

Facility Adoption of Water Quality Monitoring BMP's

Val Halla has two main ponds on the property. The largest pond, located on the 11th hole, has continuous flow in from Greely Rd. The pond exits into a stream that flows through the back nine, exits the property on the 17th hole and flows towards Twin Brook. The smaller of the two ponds, located on the 9th hole, acts more as a sediment catch basin from the Hemlock, Balsam and Pinewood Drive neighborhoods. This pond only has moving water in the spring and immediately following a rain event and remains stagnant otherwise. In times of flow, water bisects the front nine, exits the property on the 6th hole and flows towards the Cumberland Crossing development.

Third Party Testing

When we first started water testing in 2016, we contracted Maine Environmental Laboratories in Yarmouth to conduct the initial testing in order to obtain a third-party, unbiased baseline. Samples were tested for numerous nutrients as well as the most pesticides which most commonly impact freshwater resources. The test results below show that not only were most of these substances undetected, but that golf course actually cleans the water as it passes through the property.



MAINE ENVIRONMENTAL LABORATORY - Chain of Custody
 One Main Street, Yarmouth, ME 04096-0174 Tel: (207) 846-2400 Fax: (207) 846-9066
 Email: info@mel-lab.com Web: mainenvironmentallaboratory.com

CLIENT INFORMATION
 Name: Joe Young
 Address: Town of Cumberland
 Phone: 207-662-2100
 Project Name: 200 TOME RD, CUMBERLAND, ME 04092
 Location: VAL HALLA

SAMPLE IDENTIFICATION
 Sample ID: 7-Young
 Date: 5/16/16
 Time: 1:15pm

| SAMPLE IDENTIFICATION | FIELD PLAN | | METHOD PRESERVED | SAMPLING | | ANALYSIS |
|-----------------------|-------------------------------------|-------------------------------------|-----------------------------------|----------------|---------------|--|
| | IF CONTAINER | TYPE OF CONTAINER | | DATE | TIME | |
| 9 POND | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>grab</u> | <u>5/16/16</u> | <u>1:15pm</u> | <input checked="" type="checkbox"/> NH ₃ -N <input checked="" type="checkbox"/> NH ₄ -N <input checked="" type="checkbox"/> NO ₃ -N <input checked="" type="checkbox"/> NO ₂ -N <input checked="" type="checkbox"/> PO ₄ -P <input checked="" type="checkbox"/> pH <input checked="" type="checkbox"/> Temperature <input checked="" type="checkbox"/> Turbidity |
| 6 STREAM | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>H₂O₂</u> | <u>5/16/16</u> | <u>1:30pm</u> | <input checked="" type="checkbox"/> NH ₃ -N <input checked="" type="checkbox"/> NH ₄ -N <input checked="" type="checkbox"/> NO ₃ -N <input checked="" type="checkbox"/> NO ₂ -N <input checked="" type="checkbox"/> PO ₄ -P <input checked="" type="checkbox"/> pH <input checked="" type="checkbox"/> Temperature <input checked="" type="checkbox"/> Turbidity |
| 11 POND | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>grab</u> | <u>5/16/16</u> | <u>1:45pm</u> | <input checked="" type="checkbox"/> NH ₃ -N <input checked="" type="checkbox"/> NH ₄ -N <input checked="" type="checkbox"/> NO ₃ -N <input checked="" type="checkbox"/> NO ₂ -N <input checked="" type="checkbox"/> PO ₄ -P <input checked="" type="checkbox"/> pH <input checked="" type="checkbox"/> Temperature <input checked="" type="checkbox"/> Turbidity |
| 17 STREAM | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>grab</u> | <u>5/16/16</u> | <u>2:15pm</u> | <input checked="" type="checkbox"/> NH ₃ -N <input checked="" type="checkbox"/> NH ₄ -N <input checked="" type="checkbox"/> NO ₃ -N <input checked="" type="checkbox"/> NO ₂ -N <input checked="" type="checkbox"/> PO ₄ -P <input checked="" type="checkbox"/> pH <input checked="" type="checkbox"/> Temperature <input checked="" type="checkbox"/> Turbidity |

REPORTING REQUIREMENTS
 Standard Report
 ME DEP FDD
 DEP Compliance Data (S, S₂)
 CC Results to:

