



Reference 21

Tom Campbell
Originator

PHONE CONVERSATION RECORD

Conversation with:

Name Philip Farr - Sanctuary Manager
Company Holbrook Island Sanctuary State Park
Address _____

Date 7 / 25 / 00
Time 1445 AM/PM

Phone 307-336-4012

- Originator Placed Call
- Originator Received Call

W.O. No. 2202-501001-1150 TDD No. 00-00-0000

Subject Description of Holbrook Island Sanctuary State Park

Notes:

Mr. Farr stated that the Holbrook Island Sanctuary is actually a state park and not a true sanctuary. It provides cultural education of the area and nature walks. Very little development is permitted and only nature trails have been allowed.

Wildlife present include: wetland/saltwater bird species, river otter, beaver, deer, moose, coyotes, and fox.

Mr. Farr recalled when shellfish were harvested from Goose Pond before the fishery was closed.

- File Callahan Mine
- Tickle File 1 / 1
- Follow-Up By: _____
- Copy/Route To: _____

Follow-Up-Action: _____

Originator's Initials Tom Campbell

ME
26

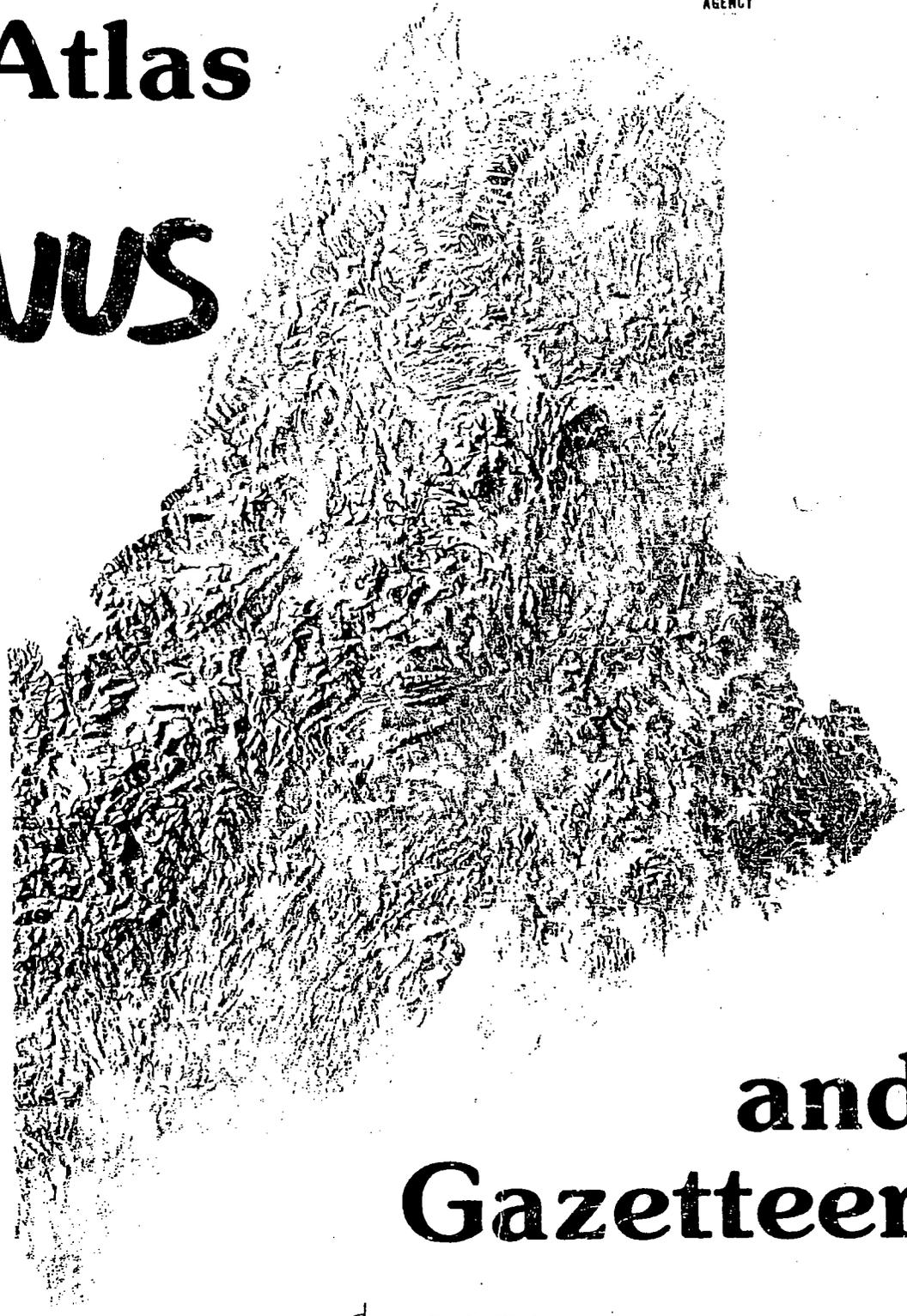
EVENTY PAGES OF MAPS DETAILING THE ENTIRE

