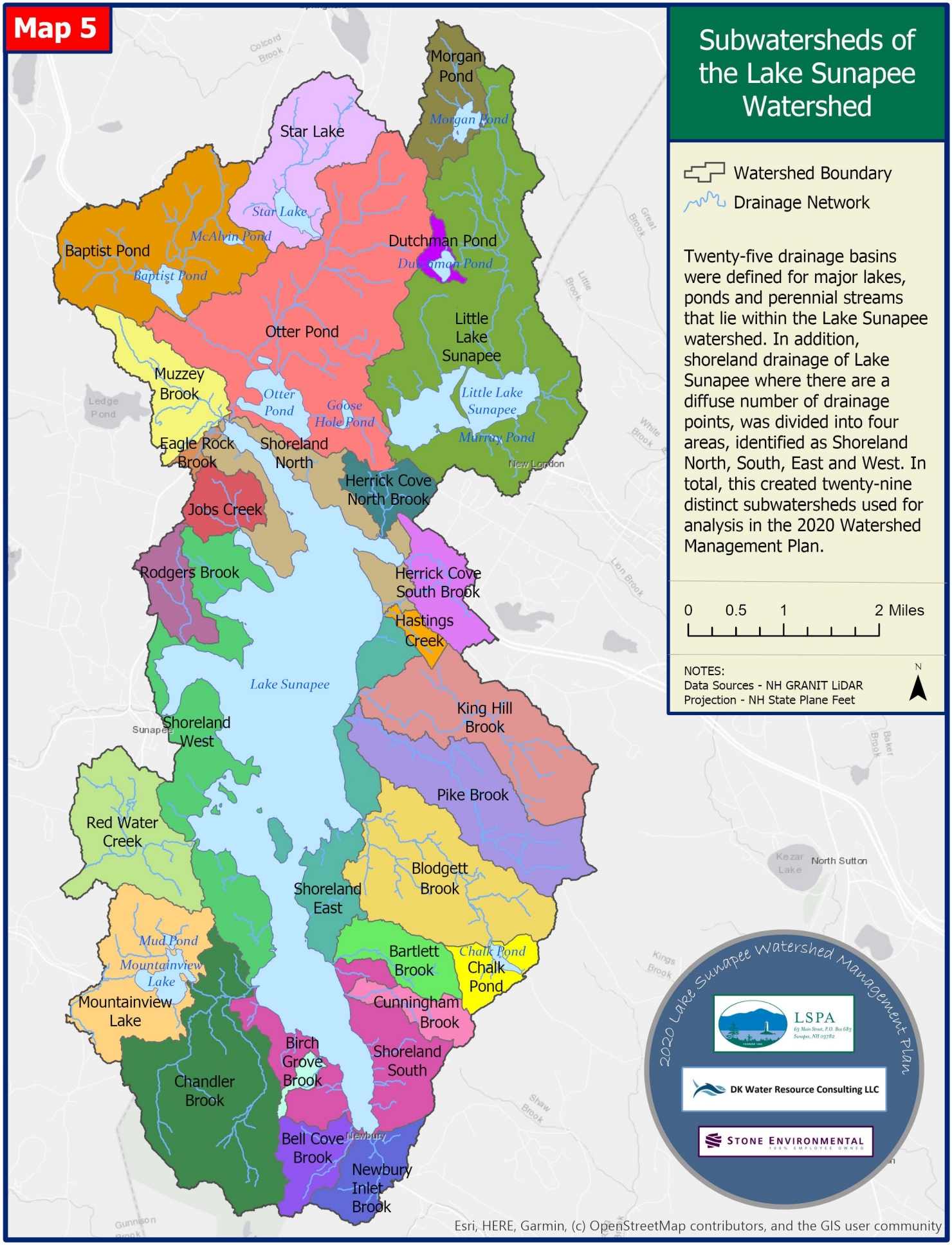
Map 5
Subwatersheds of the Lake Sunapee Watershed
Watershed Boundary
Drainage Network
Twenty-five drainage basins were defined for major lakes, ponds and perennial streams that lie within the Lake Sunapee watershed. In addition, shoreland drainage of Lake Sunapee where there are a diffuse number of drainage points, was divided into four areas, identified as Shoreland North, South, East and West. In total, this created twenty-nine distinct subwatersheds used for analysis in the 2020 Watershed Management Plan.
0 0.5 1 2 Miles
NOTES:
Data Sources - NH GRANIT LiDAR
Projection - NH State Plane Feet
N
Morgan Pond
Star Lake
Baptist Pond
McAlvin Pond
Dutchman Pond
Otter Pond
Little Lake Sunapee
Muzzey Brook
Goose Hole Pond
Murray Pond
Eagle Rock Brook
Shoreland North
Herrick Cove North Brook
Jobs Creek
Rodgers Brook
Herrick Cove South Brook
Hastings Creek
Lake Sunapee
King Hill Brook
Shoreland West
Pike Brook
Red Water Creek
Blodgett Brook
Shoreland East
Mud Pond
Mountainview Lake
Bartlett Brook
Chalk Pond
Cunningham Brook
Birch Grove Brook