COMMENTS
POD SHARE INFO W/ CREEK BOUND

CHAIN OF CUSTODY

| RELINQUISHED BY | DATE | TIME | RECEIVED BY |
|------------------|-------|-------|--------------|
| RELINQUISHED BY: | DATE: | TIME: | RECEIVED BY: |
| RELINQUISHED BY: | DATE: | TIME: | RECEIVED BY: |
| RELINQUISHED BY: | DATE: | TIME: | RECEIVED BY: |

006-1014 It is the client's responsibility to check for accuracy prior to laboratory analysis. By accepting this COC, the client has read and agrees to be bound by MEL's Terms & Conditions. page 1 of 1

LABORATORY REPORT

EAI ID#: 156165

Client: Maine Environmental Laboratory
Client Designation: CUM003-16

Client Sample ID: 9 Pond
Lab Sample ID: 156165.01
Matrix: aqueous
Date Sampled: 5/18/16
Date Received: 5/17/16

Table with 10 columns: Result, RL, Dilution Factor, Units, Date / Time Analyzed, Date Prepared, Method, Analyst. Lists various herbicides like Aldrin, alpha-BHC, beta-BHC, etc.

LABORATORY REPORT

EAI ID#: 156165

Client: Maine Environmental Laboratory
Client Designation: CUM003-16

Client Sample ID: 6 Stream
Lab Sample ID: 156165.02
Matrix: aqueous
Date Sampled: 5/18/16
Date Received: 5/17/16

Table with 10 columns: Result, RL, Dilution Factor, Units, Date / Time Analyzed, Date Prepared, Method, Analyst. Lists various herbicides like Aldrin, alpha-BHC, beta-BHC, etc.

LABORATORY REPORT

EAI ID#: 156165

Client: Maine Environmental Laboratory
Client Designation: CUM003-16

Client Sample ID: 11 Pond
Lab Sample ID: 156165.03
Matrix: aqueous
Date Sampled: 5/18/16
Date Received: 5/17/16

Table with 10 columns: Result, RL, Dilution Factor, Units, Date / Time Analyzed, Date Prepared, Method, Analyst. Lists various herbicides like Aldrin, alpha-BHC, beta-BHC, etc.

LABORATORY REPORT

EAI ID#: 156165

Client: Maine Environmental Laboratory
Client Designation: CUM003-16

Client Sample ID: 17 Stream
Lab Sample ID: 156165.04
Matrix: aqueous
Date Sampled: 5/18/16
Date Received: 5/17/16

Table with 10 columns: Result, RL, Dilution Factor, Units, Date / Time Analyzed, Date Prepared, Method, Analyst. Lists various herbicides like Aldrin, alpha-BHC, beta-BHC, etc.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 270, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
May 25, 2016

FOR: Attn: Front Office
Eastern Analytical
25 Channel Drive
Concord, NH 03301

Sample Information
Matrix: WATER
Location Code: EASTANAL
Rush Request: Standard
P.O.#: 44527

Custody Information
Collected by: LK
Analyzed by: see "By" below

Laboratory Data
SDG ID: GBN36343
Phoenix ID: BN36343

Project ID: 9 POND
Client ID: 9 POND

Table with 8 columns: Parameter, Result, RL/PQL, Units, Dilution, Date/Time, By, Reference. Lists herbicides like 2,4,5-T, 2,4,5-TP, etc.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
CAQC: Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
May 25, 2016
Reviewed and Released by: Bobbi Aloia, Vice President



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 270, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
May 25, 2016

FOR: Attn: Front Office
Eastern Analytical
25 Channel Drive
Concord, NH 03301

Sample Information
Matrix: WATER
Location Code: EASTANAL
Rush Request: Standard
P.O.#: 44527

Custody Information
Collected by: LK
Analyzed by: see "By" below

Laboratory Data
SDG ID: GBN36343
Phoenix ID: BN36344

Project ID: 6 STREAM
Client ID: 6 STREAM

Table with 8 columns: Parameter, Result, RL/PQL, Units, Dilution, Date/Time, By, Reference. Lists herbicides like 2,4,5-T, 2,4,5-TP, etc.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
CAQC: Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

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Phyllis Shiller, Laboratory Director
May 25, 2016
Reviewed and Released by: Bobbi Aloia, Vice President



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06045
Tel. (800) 945-1102 Fax (800) 945-0823

Analysis Report
May 25, 2016

FOR: Attn: Front Office
Eastern Analytical
25 Channell Drive
Concord, NH 03301

Sample Information
Matrix: WATER
Location Code: EASTANAL
Rush Request: Standard
P.O.#: 44527

