Appendix B

Water Quality Monitoring Data

Furnace & Oldham Ponds
Watershed Restoration Project
Section 604b Project # 2009-07/ARRA 604

Prepared by
Comprehensive Environmental Inc. for
Town of Pembroke, MA

Prepared for
Massachusetts Department of
Environmental Protection

Massachusetts Executive Office of Energy and Environmental Affairs
Richard K. Sullivan Jr., Secretary
Department of Environmental Protection
Kenneth L. Kimmel, Commissioner

Bureau of Resource Protection
Ann Lowery, Acting Assistant Commissioner
Division of Municipal Services
Steven J McCurdy, Director

June 2011
PEMBROKE WATERSHED ASSOCIATION

WATER QUALITY SAMPLING
OLDHAM POND/FURNACE POND

JUNE 2010
Pembroke Watershed Association
P.O. Box 368, Pembroke, MA 02361-0368

Water Sample Collection Data Sheet

Sampling Station #: D-A
Watershed: PWA / South Congalad

Town: Housatonic
Pond or River: Oldham
GPS Location: 41° 01’ 35.0”N 70° 50.388”W

Water level: 55.3 ft.

Today’s weather: Cloudy, Rainy
Rainfall: __ in.

Yesterday’s weather: Cloudy, Rain
Rainfall: __ in.

Day before’s weather: Rain, Cloudy
Rainfall: __ in.

Site location: Beckett St Trail

Sample taken from: Boat, Bank, Wade, Dock, Other Standing water downstream

Water use: ( ) None, ( ) Fishing, ( ) Boating, ( ) Skiing, ( ) Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green

Water odor: ( ) None, ( ) Sewage, ( ) Oil, ( ) Chlorine, ( ) Rotten eggs, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, 100%

Bottom appearance: Not Visible, Silt, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Current at sample area: Fast, Slow, Still, None

Water Characteristics:

Secchi Disk Transparency: ( ) Yes, ( ) No
Time: ___ pm
Depth: ___ ft.

Chemistry sample: ( ) Yes, ( ) No
Time: ___ pm
Depth: ___ ft.

DO Meter Sample: Time: ___ am / pm

Depth 0 ft. Surface DO: __ mg/l	 (%)	 Water temp: ___ °F/C

Conductivity: 195.2 µS/cm pH: 5.88 Salinity: ___

Depth 7 ft. DO: __ mg/l (%)	 Water temp: ___ °F/C

Depth ___ ft. DO: __ mg/l (%)	 Water temp: ___ °F/C

Depth at sample area: ___ Ft.

Air temp: ___ °F/C Surface water temp: ___ °F/C

Comments:

Sample taker name: __________ Date: ___/___/___

Witness: __________ Date: ___/___/___

Water Sample Form revised 10/97
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02356-0368

Water Sample Collection Data Sheet

Sampling Station #: O-B Watershed: Puff/S Coastal

Town: Pembroke/Glidden GPS Location:

Pond or River: Glidden Water level: 55 3 Ft

Today's weather: Cloudy Rain

Rainfall: in.

Yesterday's weather: Cloudy Rain

Rainfall: in.

Day before's weather: Cloudy Rain

Rainfall: in.

Site location: Lakeside Dr

Sample taken from: Boat, Bank, Wade, Dock, Other In water downstream

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Muddy, Foam, Brown (muddy), Gray (silty), Tee, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 0%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics:

Water Characteristics:

Current at sample area:

Fast, Slow, Still, None

Secchi Disk Transparency:

No

Chemistry sample:

Do Meter Sample:

Depth [ft. surface]

DO [mg/l] 8.32

% Water temp 12.8 °F/C

Conductivity [µs/cm]

pH 6.38

Salinity [‰]

Depth [ft.]

DO [mg/l] % Water temp [°F/C]

Depth [ft.]

DO [mg/l] % Water temp [°F/C]

Depth at sample area:

Ft. Air temp: 65 °F/C Surface water temp: °F/C

Comments:

Sample taker name:

Date 6/13/10 Time 11

Witness:

Date 6/13/10 Time 11

Water Sample Form revised 10/07
Pembroke Watershed Association
P. O. Box 388, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: O-C  Watershed: South Coastal

Pond or River: Oldham  GPS Location: 43.04.9460, -70.58.4244

Town: Pembroke  Water level: 95.3 Ft

Today's weather: Rain, Cloudy  Rainfall: ___ in.

Yesterday's weather: Rainy, Cloudy  Rainfall: _1 in.

Day before's weather: Cloudy, Snow  Rainfall: _0.4 in.

Site location: Country Ln/Brook St

Sample taken from: Boat, Bank, Wade, Dock, Other Stand in water down stream

Water use:  None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other

Algal growth: None, <5%, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%  Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other

Weed Growth in Sample area: Not Visible, Embedded, Surface - % of weed growth

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Sacchi Disk Transparency: No  Time: __am / pm  Depth: ___ ft

Chemistry sample: Yes  No  Time: 11:20 am / pm  Depth: ___ inches

DO Meter Sample:  Time: 11:20 am / pm

Depth surface Ft.  DO  ___ mg/l  ___ %  Water temp: 14.7 °F/C

Conductivity 150.7 pH 5.77 Salinity 1

Depth 7 Ft.  DO  ___ mg/l  ___ %  Water temp: ___ °F/C

Depth ___ Ft.  DO  ___ mg/l  ___ %  Water temp: ___ °F/C

Depth at sample area: ___ Ft.  Air temp: 65 °F/C  Surface water temp: ___ °F/C

Comments: 

Sample taken name: Name of Sample taker:  Date: 6/13  Time 11:30

Witness:  Date: 6/13  Time 11:30

Water Sample Form revised 10/07
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: 0-0
Watershed: PW4/5 Coastal

Town: Pembroke
Pond or River: Oldham
GPS Location: 42° 03' 55.0" N 70° 44' 17.6" W

Water level: 8' 3" Ft

Today's weather: Cloudy, Rain
Rainfall: in

Yesterday's weather: Cloudy, Rain
Rainfall: in

Day before’s weather: Cloudy, a shower
Rainfall: 0.04" in

Site location: Old ham outlet to furnace

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam (Brown), (muddy), Gray (salty), Tea, Green

Water odor: None, Beverage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: 3%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: Depth: ft

Chemistry sample: Yes
Time: 10:50 am

DO Meter Sample:
Time: 11:50 am

Depth 1 ft:

DO 7.0 mg/l 79.2 %
Water temp 20.4 °F / C
Conductivity 201.9 ph 5.92 Salinity 1

Depth 7 ft:

DO mg/l %
Water temp °F / C

Depth 1 ft:

DO mg/l %
Water temp °F / C

Depth at sample area: ft
Air temp: °F / C
Surface water temp: °F / C

Comments:

Sample taker name: 
Date 6/13/10 Time 12°

Witness: 
Date 6/13 Time 12°
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0388

Water Sample Collection Data Sheet

Sampling Station #: 0-08 Watershed:

Pond or River: Oldham GPS Location:

Town: Pembroke Water level: ___________ Ft.

Today's weather: Rainy, Cloudy Rainfall: ______ in.

Yesterday's weather: Rain, Cloudy Rainfall: ______ in.

Day before's weather: Rain, Cloudy Rainfall: ______ in.

Site location: Doll Hole SE

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foamy, Brown (muddy), Gray (silty), Tan, Green

Water odor: None, Beewax, Oil, Chlortane, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae Color: Green, Blue-Green

Bottom appearance: Not Visible, Gravel, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics:

Current at sample area: Fast, Slow, None

Secchi Disk Transparency: No Time: 12:30 pm Depth: 4 ft.

Chemistry sample: No Time: 12:30 pm

DO Meter Samples Time: 12:30 pm

Depth 4 ft. DO 6.66 mg/l 74% Water temp 20.8°F/C

Conductivity 204 pH 7.0 Salinity = 1

Depth 7 ft. DO 6.70 mg/l 75% Water temp 20.8°F/C

Depth 10 ft. DO 6.74 mg/l 75.4% Water temp 20.7°F/C

Depth at sample area 42 ft. Air temp: 20.4°F/C Surface water temp: 20.8°F/C

Comments: ____________________________

Sample taken by: __________________ Date: 6/13/10 Time: 10:30

Witness: __________________ Date: 6/13/10 Time: 10:30

Water Sample Form revised 1/907
### Certificate of Analysis

**Ray Holman**  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 11:45  
LOCATION: Beckett Trail (O-A) Grab  

**REPORTED:** 06/18/2010  
**ORDER #:** G1027071  
**SAMPLE DATE:** 6/13/2010  
**DATE RECEIVED:** 6/14/2010  
**SAMPLE ID:** Oldham Pond  
**DESCRIPTION:** WATER

### Results of Analysis

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Analytical Method</th>
<th>Date Analyzed</th>
<th>Units</th>
<th>Det. Limit*</th>
<th>Result</th>
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<tbody>
<tr>
<td>Alkalinity 310.2</td>
<td>EPA 310.2</td>
<td>06/16/2010</td>
<td>mg/L</td>
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<td>&lt;4.00</td>
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<td>Chloride 4110B</td>
<td>SM 4110 B</td>
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<td>mg/L</td>
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<td>Phosphorus, Total</td>
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<td>Turbidity</td>
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<td>06/14/2010</td>
<td>NTU</td>
<td>0.25</td>
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**LAB-ID#:** 1027071-63
REPORTED: 06/18/2010
ORDER #: G1027071
SAMPLE DATE: 6/13/2010
DATE RECEIVED: 6/14/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

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<td>1.1</td>
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CERTIFICATE OF ANALYSIS

Ray Holman
Pembroke Watershed Association
PO Box 368
Pembroke, MA 02359
COLLECTED BY: P. McCabe
TIME: 11:20
LOCATION: Country Lane Culvert (O-C) Grab

REPORTED: 06/18/2010
ORDER #: G1027071
SAMPLE DATE: 6/13/2010
DATE RECEIVED: 6/14/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

RESULTS OF ANALYSIS

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<th>Parameter</th>
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<th>Units</th>
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<td>06/14/2010</td>
<td>NTU</td>
<td>0.25</td>
<td>5.6</td>
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LAB-ID#: 1027071-02
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 11:44  
LOCATION: Outlet to Furnace (O-D) Grab  