Shoreland South
Chandler Brook
Bell Cove Brook
Newbury Inlet Brook
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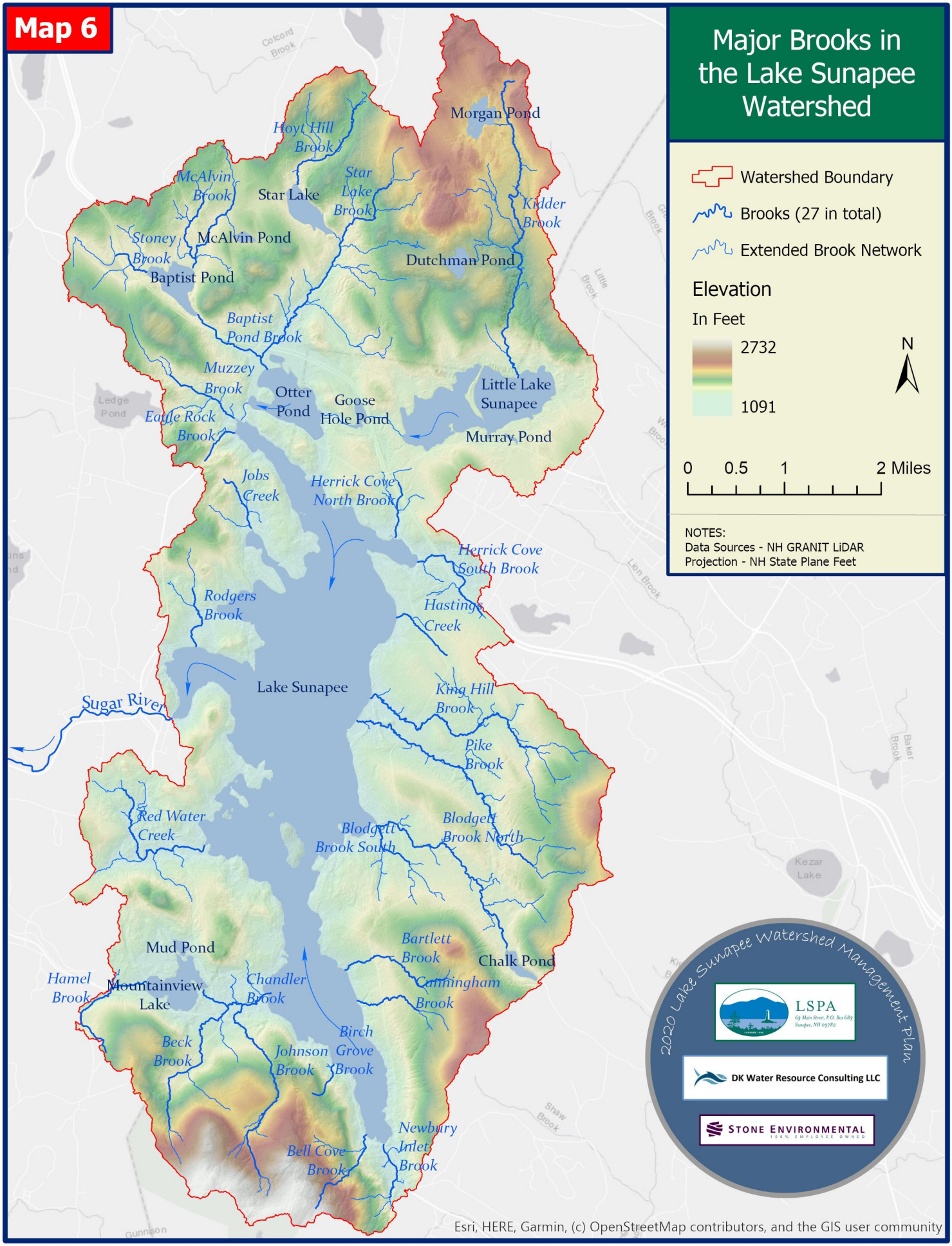
Map 6
Major Brooks in the Lake Sunapee Watershed
Watershed Boundary
Brooks (27 in total)
Extended Brook Network
Elevation
In Feet
2732
1091
N
0 0.5 1 2 Miles
NOTES:
Data Sources - NH GRANIT LiDAR
Projection - NH State Plane Feet
Morgan Pond
Hoyt Hill Brook
McAlvin Brook
Star Lake
Star Lake Brook
Kidder Brook
Stoney Brook
McAlvin Pond
Dutchman Pond
Baptist Pond
Baptist Pond Brook
Muzzey Brook
Otter Pond
Goose Hole Pond
Little Lake Sunapee
Eagle Rock Brook
Murray Pond
Jobs Creek
Herrick Cove North Brook
Herrick Cove South Brook
Rodgers Brook
Hastings Creek
Lake Sunapee
Sugar River
King Hill Brook
Pike Brook
Red Water Creek
Blodgett Brook South
Blodgett Brook North
Mud Pond
Bartlett Brook
Chalk Pond
Hamel Brook
Mountainview Lake
Chandler Brook
Cunningham Brook
Beck Brook
Birch Grove Brook
Johnson Brook
Newbury Inlet Brook
Bell Cove Brook
Ledge Pond
Kezar Lake
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Map 7