Custody Information
Collected by: [blank]
Received by: LK
Analyzed by: see "By" below

Date Time
05/16/16 13:45
05/20/16 11:57

Laboratory Data

SDG ID: GBN36343
Phoenix ID: BN36345

Project ID: [blank]
Client ID: 11 POND

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|---|--------|------------|-------|----------|-----------|----|------------|
| Extraction for Herbicide Completed 05/23/16 R/D SWB151A | | | | | | | |
| Chlorinated Herbicides | | | | | | | |
| 2,4,5-T | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| 2,4,5-TP (Silver) | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| 2,4-D | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| 2,4-DB | ND | 10 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| Datapon | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| Dicamba | ND | 2.5 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| Dichlorprop | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| Dinoseb | ND | 2.5 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| QA/QC Surrogates | | | | | | | |
| % DCAA | 65 | | % | 10 | 05/24/16 | BB | 30 - 150 % |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller
Phyllis Shiller, Laboratory Director
May 25, 2016

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Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06045
Tel. (800) 945-1102 Fax (800) 945-0823

Analysis Report
May 25, 2016

FOR: Attn: Front Office
Eastern Analytical
25 Channell Drive
Concord, NH 03301

Sample Information
Matrix: WATER
Location Code: EASTANAL
Rush Request: Standard
P.O.#: 44527

Custody Information
Collected by: [blank]
Received by: LK
Analyzed by: see "By" below

Date Time
05/16/16 14:15
05/20/16 11:57

Laboratory Data

SDG ID: GBN36343
Phoenix ID: BN36346

Project ID: [blank]
Client ID: 17 STREAM

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|---|--------|------------|-------|----------|-----------|----|------------|
| Extraction for Herbicide Completed 05/23/16 R/D SWB151A | | | | | | | |
| Chlorinated Herbicides | | | | | | | |
| 2,4,5-T | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| 2,4,5-TP (Silver) | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| 2,4-D | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| 2,4-DB | ND | 10 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| Datapon | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| Dicamba | ND | 2.5 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| Dichlorprop | ND | 1.3 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| Dinoseb | ND | 2.5 | ug/L | 10 | 05/24/16 | BB | SWB151A |
| QA/QC Surrogates | | | | | | | |
| % DCAA | 70 | | % | 10 | 05/24/16 | BB | 30 - 150 % |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller
Phyllis Shiller, Laboratory Director
May 25, 2016

Reviewed and Released by: Bobbi Aloia, Vice President

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096 Tel.: (207) 846-6569 Fax: (207) 846-9066 Email: melab@mel-lab.com

Toby Young Page 2 of 5
Town of Cumberland
290 Tuttle Road June 2, 2016
Cumberland, ME 04021

Report No: CUM003-16 Sampler: T. Young
Date received: 05/16/16 Sampling date & time: 5/16/16-1315
Project ID: Audubon Sample matrix: Aqueous-Grab
Laboratory ID: CUM00316-01 Sample ID: 9 POND

| Parameter | Results | units | Date-Time Analyzed | LOD | LOQ | Method | Reference |
|------------|---------|----------|-----------------------|------|----------|------------|-----------|
| Ammonia-N | ND | mg/L | 05/27/16 | 0.1 | 0.5 | 4500NH3B/E | STM |
| Nitrate-N | 0.3 | mg/L | 05/17/16-0839 | 0.1 | 0.3 | 300.0 | EPA1 |
| Nitrite-N | ND | mg/L | 05/17/16-0839 | 0.03 | 0.10 | 300.0 | EPA1 |
| pH * | 6.70 | pH units | 05/16/16-1520 | 0.01 | 4500 H-B | STM | |
| Phosphorus | 0.05 | mg/L | 05/26/16 | 0.01 | 0.04 | 365.3 | EPA |

*pH holding time is 15 minutes after sampling. Analysis is outside EPA's recommended holding time.
ND = not detected J = estimated B = detected in blank S = DLs increased due to sample matrix

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096 Tel.: (207) 846-6569 Fax: (207) 846-9066 Email: melab@mel-lab.com

Toby Young Page 3 of 5
Town of Cumberland
290 Tuttle Road June 2, 2016
Cumberland, ME 04021