REPORTED: 06/18/2010  
ORDER #: G1027071  
SAMPLE DATE: 6/13/2010  
DATE RECEIVED: 6/14/2010  
SAMPLE ID: Oldham Pond  
DESCRIPTION: WATER

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<th>Units</th>
<th>Det. Limit*</th>
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<td>mg/L</td>
<td>0.01</td>
<td>0.04</td>
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<td>NTU</td>
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</table>
Environmental Chemistry
Site Assessment
Quality Assurance Services

Ray Holman
Pembroke Watershed Association
PO Box 368
Pembroke, MA 02359

COLLECTED BY: P. McCabe
TIME: 12:45
LOCATION: Deep Hole (O-OB) Grab

REPORTED: 06/18/2010
ORDER #: G1027071
SAMPLE DATE: 6/13/2010
DATE RECEIVED: 6/14/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

RESULTS OF ANALYSIS

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<th>Parameter</th>
<th>Analytical Method</th>
<th>Date Analyzed</th>
<th>Units</th>
<th>Det. Limit*</th>
<th>Result</th>
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<tr>
<td>Alkalinity 310.2</td>
<td>EPA 310.2</td>
<td>06/16/2010</td>
<td>mg/L</td>
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<tr>
<td>Turbidity</td>
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<td>06/14/2010</td>
<td>NTU</td>
<td>0.25</td>
<td>8.3</td>
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</table>

NA = Not Applicable
ND = Not Detected
< = Less Than
** = Detection Limit

LAB-ID#: 1027071-65

Approved By: Lab Director / Date

Analytical Balance Corp., 422 West Grove Street, Middleboro, MA 02346 Ph: 508-946-2225
Pembroke Watershed Association  
P. O. Box 368, Pembroke, MA 02359-0368  

Water Sample Collection Data Sheet

Sampling Station #: F-04  
Watershed: PWA / S Corneal

Town: Pembroke  
Water level: 55.3 ft

Today's weather: Cloudy, rain  
Rainfall: ___ in.

Yesterday's weather: Cloudy, rain  
Rainfall: ___ in.

Day before's weather: Cloudy, rain  
Rainfall: ___ in.

Site location: Outlet to Goshen

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skating, Swimming

Water color: Clear, Cloudy, Milky, Foamy, Brown (muddy), Gray (silty), Tea, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Mud, Sand, Rock, Weeds, Mud, Other (describe)

Weed growth in sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics: Large Wave, Small wave, Smooth, Still

Current at sample area: Fast, Slow, Still, None


Chemistry sample:

DO Meter Sample:

Depth 4 ft.  
DO 5.75 mg/l, % Water temp: 20.9 °F/C

Conductivity: 219, pH: 6.66, Salinity: 1

Depth 7 ft.  
DO __ mg/l, % Water temp __°F/C

Depth ___ ft.  
DO ___ mg/l, % Water temp __°F/C

Depth at sample area: ___ Ft.  
Air temp: ___ °F/C  
Surface water temp: ___ °F/C

Comments:

Sample taker name: ___ Date: ___ Time: ___

Witness: ___ Date: ___ Time: ___

Water Sample Form revised 10/07
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: I-08
Watershed: PWS/ South Coastal

Town: Pembroke
Pond or River: Furnace
GPS Location: 42° 03.2353' N 70° 42.3150' W
Water level: 55.3 Ft.

Today's weather: Cloudy, Rain
Rainfall: ___ in.

Yesterday's weather: Cloudy, Rain
Rainfall: ___ in.

Day before's weather: Cloudy, Rain
Rainfall: ___ in.

Site location:

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green

Water odor: Mere, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency:

Chemistry sample: Yes, No
Time: ___ am/ pm
Depth: 4 ft.

DO Meter Sample:
Time: ___ am/ pm

Depth 4 ft.

DO 4.87 mg/l 58.4 %
Conductivity 210
pH 6.36
Salinity 1

Depth 7 ft.

DO 4.19 mg/l 42.7 %

Depth ___ ft.

DO ___ mg/l ___ %

Water temp __° F/C

Water temp __° F/C

Water temp __° F/C

Depth at sample area: ____ Ft.
Air temp: ___° F/C
Surface water temp: ___° F/C

Comments:

Sample taker name: Patricia McCall
Date: ___/___/___

Witness: Patricia McCall
Date: ___/___/___

Water Sample Form revised 1/97
Environmental Chemistry
Site Assessment
Quality Assurance Services

Ray Holman
Pembroke Watershed Association
PO Box 368
Pembroke, MA 02359

COLLECTED BY: P. McCabe
TIME: 15:00
LOCATION: Gorham Outlet (F-O4) Grab

REPORTED: 06/18/2010
ORDER #: G1027074
SAMPLE DATE: 6/13/2010
DATE RECEIVED: 6/14/2010
SAMPLE ID: Furnace Pond
DESCRIPTION: WATER

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<th>Parameter</th>
<th>Analytical Method</th>
<th>Date Analyzed</th>
<th>Units</th>
<th>Det. Limit*</th>
<th>Result</th>
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<tr>
<td>Alkalinity 310.2</td>
<td>EPA 310.2</td>
<td>06/16/2010</td>
<td>mg/L</td>
<td>4</td>
<td>15.2</td>
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<tr>
<td>Chloride 4110B</td>
<td>SM 4110 B</td>
<td>06/14/2010</td>
<td>mg/L</td>
<td>6.0</td>
<td>55.3</td>
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<tr>
<td>Phosphorus, Total</td>
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<td>06/17/2010</td>
<td>mg/kg</td>
<td>0.01</td>
<td>0.04</td>
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<tr>
<td>Turbidity</td>
<td>SM 2130B</td>
<td>06/14/2010</td>
<td>NTU</td>
<td>0.25</td>
<td>5.6</td>
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</table>

Chloride: 0.001 mg/L

Analytical Balance Corp., 422 West Grove Street, Middleboro, MA 02346 Ph: 508-946-2225
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 15:00  
LOCATION: Deep Hole (F-08)  
Grab

REPORTED: 06/18/2010  
ORDER #: G1027074  
SAMPLE DATE: 6/13/2010  
DATE RECEIVED: 6/14/2010  
SAMPLE ID: Furnace Pond  
DESCRIPTION: WATER

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<th>Analytical Method</th>
<th>Date Analyzed</th>
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NA = Not Applicable  
ND = Not Detected  
'*' = Less Than  
'**' = Detection Limit

Approved By: ___________________________  
Lab Director / Date

Analytical Balance Corp., 422 West Grove Street, Middleboro, MA 02346  Ph: 508-946-2225 Page 2 of 2
PEMBROKE WATERSHED ASSOCIATION

WATER QUALITY SAMPLING

OLDHAM POND/FURNACE POND

JULY 2010
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: 0-A  Watershed: Pembroke South Coastal

Town: Hanson  Water level: _____ Ft.

Today's weather: Sunny hot  Rainfall: 0 in.

Yesterday's weather: Sunny hot  Rainfall: 0 in.

Day before's weather: Stormy  Rainfall: 0.8 in.

Site location: Beckett Road St. Trail

Sample taken from: Boat, Bank, Wade, Dock, Other: Stand in water downstream

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, 75%

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: 200'  Time: 10:13 am / pm  Depth 0.1 f

Chemistry sample: Yes  No

Time: 10:13 am / pm  Depth <1 ft  Bottle ID#: 0-A

DO Meter Sample:

Depth 2 ft. DO 1.8 mg/l  14%  Water temp 35.6°F/C

Conductivity 136.5  pH 5.145  Salinity 1

Depth 7 ft. DO  mg/l  %  Water temp °F/C

Depth 7 ft. DO  mg/l  %  Water temp °F/C

Depth at sample area: _____ Ft.  Air temp: °F/C  Surface water temp: °F/C

Comments: Large algae located downstream

Sample taker name: Patricia McAfee

Date: 7/18/10 Time: 2:00 PM

Witnesses:

Date: 7/18/10 Time: 2:00 PM

Water Sample Form revised 1007
Pembroke Watershed Association
P. O. Box 386, Pembroke, MA 02360-0386

Water Sample Collection Data Sheet

Date: 7/15/10

Sampling Station #: 0-B
Watershed: Ply South Coastal

Pond or River: Oldham
GPS Location: 42° 04' 14.810
To 50° 11.714

Town: Hanson
Water level: ________ Ft

Today's weather: Hot Rainfall: 0 in.
Yesterday's weather: Hot Rainfall: 0 in.
Day before's weather: Hot Rainfall: 0 in.

Site location: Lake Side Drive

Sample taken from: Boat, Bank, Wade, Dock, Other: in water down stream

Water use: Fishing, Boating, Skiing, Swimming
Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green
Water odor: Sewage, Oil, Chlorine, Rotten egg, Other (describe)
Algae growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%
Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics:
Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: No
Time: ___________ am/pm
Depth: ___________ ft

Chemistry sample: Yes
No Time: ___________ am / pm
Depth: ___________ ft

Bottle ID#: 0-B

DO Meter Sample:
Time: ___________ am/pm
Depth: ___________ ft
DO: ___________ mg/l ___________ %
Water temp: ___________ °F/C

Conductivity: ___________ pH ___________ Salinity: ___________

Depth: ___________ ft.
DO: ___________ mg/l ___________ %
Water temp: ___________ °F/C

Depth: ___________ ft.
DO: ___________ mg/l ___________ %
Water temp: ___________ °F/C

Depth at sample area: ___________ ft.
Air temp: ___________ °F/C
Surface water temp: ___________ °F/C

Comments: __________________________

Sample taker name: Patricia McColl
Date: 7/15/10 Time: 2:00 PM

Witness: ____________________________
Date: 7/15/10 Time: 2:00 PM

Water Sample Form revised 10/07
Pembroke Watershed Association
P. O. Box 366, Pembroke, MA 02359-0366

Water Sample Collection Data Sheet

Sampling Station #: O-C    Watershed: Pup/South Coastal

Pond or River: Oldham    GPS Location: 42.04.496

Town: Hanson    Water level: _______________ Ft.
Today's weather: Sunny hot    Rainfall: 0 in.
Yesterday's weather: Sunny hot    Rainfall: 0 in.
Day before's weather: Sunny hot    Rainfall: 0 in.