Active Water Quality Stations

Voluntary Lake Assessment Program (VLAP)

- Tributary Stations
- Deep Site Stations
- Cove Stations
- Upstream Lake/Pond Stations
- Major Brooks
- Watershed Boundary

Biological and chemical parameters are measured at these lake, pond and tributary VLAP monitoring stations in the Lake Sunapee watershed. Most samples are collected by volunteers except at a few tributaries stations and at the deep sites in Lake Sunapee. Samples are analyzed by the LSPA Water Quality Laboratory located at Colby-Sawyer College in New London.

0 0.25 0.5 1 Miles

N

NOTES:
Data Sources - NH GRANIT LiDAR & NHDES VLAP
Projection - NH State Plane Feet

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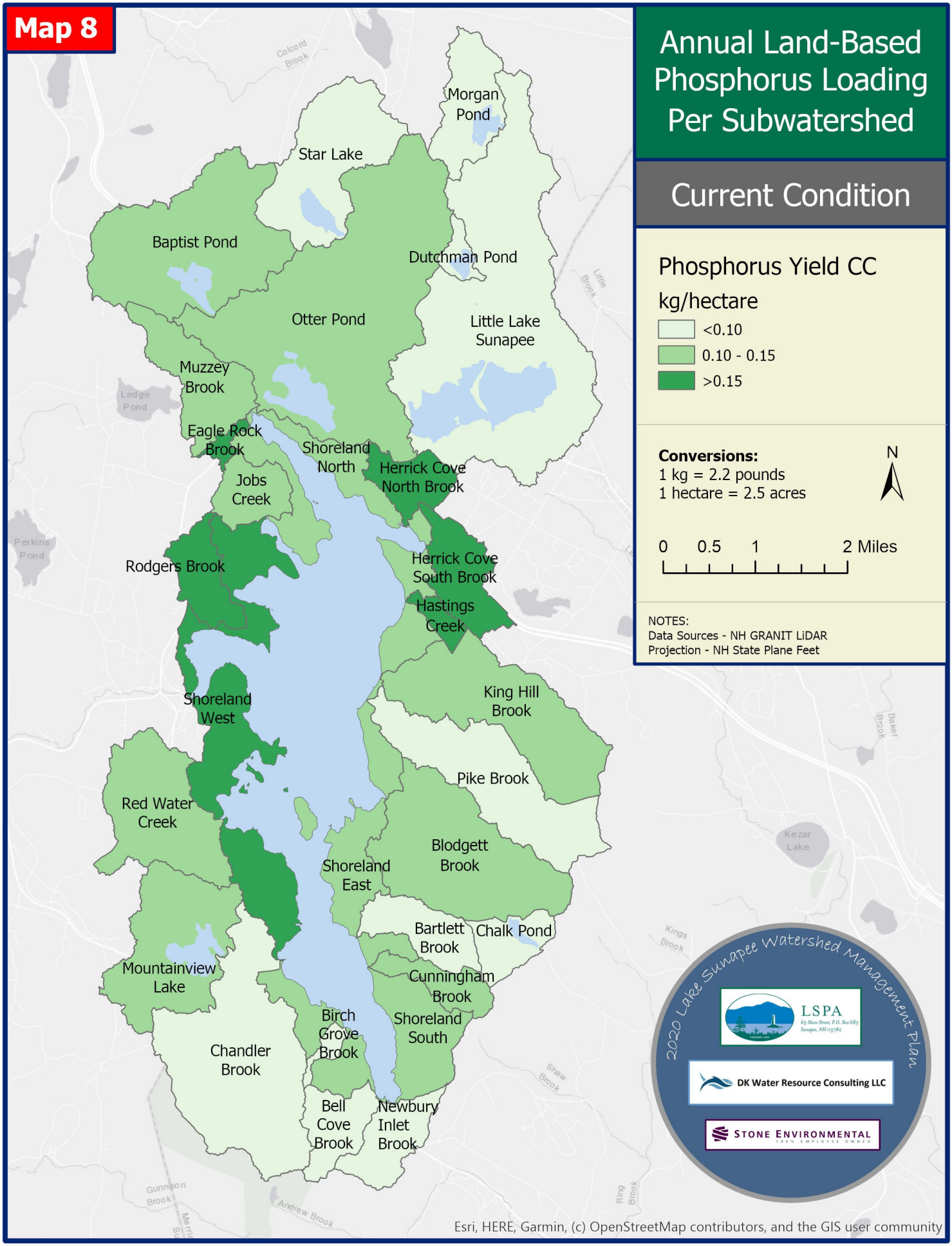
Map 8
Annual Land-Based Phosphorus Loading Per Subwatershed
Current Condition
Phosphorus Yield CC
kg/hectare
<0.10
0.10 - 0.15
>0.15
Conversions:
1 kg = 2.2 pounds
1 hectare = 2.5 acres
N
0 0.5 1 2 Miles
NOTES:
Data Sources - NH GRANIT LiDAR
Projection - NH State Plane Feet
Morgan Pond
Star Lake
Baptist Pond
Dutchman Pond
Otter Pond
Little Lake Sunapee
Muzzey Brook
Eagle Rock Brook
Shoreland North
Herrick Cove North Brook
Jobs Creek
Rodgers Brook
Herrick Cove South Brook
Hastings Creek
Shoreland West
