Narrative, Location Map, and Soils Map
PR&R Eight-Lot Subdivision

1. Introduction

Catamount Consulting Engineers, PLLC are writing on behalf of PR&R Development, LLC to apply for a State Stormwater Discharge Permit pursuant to General Permit 3-9050 for the above referenced project.

2. Project Description

The PR&R Eight-Lot Subdivision involves an eight-lot residential subdivision on an existing 21.26 ac. property located on the north side of Observatory Rd. in Hinesburg, VT. There is currently a single existing single family residential house on the property. The project proposes seven new residential homes to be accessed via two, new, private, gravel driveways. Proposed Lot 1 will retain the existing residential house and gravel driveway, Proposed Lots 2 and 3 will share a new gravel driveway and Proposed Lots 4-8 will share a new gravel driveway.

This project requires coverage under General permit 3-9050 as it is proposing more than 0.5 ac. (0.98 ac.) of impervious area in a non-impaired watershed.

3. Existing Condition

The existing property is predominantly wooded, with the exception of the existing residential house and driveway. The lot is roughly rectangular in shape and about 1,000 feet wide (north to south) and 3,000 feet long (east to west). It is bounded by North Rd. to the east and partial by Observatory Rd. to the south on the eastern half. There is a vertical highpoint in the northern middle of the property which directs runoff to the southwest and southeast.

As all of the proposed development is on the eastern side of the drainage divide of the property, a single discharge point (S/N 001) has been established in the form of the single culvert that collects all runoff from the east side of the property via sheet flow and an existing swale on the north side of Observatory Rd. This culvert discharges to a roadside swale on the west side of North Rd. that ultimately discharges to an unnamed tributary of the La Platte River south of the subject property.

Although there are several different soil types on this 61.26 ac. property, soils within the project area generally include Peru fine sandy loam (PsE) with slopes between 20% to 60%,

Stetson gravelly fine sandy loam (StC) with slopes between 0% to 20% and Colton and Stetson soils (CsD) with slopes between 0% to 30%, with a predominant hydrologic soil group classification within the project limits of A. See the attached NRCS soil mapping for a more detailed description.

4. Existing Stormwater System

Not applicable.

5. Proposed Stormwater System

a) Description of Impervious Area: There is 0.98 ac. of new impervious area proposed for this project, with 0.30 ac. representing the seven proposed houses and the remaining impervious areas being comprised of gravel driveways.

b) Receiving Body: La Platter River

c) Fish Habitat Designation for Receiving Water: Cold

d) Description of compliance with each of the treatment standards in the 2017 VSMM including the treatment practices or waivers used to meet each of the following standards:

i) Post-Construction Soil Depth and Quality Standard: All areas proposed to be disturbed will comply with the Post-Construction Soil Depth and Quality Standard as outlined on the "EPSC & Stabilization Site Plan", sheet SW-4, and the "Post-Construction Soil Stabilization Detail", sheet SW-6/8. This detail outlines the stockpiling, modification options and placing of topsoil, as well as seeding, stabilizing and testing requirements to comply with this standard.

ii) Groundwater Recharge Standard: The Groundwater Recharge Standard is being met on this property through the implementation of two infiltration basins (Tier 1 practices).

iii) Water Quality Treatment Standard (WQ_V): WQ_V is being met on this property through the implementation of two infiltration basins (Tier 1 practices).

iv) Channel Protection Standard (CP_V): CP_V is being met on this property through the implementation of two infiltration basins (Tier 1 practices) using the Hydrologic Condition Method.

v) Overbank Flood Protection Standard (Q_{P10}): Q_{P10} is being met on this property through the implementation of two infiltration basins (Tier 1 practices) which have

been sized to accommodate the larger rain events to ensure the post-construction discharge rate for the 10 year rain event (9.86 cfs) is less than the pre-construction discharge rate (12.98 cfs).

vi) Extreme Flood Protection Standard (Q_{P100}): The QP100 is not required for this project as the total proposed impervious is less than 10 ac. A QP100 waiver form has been provided within the application.

vii) Offset Information: An offset is not required for this project.