Reference 22

ENVIRONMENTAL PROTECTION
AGENCY

The Maine Atlas

NUS



and Gazetteer

 **DELORME**
MAPPING COMPANY

HOUSES

GEORIS
TIRING MEANS
DAMP HEADS
BARKS
PRESERVES
MILK
SAND BEACHES

TOWNSHIP

SAND BEACHES

HIKING TRAILS, continued

MOUNT KINEO - Kineo Twp - Map 41, A-1 Isolated mountain rises dramatically from middle of Moosehead Lake; magnificent views from bald summit (abandoned fire tower); good conditions. Shorter branch of trail (Indian ascends along cliffs; Bridle Trail is longer, with no views and easier grades. Dock to summit, 1 on 2 mi; elev gain 800 ft.

MOUNT MEGUNTICOOK - Camden - Map 14, D-1 The highest of the Camden Hills, the ridge is ascended by park trails from several directions. No views from wooded summit, but several fine lookouts from exposed ledges. Megunticook Trail offers most direct ascent, from park entrance. Passes grove and stream, then rises steeply to Ocean Lookout and panoramic views. Base to Lookout, 1 mi; elev gain 1100 ft. (Map and guide to Camden Hills trail network supplied at park entrance.)

MOUNT PISGAH - Windthrop - Map 12, C-2 Pleasant, easy walk, good family hike, with panoramic views at summit ledge (manned fire tower). Trail follows jeep road and power line; steepest at beginning. Side trail to field, several descent routes. Base to summit, 1 mi; elev gain 400 ft.

NUMBER FOUR MOUNTAIN - Frenchtown - Map 41, A, B-5 Very pleasant hike, ascending easily, then steeply through hardwoods, to broad windswept summit plateau and fine views of Moosehead region and north woods from unmanned fire tower (good condition). Base to summit, 4 mi; elev gain 1700 ft.

OLD SPECK MOUNTAIN - Grafton - Map 18, D, E-1 Fourth highest peak in Maine, has several trails to wooded summit (360° views from observation tower). The Mossy Cascade Trail is accessed via the Eyebrow Trail. Side trail leads to the Eyebrow Sheer Cliff which makes up part of W wall of Grafton Notch. Summit can be accessed via Link Trail to Spur Trail or by AT and side trail. Base to summit, 4 mi; elev gain 2700 ft.

OSSIPEE HILL - Waterboro - Map 2, A-4 Pleasant, easy hike along old fire tower road. Panoramic views of Saco valley and Presidential forest from open, ledge summit (manned fire tower). Dirt road may be driven part way, then becomes too rocky and steep. Base to summit, 1 1/2 mi; elev gain 600 ft.

PEAKED MOUNTAIN (CHICK HILL) - Clifton - Map 24, A, B-1 Extensive views in all directions from open ledges at summit (abandoned fire tower). Trail ascends gradually along old tote roads. Base to summit, 1 1/2 mi; elev gain 800 ft.

PEMETIC MOUNTAIN - Mt Desert - Map 16, B-4 Pleasant climb (gradual, then steep) through "storybook" forest to superb views of Mt Desert summits, offshore islands. (Possible

loop, descending S and returning N along carriage road.) Bubble Pond to summit, 1 mi; elev gain 1000 ft. (Loop, 3 1/2 mi.)