King Hill Brook
Pike Brook
Red Water Creek
Blodgett Brook
Shoreland East
Bartlett Brook
Chalk Pond
Mountainview Lake
Cunningham Brook
Birch Grove Brook
Shoreland South
Chandler Brook
Bell Cove Brook
Newbury Inlet Brook
Colcord Brook
Ledge Pond
Perkins Pond
Little Brook
Kezar Lake
Baker Brook
Kings Brook
Shaw Brook
Ring Brook
Gunnison Brook
Andrew Brook
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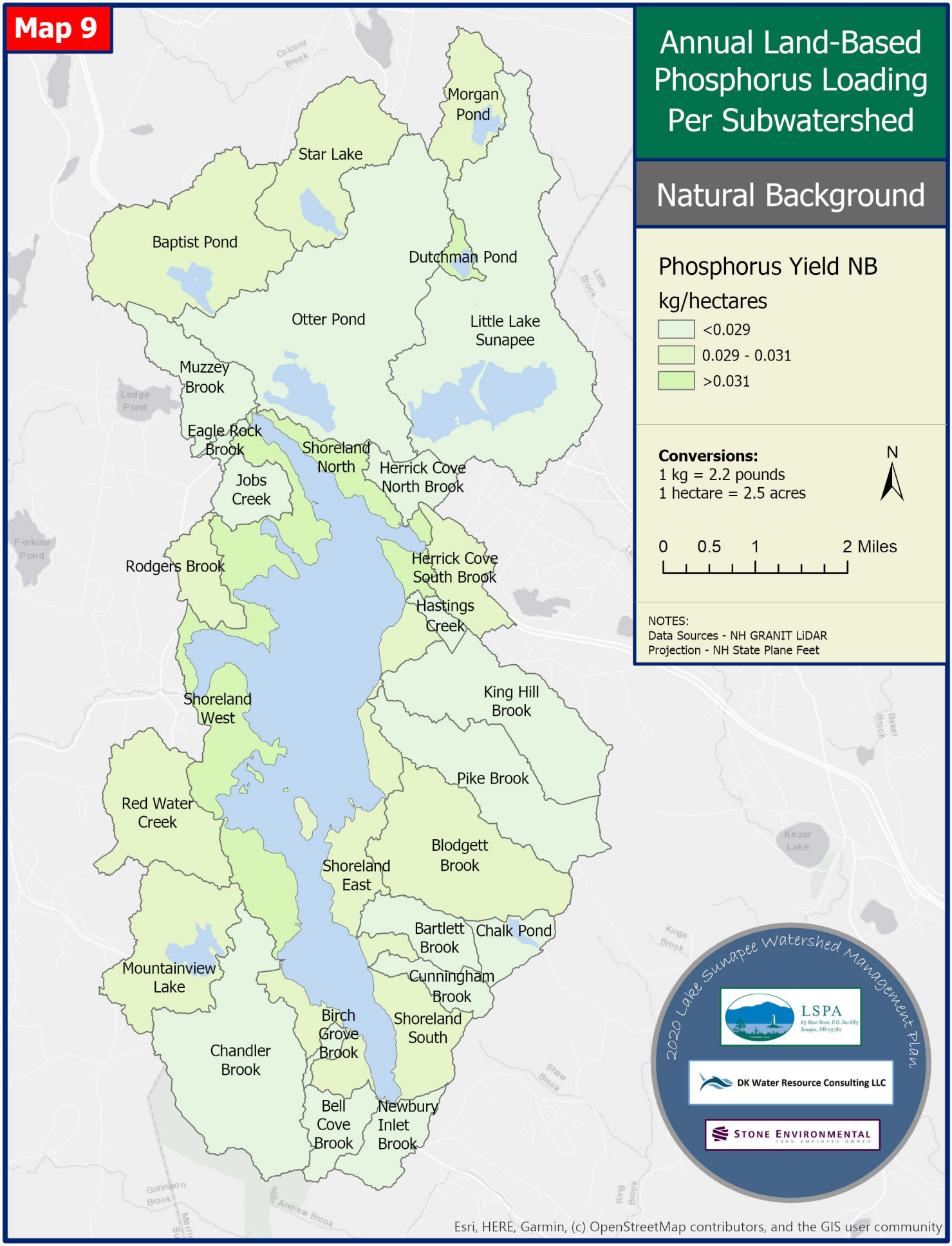
Map 9
Annual Land-Based Phosphorus Loading Per Subwatershed
Natural Background
Phosphorus Yield NB
kg/hectares
<0.029
0.029 - 0.031
>0.031
Conversions:
1 kg = 2.2 pounds
1 hectare = 2.5 acres
N
0 0.5 1 2 Miles
NOTES:
Data Sources - NH GRANIT LiDAR
Projection - NH State Plane Feet
Morgan Pond
Star Lake
Baptist Pond
Dutchman Pond
Otter Pond
Little Lake Sunapee
Muzzey Brook
Eagle Rock Brook
Shoreland North
Herrick Cove North Brook
Jobs Creek
Rodgers Brook
Herrick Cove South Brook
Hastings Creek
King Hill Brook
Shoreland West
Pike Brook
Red Water Creek
Blodgett Brook
Shoreland East
Bartlett Brook
Chalk Pond
Mountainview Lake
Cunningham Brook
Birch Grove Brook
Shoreland South
Chandler Brook
Bell Cove Brook
Newbury Inlet Brook
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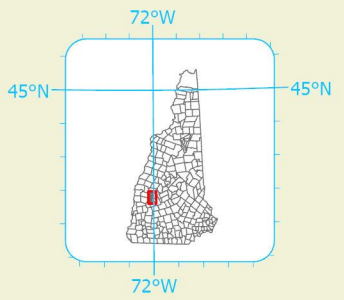
Map 10