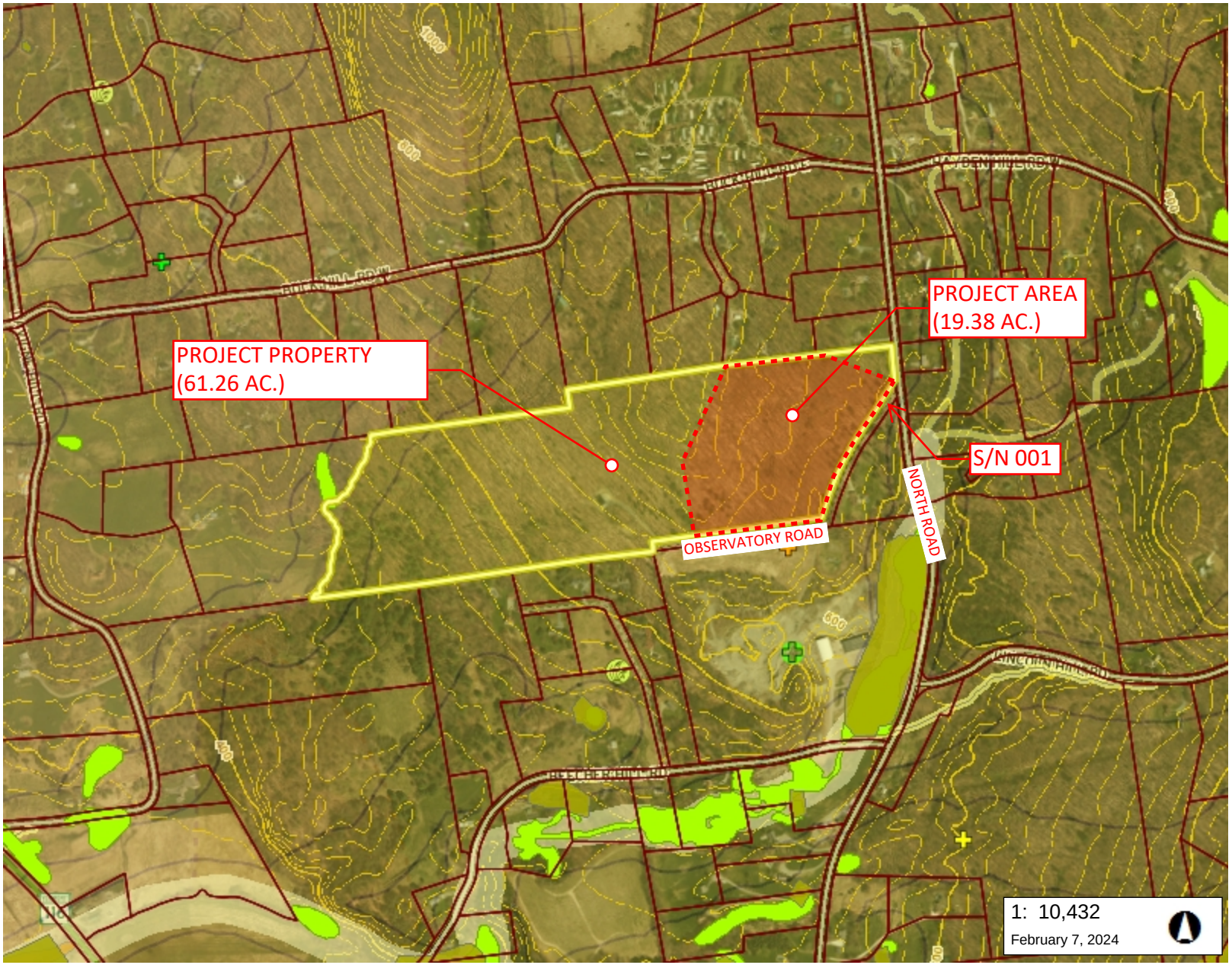
The following items are included for review:

- **eNOI form submitted via ANROnline**
- **Narrative:** Narrative, Location Map, and Soils Map.
- **Workbooks:** STP Selection Tool and Standards Compliance Workbook
- **Worksheets:** STP and Waiver Worksheets, grouped by discharge point
- **Modeling:** Runoff modeling and calculations demonstrating compliance with the applicable treatment standards.
- **Plans:** Pertinent plan sheets with all required information outlined in the Application Requirements for Operational Permits Document.
- **Plan Set Reference:** List of all plans applicable to the stormwater management design, operational standards, and application requirements.

Natural Resources Atlas

Vermont Agency of Natural Resources

vermont.gov



LEGEND

- Wetland - VSWI
  - Class 1 Wetland
  - Class 2 Wetland
  - Wetland Buffer
- Wetlands Advisory Layer
- Stormwater Permits (Issued)
  - Operational
  - Construction
  - Industrial - NOI
  - Industrial - NOX
  - Other
- Stormwater Permits (Pending)
  - Operational
  - Construction
  - Industrial - NOI
  - Industrial - NOX
  - Other
- Stormwater Impaired Watershe
- DFIRM Floodways
- Flood Hazard Areas (Only FEM
  - AE (1-percent annual chance floodp
  - A (1-percent annual chance floodpl
  - AO (1-percent annual chance zone feet)
  - 0.2-percent annual chance flood ha
- River Corridors (Aug 27, 2019)
  - .5 - 2 sqmi.
  - .25-.5 sqmi.