Report No: CUM003-16 Sampler: T. Young
Date received: 05/16/16 Sampling date & time: 5/16/16-1330
Project ID: Audubon Sample matrix: Aqueous-Grab
Laboratory ID: CUM00316-02 Sample ID: 6 STREAM

| Parameter | Results | units | Date-Time Analyzed | LOD | LOQ | Method | Reference |
|------------|---------|----------|-----------------------|------|----------|------------|-----------|
| Ammonia-N | ND | mg/L | 05/27/16 | 0.1 | 0.5 | 4500NH3B/E | STM |
| Nitrate-N | 0.2 J | mg/L | 05/17/16-0839 | 0.1 | 0.3 | 300.0 | EPA1 |
| Nitrite-N | ND | mg/L | 05/17/16-0839 | 0.03 | 0.10 | 300.0 | EPA1 |
| pH * | 6.79 | pH units | 05/16/16-1520 | 0.01 | 4500 H-B | STM | |
| Phosphorus | 0.03 J | mg/L | 05/26/16 | 0.01 | 0.04 | 365.3 | EPA |

*pH holding time is 15 minutes after sampling. Analysis is outside EPA's recommended holding time.
ND = not detected J = estimated B = detected in blank S = DLs increased due to sample matrix

Report No: CUM003-16 Sampler: T. Young
 Date received: 05/16/16 Sampling date & time: 5/16/16-1345
 Project ID: Audubon Sample matrix: Aqueous-Grab
 Laboratory ID: CUM00316-03 Sample ID: 11 POND

| Parameter | Results | units | Date-Time Analyzed | LOD | LOQ | Method | Reference |
|------------|---------|----------|--------------------|------|------|------------|-----------|
| Ammonia-N | ND | mg/L | 05/27/16 | 0.1 | 0.5 | 4500NH3B/E | STM |
| Nitrate-N | 1.0 | mg/L | 05/17/16-0839 | 0.1 | 0.3 | 300.0 | EPA1 |
| Nitrite-N | ND | mg/L | 05/17/16-0839 | 0.03 | 0.10 | 300.0 | EPA1 |
| pH * | 6.98 | pH units | 05/16/16-1520 | | 0.01 | 4500 H+B | STM |
| Phosphorus | 0.02 J | mg/L | 05/26/16 | 0.01 | 0.04 | 365.3 | EPA |

*pH holding time is 15 minutes after sampling. Analysis is outside EPA's recommended holding time.
 ND = not detected J = estimated B = detected in blank S = DLs increased due to sample matrix

Report No: CUM003-16 Sampler: T. Young
 Date received: 05/16/16 Sampling date & time: 5/16/16-1415
 Project ID: Audubon Sample matrix: Aqueous-Grab
 Laboratory ID: CUM00316-04 Sample ID: 17 STREAM

| Parameter | Results | units | Date-Time Analyzed | LOD | LOQ | Method | Reference |
|--------------|---------|----------|--------------------|------|------|------------|-----------|
| Ammonia-N | ND | mg/L | 05/27/16 | 0.1 | 0.5 | 4500NH3B/E | STM |
| Nitrate-N | 1.0 | mg/L | 05/17/16-0839 | 0.1 | 0.3 | 300.0 | EPA1 |
| Nitrite-N ** | ND | mg/L | 05/17/16-0839 | 0.03 | 0.10 | 300.0 | EPA1 |
| pH * | 6.96 | pH units | 05/16/16-1520 | | 0.01 | 4500 H+B | STM |
| Phosphorus | 0.02 J | mg/L | 05/26/16 | 0.01 | 0.04 | 365.3 | EPA |

*pH holding time is 15 minutes after sampling. Analysis is outside EPA's recommended holding time.
 **Nitrite-N matrix spike recovery of 42% is outside laboratory acceptance limits of 90%-110%.
 ND = not detected J = estimated B = detected in blank S = DLs increased due to sample matrix

In-House Testing

Waterbodies are tested annually, in-house in the same locations to ensure that the above results remain. We test surface temperature, water temperature, dissolved oxygen, pH, nitrate, nitrite, ammonia, phosphate and conductivity. Through the use of agronomic practices, scouting, precise weather monitoring, data collection, balanced fertility programs and conservative chemical applications; we can proudly say that Val Halla has a net-positive impact on the surrounding environment. Vegetative buffers surround all our water bodies and through our annual water testing efforts we have continually proved that the water leaving our property is cleaner and more filtered than when it enters.