PENOBSCOT AND SARGENT MOUNTAINS - Mt Desert - Map 16, B, C-3 Especially good views of the Bubble and Cadillac on this ridge walk, with panoramic views throughout. Somewhat difficult ascent up Jordan Cliffs; otherwise easy. From Penobscot summit (1 1/2 mi) continue past jewel-like lake and follow carnis to Sargent summit, second highest peak on Mt Desert Island. Jordan Pond to Sargent summit, 2 1/2 mi; elev gain 1200 ft.

PLEASANT MOUNTAIN - Denmark - Map 4, A-2, 3 Isolated mountain mass has several summits, open ledges, commanding views of White Mts. Many interconnecting trails. Firewarden's Trail to main summit (manned fire tower) is most popular trail. Rough jeep road ascends through rocky woods; park at main road or drive as far as warden's cabin. Base to summit, 2 1/2 mi; elev gain 1600 ft.

PRIESTLY MOUNTAIN - TII RIS, TIO R13 - Map 55, A-5; Map 61, E-5 Pleasant, leisurely hike encounters berry patches, abandoned cabin, beautiful turquoise lake ringed by hills; then makes very steep ascent to summit. From lookout tower, magnificent views of Allagash waterway, north woods, Katahdin, Umbagog Lake to tower, 3 1/2 mi; elev gain 100 ft. (Alternate route follows brook.)

QUAGGY JOE MOUNTAIN - Presque Isle - Map 65, E-1 Twin-peaked mountain overlooks lake and northern Maine; best views from N peak. Pleasant, direct climb. Base to N peak, 3 mi (to S peak, 1 1/2 mi); elev gain 600 ft.

RAGGED MOUNTAIN - Camden - Map 14, D-3 Trail follows ski lift, enters woods and swings across ledges to summit, where there are views to W. Branch trail returns to ski slope. Snow Bowl to summit, 1 mi; elev gain 1000 ft.

THE ROOST - Batchelders Grant - Map 10, B-1 Very easy climb to excellent views through Evans Notch from bald outcrop. Road to summit, 1 1/2 mi; elev gain 400 ft.

SABATTUS MOUNTAIN - Lovell - Map 10, D-2 Expansive views of nearby mountain ranges from top of massive SW cliff face. Short, easy climb to summit (old fire tower). Round trip, 1 1/2 mi; elev gain 600 ft.

SADDEBACK MOUNTAIN - Sandy River Pk - Map 19, A-1; Map 29, E-1 Excellent views of Rangeley region from barren summit (abandoned fire tower). AT approach twice as long as ski lift approach, but more gradual,

scenic. Passes enormous boulder, several beautiful small ponds. Road to summit, 5 mi; elev gain 2400 ft.

SADDEBACK JUNIOR - Madrid - Map 29, E-1, 2 Very pleasant hike along three summits, mostly open (except descent from The Horn) with continuous views. Begin at Saddleback summit (reach by AT or steeper ski lift trail). Gradual ascents over flat rocks; some steep sections. Saddleback summit to Junior summit, 4 1/2 mi.

SALLY MOUNTAIN - Attuan - Map 39, B-4 Very pleasant hike and climb through woods to open ledges and views of island-studded lake and wilderness areas SE. Most scenic approach is from campsite on N shore of lake (canoe from landing); by land, follow RR tracks from Jackman (1 1/4 mi). Limited views N from true forested summit. Base to summit, 1 1/4 mi; elev gain 1000 ft.

SARGENT MOUNTAIN - (see Penobscot Mountain)

SCHOODIC MOUNTAIN - Twp 9 SD - Map 24, E-4, 5 Magnificent views of Cadillac from bald top of this mountain (once burned). W approach crosses open area to woods, follows RR tracks and old fire road, makes steep ascent over ledges to bare summit (radio tower). Rte 200 to summit, 2 1/2 mi; elev gain 1100 ft. (Alternate approach from Tunk Lake follows gravel roads and RR siding to jet with ascending trail.)

SINGLEPOLE MOUNTAIN - Paris - Map 11, D-2 Spectacular views, from summit, of Mt Washington and Mallooses. Gradual ascent along dirt road (bear left) through mixed woods. Beautiful swimming quarry just before summit. Base to summit, 1 1/2 mi; elev gain 500 ft.