2019 Build Out Analysis

Buildable Areas

- Town Boundaries
- Watershed Boundary
- Land Parcel Boundaries
- Goshen
- Newbury
- New London
- Springfield
- Sunapee
- Sutton

Buildable areas are defined as land devoid of existing buildings, roads and other structures that can be legally developed based on this analysis.



0 0.25 0.5 1 Miles

NOTES:
Data Sources - NH GRANIT NRCS, FEMA, NWI, USGS, Towns of Goshen, Newbury, New London, Springfield, Sunapee, Sutton
Projection - NH State Plane Feet, NAD83 FIPS 2800

Springfield
Sunapee
New London
Sutton
Goshen
Newbury

Morgan Pond
Star Lake
McAlvin Pond
Baptist Pond
Dutchman Pond
Otter Pond
Goose Hole Pond
Little Lake Sunapee
Murray Pond
Lake Sunapee
Mud Pond
Mountainview Lake
Chalk Pond

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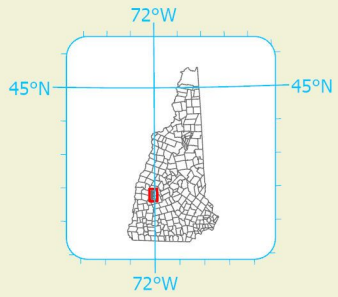
Map 11

2019 Build Out Analysis

Unbuildable Areas

- Town Boundaries
- Watershed Boundary
- Wetlands
- Merrimack County Flood Zones
- Sullivan County Flood Zones
- Poorly Drained Soils
- Conservation Protection Areas
- Road Areas
- Buildings
- Steep Slopes (15% or greater - Stone derived)

Unbuildable areas are defined as land that cannot be developed or altered because of state and local protections based on existing laws, ordinances and easements at time of analysis.



N

0 0.25 0.5 1 Miles

NOTES:
Data Sources - NH GRANIT NRCS, FEMA, NWI, USGS, Towns of Goshen, Newbury, New London, Springfield, Sunapee, Sutton
Projection - NH State Plane Feet, NAD83 FIPS 2800

Springfield
Sunapee
New London
Newbury
Sutton
Goshen
Lake Sunapee
Morgan Pond
Star Lake
McAlvin Pond
Baptist Pond
Dutchman Pond
Otter Pond
Goose Hole Pond
Little Lake Sunapee
Murray Pond
Mud Pond
Mountainview Lake
Chalk Pond
Kolelemook Lake
Ledge Pond
Messer Pond