Site location: _______________

Sample taken from: Boat, Bank, Wade, Dock, Other Stand in water downstream

Water use: None, Fishing, Boating, Skiing, Swimming
Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green
Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe) ___________
Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%
Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe) __________
Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth ___________
Water Characteristics: Large Wave, Small waves, Smooth, Still
Current at sample area: Feet, Slow, Still, None

Secchi Disk Transparency: 60, No Time: _______ am / pm    Depth _______ ft.

Chemistry sample: Yes No Time: _______ am / pm    Depth _______ ft.    Bottle ID#: O-C

DO Meter Sample: Time: _______ am / pm
Depth _______ ft.    DO _______ mg/l    _______ %    Water temp _______ °F/C
Conductivity _______    pH _______    Salinity _______

Depth _______ ft.    DO _______ mg/l    _______ %    Water temp _______ °F/C

Depth _______ ft.    DO _______ mg/l    _______ %    Water temp _______ °F/C

Depth at sample area: _______ Ft.    Air temp: _______ °F/C    Surface water temp: _______ °F/C

Comments: _______________

Sample taker name: Patricia McCabe
Date 7/18/10    Time 2:00 PM
Witness: _______    _______    _______    _______
**Water Sample Collection Data Sheet**

**Sampling Station #:** O-D  
**Watershed:** PGB/SCoastal  
**Town:** Pembroke  
**Pond or River:** Oldham  
**GPS Location:** 42°07.850'N 70°41.146'W  
**Water level:** 55.05 ft  

**Today's weather:** Sunny hot  
**Rainfall:** 0 in.  
**Yesterday's weather:** Sunny hot  
**Rainfall:** 0 in.  
**Day before's weather:** Storms hot  
**Rainfall:** 0.88 in.  

**Site location:** Oldham outlet to farmhouse  
**Sample taken from:** Boat, Bank, Wade, Dock, Other, Stand downstream  

**Water use:** None, Fishing, Boating, Sailing, Swimming  
**Water color:** Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (algal), Tan, Green  
**Water odor:** None, Sewage, Oil, Chlorine, Rotten egg, Other, (describe)  
**Algal growth:** None, 1%, 10%, 15%, 20%, 25%, 50%, 75%, >75%  
**Algae Color:** Green, Blue Green  
**Bottom appearance:** Mud, Sludge, Sand, Rock, Weeds, Mud, Other, (describe)  
**Weed Growth in Sample area:** Not Visible, Submerged, Surface  
**% of weed growth:** N/A  
**Water Characteristics:** Large Wave, Small wave, Slow, Still  
**Current at sample area:** Fast, Slow, Still, None  

**Secchi Disk Transparency:** 0  
**Time:** 12:40 am/pm  
**Depth:** 0.19 ft.  
**Chemistry sample:** Yes  
**Time:** 12:40 am/pm  
**Depth:** 1 ft.  
**Bottle ID#:** O-D  

**DO Meter Sample:**  
**Depth** 1 ft.  
**DO** 4.39 mg/l  
**%** 51.0  
**Water temp:** 29 °F/C  
**Conductivity:** 260  
**pH:** 7.3  
**Salinity:** 0  
**Depth** 1 ft.  
**DO** 4.39 mg/l  
**%** 51.0  
**Water temp:** 29 °F/C  
**Depth** 1 ft.  
**DO** 4.39 mg/l  
**%** 51.0  
**Water temp:** 29 °F/C  

**Depth at sample area:** 1 ft.  
**Air temp:** 88 °F/C  
**Surface water temp:** 29 °F/C  

**Comments:**  

**Sample taker name:** Patricia McCall  
**Date:** 7/18/10  
**Time:** 2:00 PM  

**Witness:**  
**Date:** 7/18/10  
**Time:** 2:00 PM  

*Water Sample Form revised 10/07*
Pembroke Watershed Association
P. O. Box 366, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: 0-08
Watershed: Pond 15 Coastal

Town: Pembroke

Pond or River: Oldham

GPS Location: 42 84.01 N 70 08.16 W

Today's weather: Sunny hot
Rainfall: 0 in.

Yesterday's weather: Sunny hot
Rainfall: 0 in.

Day before's weather: Sunny hot
Rainfall: 0.08 in.

Site location:

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use:

Water color:

Water odor:

Algal growth:

Bottom appearance:

Weed Growth in Sample area:

Water Characteristics:

Current at sample area:

Secchi Disk Transparency:

Chemistry sample:

DO Meter Sample:

Depth 4 ft.

Depth 7 ft.

Depth 10 ft.

Depth at sample area:

Air temp: 90.5 °F/C

Surface water temp: 87 °C

Comments:

Sample taker name: (signature)

Date: 7/6/84

Time: 2:00 PM

Witness:

Date: 7/6/84

Time: 2:00 PM

Water Sample Form revised 10/07
Pembroke Watershed Association
P. O. Box 388, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: 0-04  
Watershed: Win & Scitil Oldham

Pond or River: Oldham  
GPS Location:

Town: Oldham  
Water level: [ ] Ft.

Today's weather: Sunny hot  
Rainfall: 0 in.

Yesterday's weather: Sunny hot  
Rainfall: 0 in.

Day before's weather: Sunny hot  
Rainfall: 0 in.

Site location: Oldham Hanover N.E

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (slimy), Sest Green

Water odor: Slight, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None ( ), 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Mud, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface, % of weed growth

Water Characteristics: Large Wave, Small wave, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: [ ] No  
Time: 10:25 am  
Depth: [ ] ft.

Chemistry sample: Yes: No  
Time: 10:30 am  
Depth: 4 ft.

DO Meter Sample: Time: 10:30 am  
Depth: 4 ft.

DO: 5.88 mg/l  
%: 74  
Water temp: 27.6°F/C

Conductivity: 251  
PH: 9  
Salinity: %

Depth: 7 ft.

DO: [ ] mg/l  
%: [ ]  
Water temp: [ ]°F/C

Depth: 2 ft.

DO: [ ] mg/l  
%: [ ]  
Water temp: [ ]°F/C

Depth at sample area: 4.8 ft.

Air temp: 90.5°F/C

Surface water temp: 88°F/C

Comments: 

Sample taker name:  
Witness:  

Water Sample Form revised 10/17

Water Sample Form revised 10/07

Witness:  

Water Sample Form revised 10/17
Water Sample Collection Data Sheet

Sampling Station #: 0-08  Watershed: Plum Sc Coastal

Pond or River: Oldham  GPS Location: 42° 03.729' N 70° 44.447' W

Town: Pembroke  Water level: ________ Ft.

Today's weather: Sunny hot  Rainfall: 0 in.
Yesterday's weather: Sunny hot  Rainfall: 0 in.
Day before's weather: Storms  Rainfall: .08 in.

Site location: Near Here

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe) None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algal growth: None, Small, Medium, Large, Other (describe)

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Silt, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface, % of weed growth

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: Yes  No  Time: 85'  Depth 4.5 ft

Chemistry sample: Yes  No  Time: 9:30 am

DO Meter Sample: Time: 9:00 am

Depth 4 ft.

DO 5.4 mg/l  67% Water temp 37.6°F

Conductivity 250 pH 7.5 Salinity 1

Depth 7 ft.

DO 6.3 mg/l  81% Water temp 37.6°F

Depth 10 ft.

DO 6.5 mg/l  83% Water temp 37.6°F

Depth at sample area: 12 Ft  Air temp: 90°F  Surface water temp: 27.7°F

Comments: 9:00 am 9:45 am 6/18/10

Sample taken name: Patricia McCabe

Witness: 

Water Sample Form revised 10/87

7/18/10 2:00 PM

7/18/10 2:00 PM

(ac by Chuck McCabe)
CERTIFICATE OF ANALYSIS

REPORTED: 07/26/2010
ORDER #: G1028295
SAMPLE DATE: 7/19/2010
DATE RECEIVED: 7/19/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

RESULTS OF ANALYSIS

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<th>Units</th>
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CERTIFICATE OF ANALYSIS

REPORTED: 07/26/2010
ORDER #: G1028295
SAMPLE DATE: 7/19/2010
DATE RECEIVED: 7/19/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

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<td></td>
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</tbody>
</table>

*Site O-C (Barks Rd currently cleaned)*
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  

COLLECTED BY:  P. McCabe  
TIME:  10:12  
LOCATION:  Camp Pembrok (O-0#)  

REPORTED:  07/26/2010  
ORDER #:  G1028295  
SAMPLE DATE:  07/19/2010  
DATE RECEIVED:  07/19/2010  
SAMPLE ID:  Oldham Pond  
DESCRIPTION:  WATER

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**Environmental Chemistry**
**Site Assessment**
**Quality Assurance Services**

---

**Analytical Balance Corporation**

**CERTIFICATE OF ANALYSIS**

**REPORTED:** 07/26/2010  
**ORDER #:** G1028295  
**SAMPLE DATE:** 7/19/2010  
**DATE RECEIVED:** 7/19/2010  
**SAMPLE ID:** Oldham Pond  
**DESCRIPTION:** WATER

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**RESULTS OF ANALYSIS**

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**Approved By:**

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*NA = Not Applicable  
ND = Not Detected  
< = Less Than  
* = Detection Limit*
REPORTED: 07/26/2010
ORDER #: G1028295
SAMPLE DATE: 7/19/2010
DATE RECEIVED: 7/19/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

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ORDER #: G1028295
SAMPLE DATE: 7/19/2010
DATE RECEIVED: 7/19/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

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<td>5.2</td>
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Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 9:48  
LOCATION: 7 Foot Depth (DH #2) Grab  

REPORTED: 07/26/2010  
ORDER #: G1028295  
SAMPL. DATE: 7/19/2010  
DATE RECEIVED: 7/19/2010  
SAMPLE ID: Oldham Pond  
DESCRIPTION: WATER  

<table>
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<th>Test Parameters</th>
<th>Method</th>
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<th>Unit</th>
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<td>EPA 310.2</td>
<td>07/20/2010</td>
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<td>07/19/2010</td>
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<td>Phosphorus, Total</td>
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<td>Turbidity</td>
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CERTIFICATE OF ANALYSIS

REPORTED: 07/26/2010
ORDER #: G1028295
SAMPLE DATE: 7/19/2010
DATE RECEIVED: 7/19/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

RESULTS OF ANALYSIS

<table>
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<td>Turbidity</td>
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<td>NTU</td>
<td>0.25</td>
<td>8.3</td>
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</tr>
</tbody>
</table>
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02360-0368

Water Sample Collection Data Sheet

Sampling Station #: f-64 Watershed: Purvis Coastal

Pond or River: Ferrance GPS Location: 42° 03.1860' N 70° 49.804' W

Town: Pembroke Water level: ___________ Ft

Today’s weather: Sunny hot Rainfall: ___________ in.