530.0 0 265.00 530.0 Meters

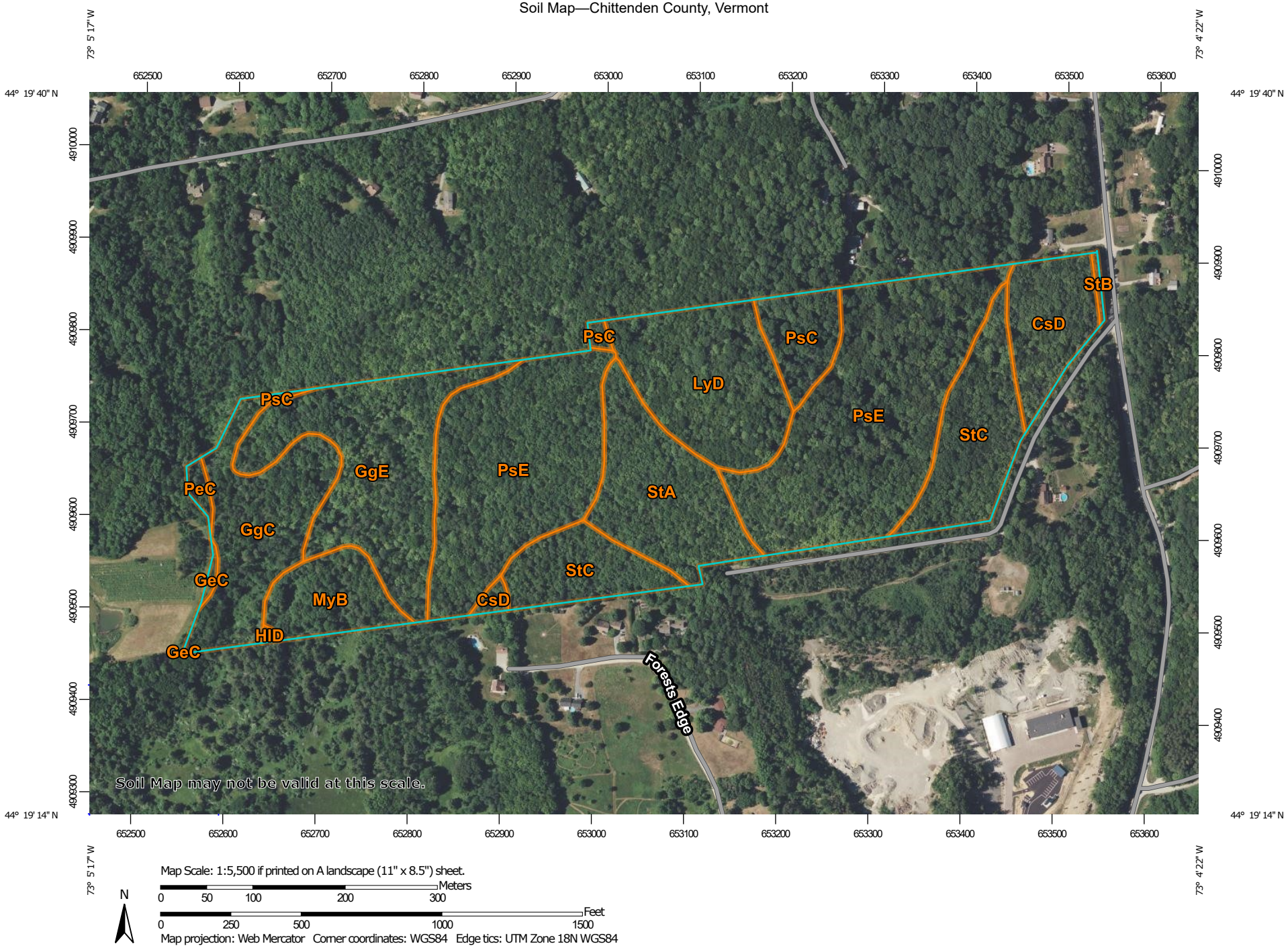
WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 869 Ft. 1cm = 104 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

NOTES

PR&R Development, LLC
340 Observatory Rd., Hinesburg, VT 05461
SPAN: 294-093-10643
Map ID: 000898.1



Map Scale: 1:5,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Chittenden County, Vermont
Survey Area Data: Version 24, Sep 9, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 18, 2020—Jun 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CsD	Colton and Stetson soils, 20 to 30 percent slopes	3.3	5.3%
GeC	Georgia stony loam, 8 to 15 percent slopes	0.1	0.2%
GgC	Georgia extremely stony loam, 0 to 15 percent slopes	5.6	8.9%
GgE	Georgia extremely stony loam, 15 to 60 percent slopes	8.2	13.0%
HlD	Hartland very fine sandy loam, 12 to 25 percent slopes	0.1	0.1%
LyD	Lyman-Marlow complex, 5 to 30 percent slopes, very rocky	6.3	9.9%
MyB	Munson and Raynham silt loams, 2 to 6 percent slopes	2.6	4.1%
PeC	Peru fine sandy loam, 12 to 20 percent slopes	0.3	0.5%
PsC	Peru fine sandy loam, 0 to 20 percent slopes, very stony	2.2	3.5%
PsE	Peru fine sandy loam, 20 to 60 percent slopes, very stony	21.7	34.4%
StA	Stetson gravelly fine sandy loam, 0 to 5 percent slopes	5.5	8.7%
StB	Stetson gravelly fine sandy loam, 5 to 12 percent slopes	0.1	0.2%
StC	Stetson gravelly fine sandy loam, 12 to 20 percent slopes	7.1	11.2%
Totals for Area of Interest		**63.1**	**100.0%**