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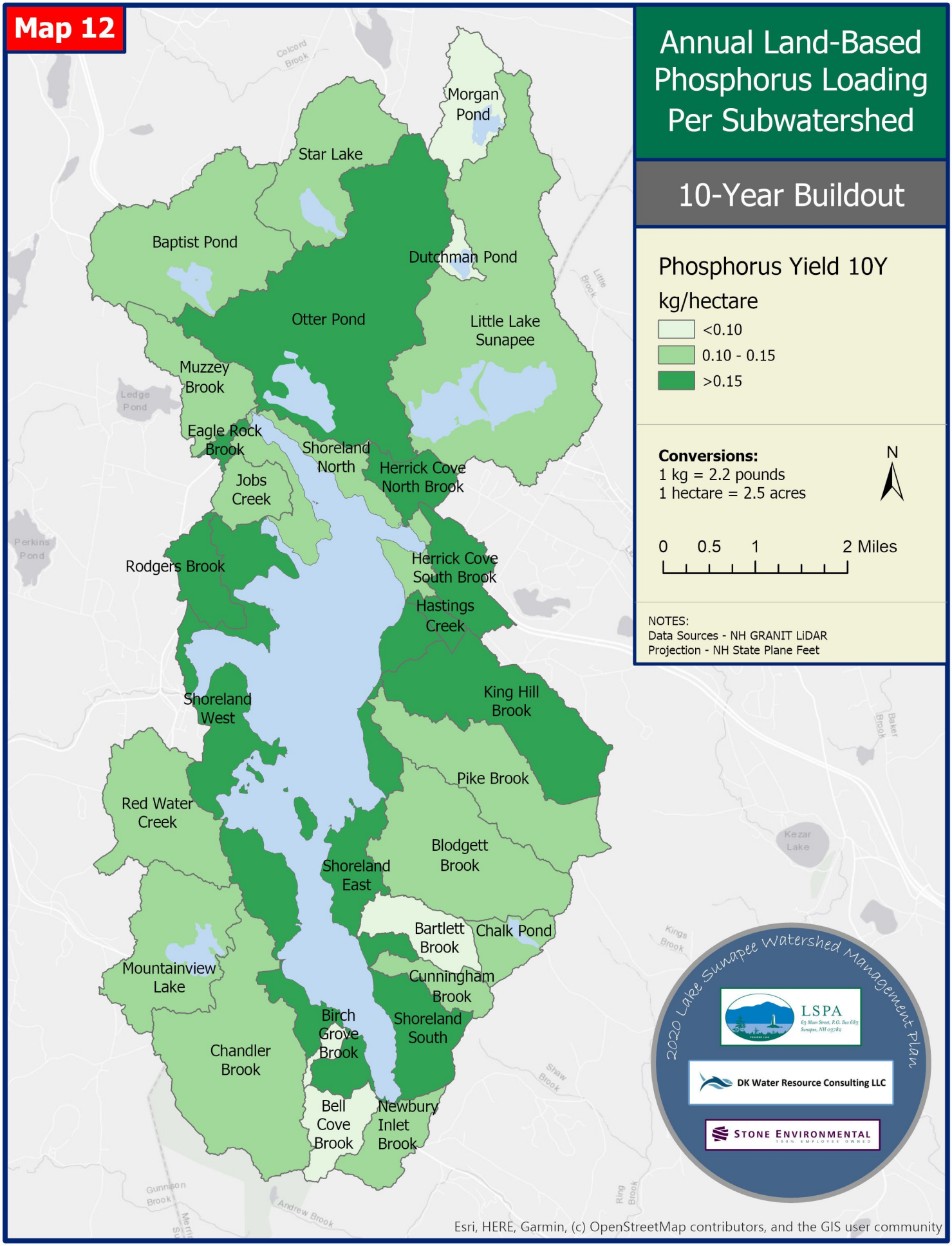
Map 12
Annual Land-Based Phosphorus Loading Per Subwatershed
10-Year Buildout
Phosphorus Yield 10Y
kg/hectare
<0.10
0.10 - 0.15
>0.15
Conversions:
1 kg = 2.2 pounds
1 hectare = 2.5 acres
N
0 0.5 1 2 Miles
NOTES:
Data Sources - NH GRANIT LiDAR
Projection - NH State Plane Feet
Morgan Pond
Star Lake
Baptist Pond
Dutchman Pond
Otter Pond
Little Lake Sunapee
Muzzey Brook
Eagle Rock Brook
Shoreland North
Herrick Cove North Brook
Jobs Creek
Rodgers Brook
Herrick Cove South Brook
Hastings Creek
Shoreland West
King Hill Brook
Pike Brook
Red Water Creek
Blodgett Brook
Shoreland East
Bartlett Brook
Chalk Pond
Mountainview Lake
Cunningham Brook
Birch Grove Brook
Shoreland South
Chandler Brook
Bell Cove Brook
Newbury Inlet Brook
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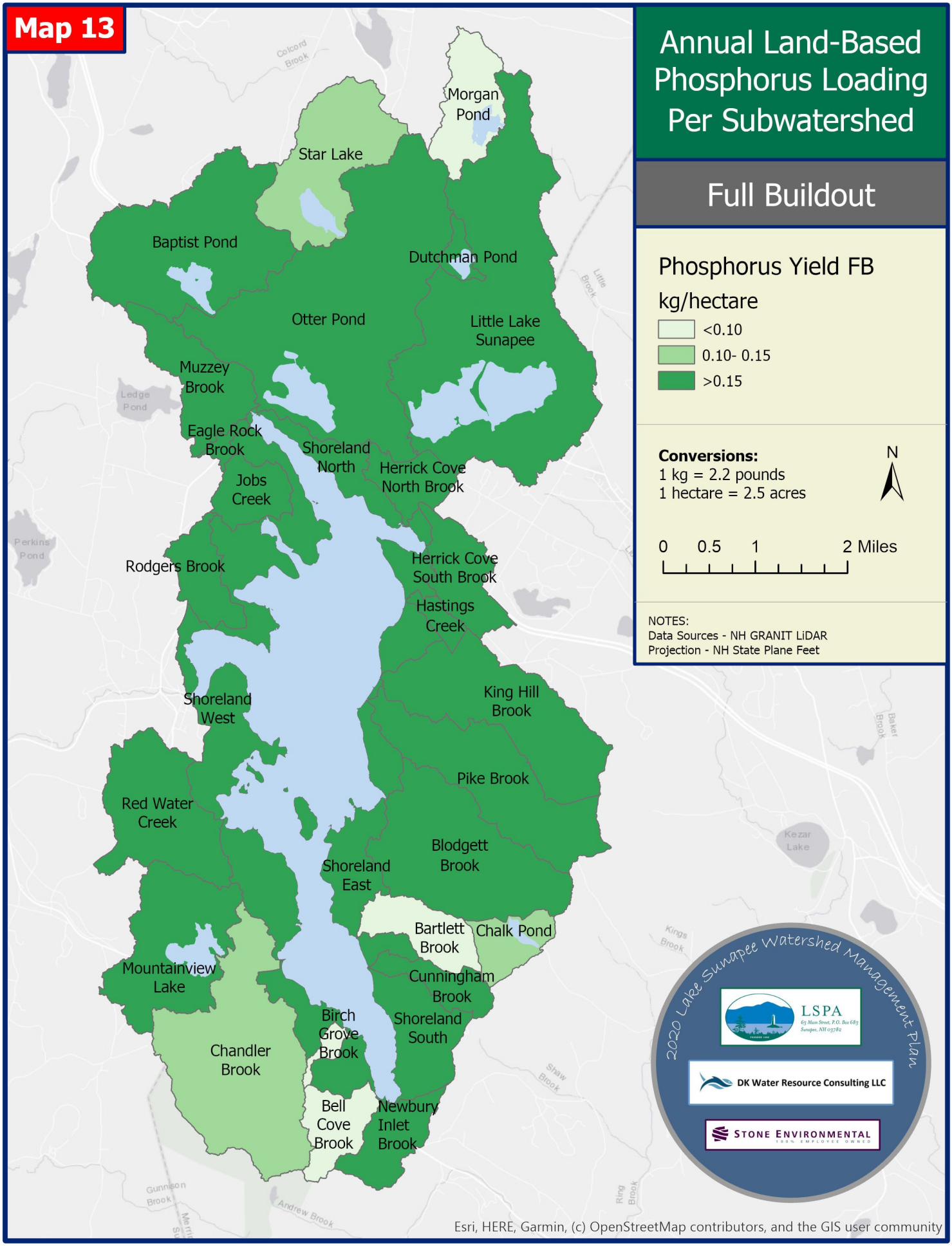
Map 13