Yesterday’s weather: Sunny hot Rainfall: ___________ in.

Day before’s weather: T Storms Rainfall: ___________ in.

Site location: Outlet to Goshan:

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), ___________ Green

Water odor: None, Sewage, Oil, Chlorine, Rotan egg, Other (describe) ___________

Algal growth: 0%, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75% Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe) ___________

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth ___________

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: No Time: ___________ Depth: ___________ ft

Chemistry sample: Yes No Time: ___________ Depth: ___________ Bottle ID#: f-04

DO Meter Sample: Time: ___________

Depth 4 ft: ___________ mg/l ___________ % Water temp ___________ °F/C

Conductivity ___________ pH ___________ Salinity ___________

Depth 7 ft: ___________ mg/l ___________ % Water temp ___________ °F/C

Depth ___________ ft: ___________ mg/l ___________ % Water temp ___________ °F/C

Depth at sample area: ___________ Ft Air temp: ___________ °F/C Surface water temp: ___________ °F/C

Comments:

Sample taker name: Paineia McCall Date: 7/18/10 Time: 2:00 PM

Witness: ___________ Date: 7/18/10 Time: 2:00 PM

Water Sample Form revised 10/07
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0368
Water Sample Collection Data Sheet

Sampling Station # 5-08  Watershed: WPA - South Coastal

Pond or River: Furnace  GPS Location: 42 03.233 D 76 44.315 W

Town: Pembroke  Water level: _______ Ft.
Today's weather: Sunny Hot  Rainfall: 0 in.
Yesterday's weather: Sunny Hot  Rainfall: 0 in.
Day before's weather: TStorms  Rainfall: 0.08 in.

Site location: Deep Hole
Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming
Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 0%, 10%, 15%, 20%, 25%, 50%, 75%, >75% Algae Color: Green, Blue Green
Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics:
Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: 4 in  No  Time: 11 am  Depth 3.75 ft

Chemistry sample: 100%  No  Bottle ID: 08-08

DO Meter Sample: Time: 11 am  Depth 4 ft  DO 4.69 mg/l  pH 8.06  Water temp 28.3°F/C

Conductivity: 243.2  pH: 7.63  Salinity: 1

Depth 7 ft  Grab 400
Grab Time: 11:08

Depth 4 ft  4.69 mg/l  64.2%  Water temp 28.3°F/C

Depth at sample area: 7 ft  Air temp: 91°F/C  Surface water temp: 28.3°F/C

Comments:
OC Sample taken time: 11/15
OC sample duration: 4 - 4.75
OC Sample taken by: 3 P o'er 7 feet

Sample taker name: Dania McCame

Date 7/18/10  Time 2:00 PM

Witness:

Water Sample Form revised 10/07

\[ A C \text{ by Chuck McCame} \]
REPORTED: 07/26/2010
ORDER #: G1028294
SAMPLE DATE: 7/19/2010
DATE RECEIVED: 7/19/2010
SAMPLE ID: Furnace Pond
DESCRIPTION: WATER

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<td>Chloride 4110B</td>
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<td>Turbidity</td>
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58.4
0.06
5.1
Reported: 07/26/2010
Order #: G1028294
Sample Date: 7/19/2010
Date Received: 7/19/2010
Sample ID: Furnace Pond
Description: WATER

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<td>Turbidity</td>
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<td>07/19/2010</td>
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| | | | |
| | | | |

Analytical Balance Corp., 422 West Grove Street, Middleboro, MA 02346 Ph: 508-946-2225
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 11:08  
LOCATION: 7 Foot Depth F-087 Grab

REPORTED: 07/26/2010  
ORDER #: G1028294  
SAMPLE DATE: 7/19/2010  
DATE RECEIVED: 7/19/2010  
SAMPLE ID: Furnace Pond  
DESCRIPTION: WATER

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<td>SM 2130B</td>
<td>07/19/2010</td>
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</table>

NA = Not Applicable  
ND = Not Detected  
"<" = Less Than  
"*" = Detection Limit

Approved By: [Signature]
Lab Manager / Date

Analytical Balance Corp., 422 West Grove Street, Middleboro, MA 02346 Ph: 508-946-2225
# Certificate of Analysis

**REPORTED:** 07/26/2010  
**ORDER #:** G1028294  
**SAMPLE DATE:** 7/19/2010  
**DATE RECEIVED:** 7/19/2010  
**SAMPLE ID:** Furnace Pond  
**DESCRIPTION:** WATER

## RESULTS OF ANALYSIS

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<th>Test Parameters</th>
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<td>NTU</td>
<td>0.25</td>
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<td>5.3</td>
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</table>
PEMBROKE WATERSHED ASSOCIATION

WATER QUALITY SAMPLING

OLDHAM POND/FURNACE POND

AUGUST 2010
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: 0-D  
Watershed: Southeast MA

Pond or River: Oldham  
GPS Location: 

Town: Pembroke  
Water level: 54.7 Ft.

Today's weather: Sunny  
Rainfall: 0 in.

Yesterday's weather: Sunny  
Rainfall: 0 in.

Day before's weather: Sunny  
Rainfall: 0 in.

Site location: Outlet to female.

Sample taken from: Boat, Bank, Wade, Dock, Other ______________________

Water use: None, Fishing, Boating, Sailing, Swimming

Water color: Clear, Cloudy, milky, Foam, Brown (mucky), Grey (silty), Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe) ___________

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae color: Green, Blue Green

Bottom appearance: Not Visible, Muddy, Sand, Rock, Weeds, Mud, Other (describe) ________

Weed growth in sample area: Not Visible, Submerged, Surface - % of weed growth ______

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: Y  
No Time: 09:20 am / pm  Depth: 21 ft.

Chemistry sample: Yes  
No Time: 09:20 am / pm  Depth: 21 ft.  Bottle ID#: 0-0

DO Meter Sample:  
Time: 09:30 am / pm

Depth X ft.  DO: 5.3 mg/l  55 %  Water temp 24.6 °F/°C

Conductivity: 199.5  pH: 8.05  Salinity: 1

Depth X ft.  DO: mg/l  %  Water temp °F/°C

Depth X ft.  DO: mg/l  %  Water temp °F/°C

Depth at sample area: ________ Ft.  Air temp: ________ °F/°C  Surface water temp: ________ °F/°C

Comments: ____________________________

Sample taker name: ____________________________  Date: 8/22/10  Time: 09:45

Witness: ____________________________  Date: 8/22/10  Time: 09:45

Water Sample Form revised 1997
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: 0-63
Watershed: SouthCoast

Pond or River: Oldham
GPS Location: __________

Town: Pembroke
Water level: __________ Ft.

Today's weather: Cloudy
Rainfall: 0 in.

Yesterday's weather: Sunny
Rainfall: 0 in.

Day before's weather: Sunny
Rainfall: 0 in.

Site location: Camp Beach Avenue (NE 500)

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Sailing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tan, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 30%, 35%, 50%, 75%, >75%
Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics: Large Wave, Small wave, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: 50
Time: 5:32 pm
Depth: 2 3/4 ft.

Chemistry sample:

DO Meter Sample:

Depth 4 ft.
DO 5.55 mg/l 64.5%
Water temp 24.9 °F/°C
Conductivity 250.7 pH 8.15 Salinity - 1

Depth __ ft.
DO ____ mg/l ____%
Water temp ____ °F/°C

Depth ____ ft.
DO ____ mg/l ____%
Water temp ____ °F/°C

Depth at sample area: 7.2 Ft.
Air temp: 72.9 °F/C
Surface water temp: 73.1 °F/C

Comments:

__________________________________________________________

Sample taker name: [Signature]
Date: 3/24/10 Time: 09:20

Witness: [Signature]
Date: 3/24/10 Time: 08:20

Water Sample Form revised 10/97
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: 0-04
Watershed: South Coastal Unit

Town: Pembroke
Pond or River: Oldham
GPS Location: _______________
Water level: ___________ Ft.

Today's weather: Cloudy
Rainfall: 0 in.

Yesterday's weather: Sunny
Rainfall: 0 in.

Day before's weather: Sunny
Rainfall: 0 in.

Site location: Hanson Side NW

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Green

Water use: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface, No weed growth

Water Characteristics: Large Wave, Small wave, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: Yes
Time: 8:47 am/ pm
Depth: 3 3/4 ft.

Chemistry sample: Yes
Time: 08:45 am/ pm
Depth: 4 ft.

DO Meter Sample: Time: 08:45 am/ pm

Depth 4 ft.
DO: 5.05 mg/l 40.9 %
Water temp: 25.1 °F/C
Conductivity: 253.3 µS
pH: 8.19
Salinity: 1

Depth Other ft.
DO: mg/l %
Water temp: °F/C

Depth Other ft.
DO: mg/l %
Water temp: °F/C

Depth at sample area: 4 ft.
Air temp: 72 °F/C
Surface water temp: 73 °F/C

Comments: ____________________________

Sample taker name: Patricia Minicle
Date: 8/22/10
Time: 09:00 am

Witness: ____________________________
Date: 8/22/10
Time: 09:00 am

Water Sample Form revised 10/07
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

 Sampling Station #: 0-08  Watershed: Southcoast / PNR

Town: Pembroke  Water level: _______ Ft

Today's weather: Cloudy  Rainfall: 6 in.

Yesterday's weather: Sunny  Rainfall: 0 in.

Day before's weather: Sunny  Rainfall: 0 in.

Site location: Deep Hole

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Sking, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Foss, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 30%, 75%, 90% >75%

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: 15 No Time: 0817 CDT pm Depth 3 ft

Chemistry sample: No Time: 0810 am / pm Depth: 4 ft Bottle I.D.: 0-08

DO Water Sample: Time: 0815 am / pm

Depth 4 ft. DO 5 mg/l 59.4% Water temp 24.4°F/C

Conductivity 246.7 pH 7.65 Saltinity 1

Depth 4 ft. DO 5 mg/l 53.4% Water temp 24.4°F/C

Depth 4 ft. DO ______ mg/l ______ % Water temp ______°F/C

Depth at sample area: 11.8 Ft. Air temp 72°F/C Surface water temp 74°F/C

Comments:

Sample taken name: ______________________ Date: 8/22/10 Time: 08:25

Witness: ______________________ Date: 8/22/10 Time: 08:25

Water Sample Form revised 10/87
CERTIFICATE OF ANALYSIS

REPORTED: 08/26/2010
ORDER #: G1029616
SAMPLE DATE: 8/22/2010
DATE RECEIVED: 8/23/2010
SAMPLE ID: Grab
DESCRIPTION: WATER

RESULTS OF ANALYSIS

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<td>Chloride 4110B</td>
<td>SM 4110 B</td>
<td>08/23/2010</td>
</tr>
<tr>
<td>Kjeldahl, Nitrogen</td>
<td>EPA 351.2</td>
<td>08/25/2010</td>
</tr>
<tr>
<td>Nitrate, Nitrogen 4110B</td>
<td>SM 4110 B</td>
<td>08/23/2010</td>
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<td>Nitrite, Nitrogen 4110B</td>
<td>SM 4110 B</td>
<td>08/23/2010</td>
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<td>Nitrogen, Total</td>
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<td>Phosphorus, Total</td>
<td>SM 4500-P B/E</td>
<td>08/23/2010</td>
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SAMPLES WILL BE TESTED FOR AMMONIA NITROGEN FROM OLDHAM AUGUST 2010 SAMPLING EVENT.
### Analytical Balance Corporation

**CERTIFICATE OF ANALYSIS**

**Revised: 0**

**Ray Holman**
Pembroke Watershed Association
PO Box 368
Pembroke, MA 02359

**COLLECTED BY:** P. McCabe
**TIME:** 9:30
**LOCATION:** Outlet to Furnace (Oldham)

**REPORTED:** 08/26/2010
**ORDER #:** G1029616
**SAMPLE DATE:** 08/23/2010
**DATE RECEIVED:** 08/23/2010
**SAMPLE ID:** Grab
**DESCRIPTION:** WATER

### RESULTS OF ANALYSIS

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<th>Test Parameters</th>
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<th>Unit</th>
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<tr>
<td>Turbidity</td>
<td>SM 2130B</td>
<td>08/23/2010</td>
<td>NTU</td>
<td>0.25</td>
<td></td>
</tr>
</tbody>
</table>

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*Analytical Balance Corp., 422 West Grove Street, Middleboro, MA 02346 Ph: 508-946-2225*
**Analytical Balance Corporation**

**CERTIFICATE OF ANALYSIS**

**REPORTED:** 08/26/2010  
**ORDER #:** G1029616  
**SAMPLE DATE:** 8/22/2010  
**DATE RECEIVED:** 8/23/2010  
**SAMPLE ID:** Grab  
**DESCRIPTION:** WATER

---

**RESULTS OF ANALYSIS**

<table>
<thead>
<tr>
<th>Test Parameters</th>
<th>Method</th>
<th>Date</th>
<th>Units</th>
<th>Value 1</th>
<th>Value 2</th>
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<tbody>
<tr>
<td>Alkalinity 310.2</td>
<td>EPA 310.2</td>
<td>08/24/2010</td>
<td>mg/L</td>
<td>4.0</td>
<td>24.2</td>
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<tr>
<td>Chloride 4110B</td>
<td>SM 4110 B</td>
<td>08/23/2010</td>
<td>mg/L</td>
<td>4.0</td>
<td>57.9</td>
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<tr>
<td>Kjeldahl, Nitrogen</td>
<td>EPA 351.2</td>
<td>08/25/2010</td>
<td>mg/L</td>
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<td>Nitrate, Nitrogen 4110B</td>
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<tr>
<td>Nitrite, Nitrogen 4110B</td>
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<td>08/23/2010</td>
<td>mg/L</td>
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<td>08/25/2010</td>
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<td>1.0</td>
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<td>Phosphorus, Total</td>
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<td>08/23/2010</td>
<td>mg/L</td>
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<td>08/23/2010</td>
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<td>8.6</td>
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</table>
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  

COLLECTED BY: P. McCabe  
TIME: 8:45  
LOCATION: Hanson NW (O-04)  
Oldham

REPORTED: 08/26/2010  
ORDER #: G1029616  
SAMPLE DATE: 8/22/2010  
DATE RECEIVED: 8/23/2010  
SAMPLE ID: Grab  
DESCRIPTION: WATER

<table>
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<tr>
<td>Alkalinity 310.2</td>
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<tr>
<td>Nitrite, Nitrogen 4110B</td>
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<td>mg/L</td>
<td>0.10</td>
<td>&lt;0.10</td>
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<td>mg/L</td>
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<td>Turbidity</td>
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<td>NTU</td>
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## Certificate of Analysis

**REPORTED:** 08/26/2010  
**ORDER #:** G1029616  
**SAMPLE DATE:** 8/22/2010  
**DATE RECEIVED:** 8/23/2010  
**SAMPLE ID:** Grab  
**DESCRIPTION:** WATER

### RESULTS OF ANALYSIS

<table>
<thead>
<tr>
<th>Test Parameters</th>
<th>Method</th>
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<th>Unit</th>
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<th>Code</th>
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<td>0.10</td>
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<td>mg/L</td>
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<td>0.06</td>
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<td>NTU</td>
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<td>1829616-04</td>
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</table>
Environmental Chemistry  
Site Assessment  
Quality Assurance Services  

Analytical Balance Corporation  

CERTIFICATE OF ANALYSIS  

Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 8:15  
LOCATION: Deep Hole 10 ft. (O-0810) Oldham  

REPORTED: 08/26/2010  
ORDER #: G1029616  
SAMPLE DATE: 8/22/2010  
DATE RECEIVED: 8/23/2010  
SAMPLE ID: Grab  
DESCRIPTION: WATER  

RESULTS OF ANALYSIS  

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<td>Chloride 4110B</td>
<td>SM 4110 B</td>
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<tr>
<td>Phosphorus, Total</td>
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</table>

NA = Not Applicable  
ND = Not Detected  
< = Less Than  
* = Detection Limit
Environmental Chemistry
Site Assessment
Quality Assurance Services

Ray Holman
Pembroke Watershed Association
PO Box 368
Pembroke, MA 02359

COLLECTED BY: P. McCabe
TIME: 13:50
LOCATION: Outlet to Furnace (O-D)
Oldham

REPORTED: 09/21/2010
ORDER #: G1030534
SAMPLE DATE: 8/22/2010
DATE RECEIVED: 9/16/2010
SAMPLE ID: Grab
DESCRIPTION: WATER

<table>
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LAB-ID#: 1030534-01
**Environmental Chemistry**  
Site Assessment  
Quality Assurance Services

**Analytical Balance Corporation**

**CERTIFICATE OF ANALYSIS**

Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 13:50  
LOCATION: Camp Pembroke NE (O-01) Oldham

REPORTED: 09/21/2010  
ORDER #: G1030534  
SAMPLE DATE: 8/22/2010  
DATE RECEIVED: 9/16/2010  
SAMPLE ID: Grab  
DESCRIPTION: WATER

### RESULTS OF ANALYSIS

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<th>Unit</th>
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<tbody>
<tr>
<td>Ammonia, Nitrogen 350.1</td>
<td>EPA 350.1</td>
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<td>mg/L</td>
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**Test Parameters**

LAB-ID#: 1030534-02
CERTIFICATE OF ANALYSIS

Ray Holman
Pembroke Watershed Association
PO Box 368
Pembroke, MA 02359

COLLECTED BY: P. McCabe
TIME: 13:50
LOCATION: Hanson NW (O-04) Oldham

REPORTED: 09/21/2010
ORDER #: G1030534
SAMPLE DATE: 08/22/2010
DATE RECEIVED: 09/16/2010
SAMPLE ID: Grab
DESCRIPTION: WATER

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<th>Units</th>
<th>Det Limit</th>
<th>Result</th>
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<tbody>
<tr>
<td>Ammonia, Nitrogen 350.1</td>
<td>EPA 350.1</td>
<td>09/17/2010</td>
<td>mg/L</td>
<td>0.10</td>
<td>&lt;0.10</td>
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</tbody>
</table>
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 13:50  
LOCATION: Deep Hole 10 ft. (O-0810) Oldham  
REPORTED: 09/21/2010  
ORDER #: G1030534  
SAMPLE DATE: 8/22/2010  
DATE RECEIVED: 9/16/2010  
SAMPLE ID: Grab  
DESCRIPTION: WATER

### RESULTS OF ANALYSIS

<table>
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<th>Result</th>
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<tbody>
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<td>mg/L</td>
<td>0.10</td>
<td>&lt;0.10</td>
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</tbody>
</table>

NA = Not Applicable  
ND = Not Detected  
'< ' = Less Than  
'*' = Detection Limit

Approved By: [Signature]  
Lab Manager  
Date: 09/21/10
Pembroke Watershed Association
P. O. Box 388, Pembroke, MA 02359-0388

Water Sample Collection Data Sheet

Sampling Station #: 5-04  Watershed: South Coast / Pub

Pond or River: Fenace  GPS Location: 

Town: Pembroke  Water level: 54.7 Ft.

Today's weather: Sunny → Cloudy  Rainfall: 0 in.
Yesterday’s weather: Sunny  Rainfall: 0 in.
Day before's weather: Sunny  Rainfall: 0 in.

Site location: Outlet to Goshan

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming
Water color: Clear, Cloudy, Milky, Foul, Brown (muddy), Gray (silty), Tea, Green
Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)
Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%

Algae Color: Green, Blue Green
Bottom appearance: Not Visible, Silt, Sand, Rock, Weeds, Mud, Other (describe)
Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics: Large Wave, Small waves, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: Yes  No  Time: 9:55 am / pm  Depth: 23.4 ft.