Annual Land-Based Phosphorus Loading Per Subwatershed
Full Buildout
Phosphorus Yield FB
kg/hectare
<0.10
0.10- 0.15
>0.15
Conversions:
1 kg = 2.2 pounds
1 hectare = 2.5 acres
N
0 0.5 1 2 Miles
NOTES:
Data Sources - NH GRANIT LiDAR
Projection - NH State Plane Feet
Morgan Pond
Star Lake
Baptist Pond
Dutchman Pond
Otter Pond
Little Lake Sunapee
Muzzey Brook
Eagle Rock Brook
Shoreland North
Herrick Cove North Brook
Jobs Creek
Rodgers Brook
Herrick Cove South Brook
Hastings Creek
Shoreland West
King Hill Brook
Pike Brook
Red Water Creek
Blodgett Brook
Shoreland East
Bartlett Brook
Chalk Pond
Mountainview Lake
Cunningham Brook
Birch Grove Brook
Shoreland South
Chandler Brook
Bell Cove Brook
Newbury Inlet Brook
Colcord Brook
Ledge Pond
Perkins Pond
Little Brook
Baker Brook
Kezar Lake
Kings Brook
Shaw Brook
Ring Brook
Gunnison Brook
Andrew Brook
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Map 14

Watershed Survey Proposed BMP Sites

Best **M**anagement **P**ractice

Identified Sites

Watershed Boundary

As part of a watershed survey completed in 2019, these sites were identified as potential sources of nutrients and contaminants into waterways based on several factors such as evidence of erosion and down stream sedimentation.

Site ID Key: (Land Ownership)

DOT = NH Dept. of Transportation
NB = Town of Newbury
NL = Town of New London
PV = Private Landowner
SPR = Town of Springfield
SUN = Town of Sunapee

0 0.25 0.5 1 Miles

N

NOTES:
Data Sources - NH GRANIT LiDAR
Projection - NH State Plane Feet

SPR-01
SPR-02
DOT-01
DOT-02
DOT-03
DOT-04
DOT-05
NL-01
NL-02
NL-03
PV-01
PV-02
PV-03
PV-04
PV-05
PV-06
PV-07
PV-08
NW-01
NW-02
NW-03
NW-04
NW-05
NW-06
NW-07
NW-08
SUN-01
SUN-02
SUN-03
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SUN-14
SUN-15
SUN-16

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