Chemistry sample: Yes  No  Time: 9:55 am / pm  Depth: 4 ft  Bottle ID#: 5-04

DO Meter Sample: Time: 9:51 am

Depth 4 ft: DO  7.8 mg/l  73.6 %  Water temp: 24.4 °F/C
Conductivity: 2547  pH: 7.82  Salinity: 1

Depth 7 ft: DO  — mg/l  — %  Water temp: — °F/C
Depth — ft: DO  — mg/l  — %  Water temp: — °F/C

Depth at sample area: 5.9 Ft  Air temp: 78 °F/C  Surface water temp: 74.2 °F/C

Comments:

Sample taker name: Patricia McCary  Date: 7/22/10  Time: 10 am
Witness: Date: 7/22/10  Time: 10 am

Water Sample Form revised 10/07
**Pembroke Watershed Association**

P. O. Box 368, Pembroke, MA 02359-0368

**Water Sample Collection Data Sheet**

<table>
<thead>
<tr>
<th>Date:</th>
<th>8/2/07</th>
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<table>
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<th>Sampling Station #</th>
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<tr>
<th>Watershed:</th>
<th>South Coastal River</th>
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<table>
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<tr>
<th>Pond or River:</th>
<th>Fungee</th>
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<table>
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<tr>
<th>GPS Location:</th>
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<tr>
<th>Town:</th>
<th>Pembroke</th>
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<table>
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<tr>
<th>Water level:</th>
<th>547 Ft</th>
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<tr>
<th>Today's weather:</th>
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<thead>
<tr>
<th>Rainfall:</th>
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<table>
<thead>
<tr>
<th>Yesterday's weather:</th>
<th>Sunny</th>
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<table>
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<tr>
<th>Day before's weather:</th>
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<table>
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<tr>
<th>Rainfall:</th>
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<table>
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<tr>
<th>Site location:</th>
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<tr>
<th>Sample taken from:</th>
<th>Boat, Bank, Wade, Dock, Other</th>
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<tr>
<th>Water use:</th>
<th>None, Fishing, Boating, Skiing, Swimming</th>
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<thead>
<tr>
<th>Water color:</th>
<th>Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (alloy), Green</th>
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<table>
<thead>
<tr>
<th>Water odor:</th>
<th>None, Sawdust, Oil, Chlorine, Rotten egg, Other (describe)</th>
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<table>
<thead>
<tr>
<th>Algal growth:</th>
<th>None, 10%, 25%, 50%, 75%, 100%</th>
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<table>
<thead>
<tr>
<th>Algae Color:</th>
<th>Green, Blue Green</th>
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<table>
<thead>
<tr>
<th>Bottom appearance:</th>
<th>Not Visible, Submerged, Sand, Rock, Weeds, Mud, Other (describe)</th>
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<thead>
<tr>
<th>Weed Growth in Sample area:</th>
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<table>
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<tr>
<th>Water Characteristics:</th>
<th>Large Waves, Small waves, Smooth, Still</th>
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<table>
<thead>
<tr>
<th>Current at sample area:</th>
<th>Fast, Slow, Still, None</th>
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<table>
<thead>
<tr>
<th>Secchi Disk Transparency:</th>
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<table>
<thead>
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<th>No</th>
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<th>Chemistry sample:</th>
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<th>No</th>
<th>Time</th>
<th>Depth</th>
<th>Bottle ID:</th>
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<th>DO Meter Sample:</th>
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<table>
<thead>
<tr>
<th>Depth</th>
<th>DO</th>
<th>%</th>
<th>Water temp</th>
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<table>
<thead>
<tr>
<th>4 ft.</th>
<th>5.15 mg/l</th>
<th>64.6%</th>
<th>24.5 °F/C</th>
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<table>
<thead>
<tr>
<th>6 ft.</th>
<th>5.50 mg/l</th>
<th>65.8%</th>
<th>9 °F/C</th>
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<table>
<thead>
<tr>
<th>8 ft.</th>
<th>5.65 mg/l</th>
<th>66.5%</th>
<th>9 °F/C</th>
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<tr>
<th>pH</th>
<th>Salinity</th>
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<td>7.08</td>
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<table>
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<tr>
<th>Depth at sample area:</th>
<th>6.7 Ft</th>
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<tr>
<th>Air temp:</th>
<th>73 °F/C</th>
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<table>
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<tr>
<th>Surface water temp:</th>
<th>73 °F/C</th>
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<table>
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<tr>
<th>Comments:</th>
<th>Chem Sample Taken @ 7 Fw, time</th>
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</table>

| Sample taker name: | | Data: | 8/23/10 Time: 10:00 |
|--------------------||-----|---------|

<table>
<thead>
<tr>
<th>Witness:</th>
<th>Chuck McCabe</th>
<th>Data:</th>
<th>8/22/10 Time: 10:00</th>
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</table>

Water Sample Form revised 10/07
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 9:55  
LOCATION: Outlet to Gorham (F-04)  
           Furnace

REPORTED:  08/26/2010  
ORDER #:  G1029617  
SAMPLE DATE:  8/22/2010  
DATE RECEIVED:  8/23/2010  
SAMPLE ID:  Grab  
DESCRIPTION: WATER

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<td>4.0</td>
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<td>Chloride 4110B</td>
<td>SM 4110 B</td>
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<td>Kjeldahl, Nitrogen</td>
<td>EPA 351.2</td>
<td>08/25/2010</td>
<td>mg/L</td>
<td>0.50</td>
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<tr>
<td>Nitrate, Nitrogen 4110B</td>
<td>SM 4110 B</td>
<td>08/23/2010</td>
<td>mg/L</td>
<td>0.20</td>
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<td>SM 4110 B</td>
<td>08/23/2010</td>
<td>mg/L</td>
<td>0.10</td>
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<td>Nitrogen, Total</td>
<td>Calculation</td>
<td>08/25/2010</td>
<td>mg/L</td>
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<tr>
<td>Phosphorus, Total</td>
<td>SM 4500-P B/E</td>
<td>08/23/2010</td>
<td>mg/L</td>
<td>0.01</td>
</tr>
<tr>
<td>Turbidity</td>
<td>SM 2130B</td>
<td>08/23/2010</td>
<td>NTU</td>
<td>0.25</td>
</tr>
<tr>
<td>Test Parameters</td>
<td>Method</td>
<td>Date</td>
<td>Units</td>
<td>Value</td>
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<td>-------------------------</td>
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</tr>
<tr>
<td>Alkalinity 310.2</td>
<td>EPA 310.2</td>
<td>08/24/2010</td>
<td>mg/L</td>
<td>4.0</td>
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<tr>
<td>Chloride 4110B</td>
<td>SM 4110 B</td>
<td>08/23/2010</td>
<td>mg/L</td>
<td>4.0</td>
</tr>
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<td>Kjeldahl, Nitrogen</td>
<td>EPA 351.2</td>
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<td>0.50</td>
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<td>SM 4110 B</td>
<td>08/23/2010</td>
<td>mg/L</td>
<td>0.20</td>
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<tr>
<td>Nitrite, Nitrogen 4110B</td>
<td>SM 4110 B</td>
<td>08/23/2010</td>
<td>mg/L</td>
<td>0.10</td>
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<tr>
<td>Nitrogen, Total</td>
<td>Calculation</td>
<td>08/25/2010</td>
<td>mg/L</td>
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<tr>
<td>Phosphorus, Total</td>
<td>SM 4500-P B/E</td>
<td>08/23/2010</td>
<td>mg/L</td>
<td>0.01</td>
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<tr>
<td>Turbidity</td>
<td>SM 2130B</td>
<td>08/23/2010</td>
<td>NTU</td>
<td>0.25</td>
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REPORTED: 08/26/2010  
ORDER #: G1029617  
SAMPLE DATE: 8/22/2010  
DATE RECEIVED: 8/23/2010  
SAMPLE ID: Grab  
DESCRIPTION: WATER

<table>
<thead>
<tr>
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<th>Method</th>
<th>Date</th>
<th>Unit</th>
<th>Value</th>
<th>Lab ID#</th>
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<tbody>
<tr>
<td>Alkalinity</td>
<td>EPA 310.2</td>
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<td>mg/L</td>
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<td>Chloride 4110B</td>
<td>SM 4110 B</td>
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<td>mg/L</td>
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<td>08/23/2010</td>
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</table>

NA = Not Applicable  
ND = Not Detected  
< = Less Than  
* = Detection Limit

Approved By: [Signature]
Lab Manager: [Name]  
Date: [Date]
**CERTIFICATE OF ANALYSIS**

REPORTED: 09/21/2010  
ORDER #: G1030535  
SAMPLE DATE: 8/22/2010  
DATE RECEIVED: 9/16/2010  
SAMPLE ID: Grab  
DESCRIPTION: WATER

### RESULTS OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Analytical Method</th>
<th>Date Analyzed</th>
<th>Units</th>
<th>Det Limit</th>
<th>Result</th>
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</thead>
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<tr>
<td>Ammonia, Nitrogen 350.1</td>
<td>EPA 350.1</td>
<td>09/17/2010</td>
<td>mg/L</td>
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<td>&lt;0.10</td>
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**Test Parameters**  
LAB-ID#: 1030535-01
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 13:50  
LOCATION: Deep Hole (F-08)  
Furnace

REPORTED: 09/21/2010  
ORDER #: G1030535  
SAMPLE DATE: 8/22/2010  
DATE RECEIVED: 9/16/2010  
SAMPLE ID: Grab  
DESCRIPTION: WATER

<table>
<thead>
<tr>
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<th>Date Analyzed</th>
<th>Units</th>
<th>Def. Limit</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td>Ammonia, Nitrogen 350.1</td>
<td>EPA 350.1</td>
<td>09/17/2010</td>
<td>mg/L</td>
<td>0.10</td>
<td>&lt;0.10</td>
</tr>
</tbody>
</table>
**Analytical Balance Corporation**

**CERTIFICATE OF ANALYSIS**

Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 13:50  
LOCATION: Deep Hole 7 ft. (F-087) Furnace

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Analytical Method</th>
<th>Date Analyzed</th>
<th>Units</th>
<th>Det. Limit</th>
<th>Result</th>
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<td>EPA 350.1</td>
<td>09/17/2010</td>
<td>mg/L</td>
<td>0.10</td>
<td>&lt;0.10</td>
</tr>
</tbody>
</table>

NA = Not Applicable  
ND = Not Detected  
'*' = Less Than  
"*" = Detection Limit

Approved By: [Signature]  
Lab Manager Date

Environmental Chemistry  
Site Assessment  
Quality Assurance Services

Environmental Services  
Site Sampling  
Data Auditing
<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITY/DESCRIPTION</th>
<th>HOURS</th>
<th>COST</th>
<th>MILES</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/10/10</td>
<td>Review July Data</td>
<td>2 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/11/10</td>
<td>Creek Sites - Al Oldham dy</td>
<td>1 1/2 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/12/10</td>
<td>Calibrate equip. reg.</td>
<td>1 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/22/10</td>
<td>Test Oldham tun furnace.</td>
<td>3 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete Paperwork</td>
<td>1 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/25/10</td>
<td>Out Board Meeting</td>
<td>2 hr</td>
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</table>

Name: Patricia McCabe

Organization: PUA

Month (circle one) Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec Year:
<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITY/DESCRIPTION</th>
<th>HOURS</th>
<th>COST</th>
<th>MILES</th>
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<tbody>
<tr>
<td>8/21/10</td>
<td>Generate go for testing</td>
<td>1/2 hr</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Validate calibration</td>
<td>1/2 hr</td>
<td></td>
<td></td>
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<tr>
<td>8/23/10</td>
<td>Test Oldham e-female</td>
<td>3 hr</td>
<td></td>
<td></td>
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<tr>
<td>8/25/10</td>
<td>Pump Board mfg</td>
<td>2 hr</td>
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Name: Chuck McCullie
Organization: PWX
Month (circle one) Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec Year:
### Pembroke 604(b) Grant
#### In-Kind Match Log

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITY/DESCRIPTION</th>
<th>HOURS</th>
<th>COST</th>
<th>MILES</th>
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</thead>
<tbody>
<tr>
<td>8/22/10</td>
<td>Test Oldham furnace</td>
<td>3.5</td>
<td></td>
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Name: Norm Shepherd  
Organization: [ ] U.S.  
Month (circle one) Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec Year: 8/30/10
**Pembroke 604(b) Grant**  
**In-Kind Match Log**

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITY/DESCRIPTION</th>
<th>HOURS</th>
<th>COST</th>
<th>MILES</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/13/10</td>
<td>Deliver Samples to Analytical Bal.</td>
<td>1 hr</td>
<td>22</td>
<td></td>
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</tbody>
</table>

Name: Howard League  
Date: 8/13/10

Organization: ________________________________

Month (circle one) Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec Year: [ ]
PEMBROKE WATERSHED ASSOCIATION

WATER QUALITY SAMPLING

OLDHAM POND/FURNACE POND

SEPTEMBER 2010
Pembroke Watershed Association
P. O. Box 368, Pembroke, MA 02361-0368

Water Sample Collection Data Sheet

Sampling Station #: F-04
Watershed: Pine/SC

Town: Pembroke
Pond or River: Sunau
GPS Location: 42 03 18W 70 49 18.24W

Water level: 551 FT

Today's weather: Sunny
Rainfall: 0 in.

Yesterday's weather: Sunny
Rainfall: 0 in.

Day before's weather: Sunny
Rainfall: 0 in.

Site location: Buffalo to Gorham

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tannin, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 30%, 75%, >75%

Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sediment, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Emerged, Surface - % of weed growth

Water Characteristics: Large Wave, Small-wave, Smooth, Still

Current at sample area: Fast, Slow, Still, Slight

Secchi Disk Transparency: 15 No Time: 9:50 AM/PM Depth: 3.2 ft.

Chemistry sample: Yes No Time: 9:50 AM/PM Depth: 2.4 ft. Bottle ID#: F-04

DO Meter Sample:

Time: 9:50 AM/PM

Depth 4 ft.
DO 5.5 mg/l 600% Water temp 21.1°F/C
Conductivity 228 pH 8.24 Salinity 1

Depth 7 ft.
DO ____ mg/l ____ % Water temp ____ °F/C

Depth ____ ft.
DO ____ mg/l ____ % Water temp ____ °F/C

Depth at sample area: 5.5 ft.
Air temp: 56.9 °F/C Surface water temp: 21.1 °F/C

Comments:

Sample taker name: [Signature]
Witness: [Signature]

Water Sample Form revised 10/07
**Pembroke Watershed Association**

**Water Sample Collection Data Sheet**

**Sampling Station #**  F-08  
**Watershed:**  FUM 15

**Town:**  Pembroke  
**Water level:**  55.1 ft.

**Today's weather:**  Sunny  
**Rainfall:**  0 in.

**Yesterday's weather:**  Sunny  
**Rainfall:**  0 in.

**Day before's weather:**  Sunny  
**Rainfall:**  0 in.

**Site location:**  Deep hole

**Sample taken from:**  Boat, Bank, Wade, Dock, Other

**Water use:**  None, Fishing, Boating, Sailing, Swimming

**Water color:**  Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea Green

**Water odor:**  None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

**Algal growth:**  None, 5%, 10%, 15%, 20%, 25%, 30%, 50%, 75%, >75%  
**Algae Color:**  Green, Blue Green

**Bottom appearance:**  Not Visible, Bridge, Sand, Rock, Weeds, Mud, Other (describe)

**Weed Growth in Sample area:**  Not Visible, Submerged, Surface, % of weed growth

**Water Characteristics:**  Larga Wave, Small waves, Smooth, Still

**Current at sample area:**  Fast, Slow, Still, None

**Secchi Disk Transparency:**  No  
**Time:**  9:32 am/ pm  
**Depth:**  3 ft.

**Chemistry sample:**  Yes  
**Time:**  9:32 am/ pm  
**Depth:**  4 ft.  
**Bottle ID#:**  F-08

**DO Meter Sample:**  4/16/08  
**Time:**  9:32 am/ pm  
**DO:**  6.88 mg/l  
**pH:**  8.1  
**Conductivity:**  228  
**Salinity:**  1

**Depth 4 ft.**  
**DO:**  4.84 mg/l  
**pH:**  5.47  
**Water temp:**  2.1°F/C

**Depth 7 ft.**  
**DO:**  ___________ mg/l  
**Water temp:**  ___________ °F/C

**Depth at sample area:**  8.4 ft.  
**Air temp:**  16°F/C  
**Surface water temp:**  ___________ °F/C

**Comments:**

---

**Sample taker name:**

**Witness:**

**Date**  9/16/08  
**Time**  9:45 am
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 9:30  
LOCATION: Outlet to Gorham F-04

REPORTED: 09/30/2010  
ORDER #: G1030772  
SAMPLE DATE: 9/27/2010  
DATE RECEIVED: 9/27/2010  
SAMPLE ID:  
DESCRIPTION: WATER

<table>
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<tr>
<th>Test Parameters</th>
<th>LAB-ID#: 1030772-01</th>
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</thead>
<tbody>
<tr>
<td>Alkalinity 310.2</td>
<td>EPA 310.2 09/29/2010</td>
</tr>
<tr>
<td>Chloride 4110B</td>
<td>SM 4110 B 09/27/2010</td>
</tr>
<tr>
<td>Phosphorus, Total</td>
<td>SM 4500-P B/E 09/29/2010</td>
</tr>
<tr>
<td>Turbidity</td>
<td>SM 2130B 09/27/2010</td>
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</tbody>
</table>
**CERTIFICATE OF ANALYSIS**

**REPORTED:** 09/30/2010  
**ORDER #:** G1030772  
**SAMPLE DATE:** 9/27/2010  
**DATE RECEIVED:** 9/27/2010  
**SAMPLE ID:** Oldham Pond  
**DESCRIPTION:** WATER

---

**RESULTS OF ANALYSIS**

<table>
<thead>
<tr>
<th>Test Parameters</th>
<th>Method</th>
<th>Date</th>
<th>Unit</th>
<th>Value</th>
<th>Result</th>
<th>Code</th>
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<tbody>
<tr>
<td>Alkalinity 310.2</td>
<td>EPA 310.2</td>
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<td>mg/L</td>
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<td>SM 4110 B</td>
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<td>mg/L</td>
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<tr>
<td>Phosphorus, Total</td>
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<td>09/29/2010</td>
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<tr>
<td>Turbidity</td>
<td>SM 2130B</td>
<td>09/27/2010</td>
<td>NTU</td>
<td>0.25</td>
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CERTIFICATE OF ANALYSIS

REPORTED: 09/30/2010
ORDER #: G1030772
SAMPLE DATE: 9/27/2010
DATE RECEIVED: 9/27/2010
SAMPLE ID: Oldham Pond
DESCRIPTION: WATER

RESULTS OF ANALYSIS

<table>
<thead>
<tr>
<th>Test Parameters</th>
<th>Method</th>
<th>Date</th>
<th>Unit</th>
<th>Result</th>
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<tbody>
<tr>
<td>Alkalinity 310.2</td>
<td>EPA 310.2</td>
<td>09/29/2010</td>
<td>mg/L</td>
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<tr>
<td>Cl&lt;sup&gt;+&lt;/sup&gt; 4110B</td>
<td>SM 4110 B</td>
<td>09/27/2010</td>
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<td>Phosphorus, Total</td>
<td>SM 4500-P B/E</td>
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<td>mg/L</td>
<td>0.01</td>
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<td>Turbidity</td>
<td>SM 2130B</td>
<td>09/27/2010</td>
<td>NTU</td>
<td>0.25</td>
</tr>
</tbody>
</table>

NA = Not Applicable
ND = Not Detected
'<=' = Less Than
"<" = Detection Limit

Approved By: [Signature]
Lab Manager / Date

Analytical Balance Corp., 422 West Grove Street, Middleboro, MA 02346 Ph: 508-946-2225
Pembroke Watershed Association

Pond or River: Oldham

Water level: 351 Ft.

Today's weather: Sunny
Rainfall: 0 in.

Yesterday's weather: Sunny
Rainfall: 0 In.

Day before's weather: Sunny
Rainfall: 0 in.

Site location: Angle to furnace.

Sample taken from: Boat, Bank, Wade, Dock, Other (stand near stream.

Water use: None, Fishing, Boating, Skiing, Swimming

Water color: Clear, Cloudy, Milly, Foam, Brown (muddy), Gray (silt), Tea, Green

Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%
Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Studge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface, % of weed growth

Water Characteristics: Large Wave, Small wave, Smooth, Still

Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: ☐ No Time: 9:05 am/pm Depth __________ ft.

Chemistry sample: ☐ Yes No Time: 9:05 am/pm Depth 1 ft. Bottle ID #: O-D

DO Meter Sample: Time: 9:05 am/pm

Depth 4 ft. DO ______ mg/l ______ % Water temp ______ °F/°C
Conductivity 139.3 pH 8.82 Salinity 1

Depth 1 ft. DO ______ mg/l ______ % Water temp ______ °F/°C

Depth ______ ft. DO ______ mg/l ______ % Water temp ______ °F/°C

Depth at sample area: ______ Ft. Air temp: ______ °C Surface water temp: ______ °C

Comments: 

Sample taker name: 
Witness: 

Date: 9/24/16 Time: 10:00 
Date: 9/6/16 Time: 9:10

Water Sample Form revised 10/07
Pembroke Watershed Association
P. O. Box 366, Pembroke, MA 02359-0366

Water Sample Collection Data Sheet

Sampling Station #: 0-01
Watershed: Pun/Sc

Town: Pembroke
Water level: 55.1 Ft

Pond or River: Oldham
GPS Location: 42 04.044 W

Today's weather: Sunny
Rainfall: 0 in.

Yesterday's weather: Sunny
Rainfall: 0 in.

Day before's weather: Sunny
Rainfall: 0 in.

Site location: Camp Pembroke (WSE)

Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Sailing, Swimming

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Tea, Green

Water odor: Stone, Sewage, Oil, Chlorine, Rotten egg, Other (describe)

Algal growth: None, 5%, 10%, 16%, 50%, 50% > 75%
Algae Color: Green, Blue Green

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth

Water Characteristics:

- Current at sample area: Fast, Slow, Still, None
- Secchi Disk Transparency: YS
  - No: Time: 5:24 am/pm
  - Depth: 1.5 ft

Chemistry sample: YS
- Time: 6:30 am/pm
- Depth: 4 ft
- Bottle ID#: 0-01

DO Meter Sample:
- Time: 8:30 am/pm
- Depth 4 ft:
  - DO: 4.83 mg/l
  - %: 85.1%
  - Water temp: 26.1 °F/C
  - Conductivity: 2.265 mS
  - pH: 8.6
  - Salinity: 0.1

Depth 7 ft:
- DO: mg/l
- %: %
- Water temp: °F/C

Depth ft:
- DO: mg/l
- %: %
- Water temp: °F/C

Depth at sample area:
- Depth: 7.8 ft
- Air temp: 64 °F/C
- Surface water temp: 68 °F/C

Comments:

Sample taker name: [Signature] Date: 9/26/10 Time: 16:06
Witness: [Signature] Date: 9/30/10 Time: 8:37

Water Sample Form revised 10/07
Water Sample Collection Data Sheet

Sampling Station #: 6-04
Watershed: PwK / S C

Town: Pembroke
Pond or River: Oldham
GPS Location: 42.80.990, -70.56.837
Water level: 55.1 Ft

Today's weather: Sunny
Rainfall: 6 in.
Yesterday's weather: Sunny
Rainfall: 6 in.
Day before's weather: Sunny
Rainfall: 0 in.

Site location: Hanson WW
Sample taken from: Boat, Bank, Wade, Dock, Other

Water use: None, Fishing, Boating, Skiing, Swimming
Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Green
Water odor: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)
Algal growth: None, 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, 100%
Algae color: Green, Blue Green
Bottom appearance: Not Visible, St. Jude, Sand, Rock, Weeds, Mud, Other (describe)
Weed Growth in Sample area: Not Visible, Submerged, Surface, % of weed growth
Water Characteristics: Large Wave, Small wave, Smooth, Still
Current at sample area: Fast, Slow, Still, None

Secchi Disk Transparency: Yes
Time: 4:00 pm
Depth: 1.5 ft

Chemistry sample: Yes
Time: 8:00 am
Depth: 4 ft
Bottle #1: 0-04

DO Meter Sample: Time: 8:00 am
Depth: 4 ft
DO: 4.57 mg/l
SO2 %
Water temp: 72.1 °F (°C)
Conductivity: 228
pH:
Salinity: 1

Depth 7 ft.
DO:
mg/l
%
Water temp:
°F (°C)

Depth:
DO:
mg/l
%
Water temp:
°F (°C)

Depth at sample area: 5.7 Ft
Air temp: 68 °C
Surface water temp: 65.0°C

Comments:

Sample taker name: [Signature]
Date: 9/24/18
Time: 10:00

Witness: [Signature]
Date: 9/26/18
Time: 9:00
Pembroke Watershed Association
P. O. Box 358, Pembroke, MA 02359-0368

Water Sample Collection Data Sheet

Sampling Station #: 0-08  
Watershed: PWS 15C  

Pond or River: Oldham  
GPS Location: 42° 03' 00.0" N, 70° 44' 49.7" W

Town: Oldham  
Water level: 55.1 Ft.

Today's weather: Sunny  
Rainfall: 0 in.

Yesterday's weather: Sunny  
Rainfall: 0 in.

Day before's weather: Sunny  
Rainfall: 0 in.

Site location:  
Sample taken from: Boat, Bank, Wade, Dock, Other  

Water use: None, Fishing, Boating, Skiing, Swimming  

Water color: Clear, Cloudy, Milky, Foam, Brown (muddy), Gray (silty), Teal, Green  

Water color: None, Sewage, Oil, Chlorine, Rotten egg, Other (describe)  

Algal growth: None, 5%, 10%, 15%, 20%, 25%, 50%, 75%, >75%  

Algae Color: Green, Blue Green  

Bottom appearance: Not Visible, Sludge, Sand, Rock, Weeds, Mud, Other (describe)  

Weed Growth in Sample area: Not Visible, Submerged, Surface - % of weed growth  

Water Characteristics: 
Large Wave, Small waves, Smooth, Still  

Current at sample area: Fast, Slow, Still, None  

Secchi Disk Transparency: Yes  
Time: 8:10 am pm  
Depth: 10.5 ft

Chemistry sample: Yes  
No  
Time: 8:15 am pm  

DO Meter Sample: Yes  
No  
Time: 8:15 am pm  

Depth 4 ft.  
DO 4.1 mg/l 46.2 % Water temp 21.4 °F  
Conductivity 228.7 pH 8.18 Salinity 1  

Depth 10 ft.  
DO 4.27 mg/l 48.5 % Water temp 20.6 °F  

Depth 10 ft.  
DO  

 Depth at sample area: 12.3 Ft  
Air temp: 64.9 °C  
Surface water temp: 68.4 °C

Comments:  

Sample taker name:  

Witness:  

Water Sample Form revised 10/07
## Certificate of Analysis

**Ray Holman**  
**Pembroke Watershed Association**  
**PO Box 368**  
**Pembroke, MA 02359**  
**COLLECTED BY:** P. McCabe  
**TIME:** 9:08  
**LOCATION:** Outlet Furnace 0-D Grab  
**REPORTED:** 09/30/2010  
**ORDER #:** G1030771  
**SAMPLE DATE:** 9/27/2010  
**DATE RECEIVED:** 9/27/2010  
**SAMPLE ID:**  
**DESCRIPTION:** WATER

### Results of Analysis

<table>
<thead>
<tr>
<th>Test Parameters</th>
<th>LAB-ID#:</th>
<th>1030771-01</th>
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</thead>
<tbody>
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<td>Alkalinity 310.2</td>
<td>EPA 310.2</td>
<td>09/29/2010</td>
<td>mg/L</td>
<td>4</td>
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<tr>
<td>Chloride 4110B</td>
<td>SM 4110 B</td>
<td>09/27/2010</td>
<td>mg/L</td>
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<tr>
<td>Phosphorus, Total</td>
<td>SM 4500-P B/E</td>
<td>09/29/2010</td>
<td>mg/kg</td>
<td>0.01</td>
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<tr>
<td>Turbidity</td>
<td>SM 2130B</td>
<td>09/27/2010</td>
<td>NTU</td>
<td>0.25</td>
</tr>
</tbody>
</table>

---

*Lab verified results are correct and that sample appeared to have sediment in test samples.*
Ray Holman  
Pembroke Watershed Association  
PO Box 368  
Pembroke, MA 02359  
COLLECTED BY: P. McCabe  
TIME: 3:30  
LOCATION: Camp Pembroke 0-01 Grab

REPORTED: 09/30/2010  
ORDER #: G1030771  
SAMPLE DATE: 9/27/2010  
DATE RECEIVED: 9/27/2010  
SAMPLE ID:  
DESCRIPTION: WATER

### RESULTS OF ANALYSIS

<table>
<thead>
<tr>
<th>Test Parameters</th>
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<th>Unit</th>
<th>Value</th>
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CERTIFICATE OF ANALYSIS

REPORTED: 09/30/2010
ORDER #: G1030771
SAMPLE DATE: 9/27/2010
DATE RECEIVED: 9/27/2010
SAMPLE ID: oldham
DESCRIPTION: WATER

RESULTS OF ANALYSIS

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</table>
Ray Holman
Pembroke Watershed Association
PO Box 368
Pembroke, MA 02359
COLLECTED BY: P. McCabe
TIME: 8:10
LOCATION: Deep Hole 0-08

REPORTED: 09/30/2010
ORDER #: G1030771
SAMPLE DATE: 9/27/2010
DATE RECEIVED: 9/27/2010
SAMPLE ID: P
DESCRIPTION: WATER

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DATE RECEIVED: 9/27/2010
SAMPLE ID: 405-0810
DESCRIPTION: WATER

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NA = Not Applicable
ND = Not Detected
'<' = Less Than
'<' = Detection Limit

Approved By: [Signature]  
Lab Manager  [Date]