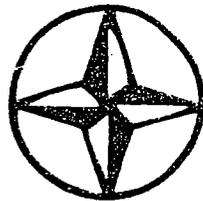
SNOW MOUNTAIN - Alder Stream Twp - Map 28, A-4, 5 Scenic hike in remote setting, for experienced hikers (trail poorly marked; confusing road access). From left fork at logging camp remains, trail crisscrosses stream. From pond, trail climbs steadily to summit and fine views. Parking to summit, 4 1/2 mi; elev gain 2100 ft.

SPAULDING MOUNTAIN - (see Sugarloaf Mountain)

SPECKLED MOUNTAIN - Stoneham, Batchelders Grant - Map 10, C-1 Magnificent views of mountains W from summit (abandoned fire tower). Ascended by 5 trails, varying in difficulty. Easiest and most direct route, Spruce Hill Trail, starting at height of land at Evans Notch, directly opposite East Royce Trail. Or use Bickford Brook Trail, which joins Blueberry Ridge Trail 1/2 mi from summit; good loop. Bricket Place to summit, either trail, 4 mi; elev gain 2200 ft.

UNIQUE NATURAL AREAS

including Gorges, Eskers, Caves, Estuaries, Reversing Falls, Cliffs



BAGADUCE FALLS - Brooksville - Map 15, B-3 Reversing falls occurring between Snow Cove and the Bagaduce estuary. Easy access; popular practice run for canoeists and kayakers.

BAKER ISLAND "DANCE FLOOR" - Cranberry Isles - Map 16, D-4 Off-shore pile of huge slabs of granite, leaven from shore by the throes of powerful waves.

BASIN COVE FALLS - Harpswell - Map 6, E-2 Set of reversing falls formed by tidal flow between Basin Cove and Potts Harbor. Run by canoeists and kayakers.

BAXTER PEAK - Mt Katahdin Twp - Map 50, D-5 The highest point in Maine and (during most of year) the first place in the US touched by the morning sun. N terminus of Appalachian Trail.

THE BEEHIVE - Bar Harbor - Map 16, B-4 Named for the unusual shape of its E cliff face. Offers a very precipitous climb to excellent vantage point; trail. First part of Acadia park.

BIDDEFORD POOL - Biddeford - Map 3, C-3 Tidal basin 1 mi wide, mud flats at low tide. Attractive to many species of shore birds; excellent birdwatching.

BIG WILSON CLIFFS - Ellentonville - Map 41, E-4 Huge slabs outcrop offset scenic overlook of valley. Unusual position - most cliffs in Maine lie N to S, these lie E to W. Accessible by Appalachian Trail.

BINGHAM ESKER - Bingham - Map 30, D-4 Steep (30 yds high) esker composed of several ridges, kettle holes. Obvious; road access.

BLOWING CAVE - Kennebecport - Map 3, D-2 Sea cleft spouts spectacular surf before high tide, up to 30 ft in air. Colorful rock ledges. Popular roadside stop.

BLUE HILL FALLS - Blue Hill - Map 15, B-5 Unusual set of reversing falls. Injuring tide funneled by narrow channel to create high standing waves; reverse eddy along opposite side. 200 yds, runnable by raft, inner tube, canoe.

BOWDOIN PINES - Brunswick - Map 6, C-3 Stand of old growth white pines, approx 125 yrs old and 90 ft tall, arching majestically over road. Parking area.

CADILLAC MOUNTAIN - Bar Harbor - Map 16, B-4 Highest point on the eastern seaboard. Parking at summit. Pink granite ledges, magnificent views from trail.

CASCADE STREAM GORGE - Cascade Stream, Sandy River Pk - Map 28, E-5 V-shaped gorge, 700 yds long, 30 yds deep. Cascades, attractive falls at entry to lower gorge. Access trails to lower gorge.

CATHEDRAL WOODS - Monhegan Island - Map 8, D-1 Exceptionally peaceful forest of tall spruce, mossy boulders, ferns. Traversed by trail. (Maps of Monhegan trail system available on island.)

CHESTERVILLE ESKER - Chesterville - Map 20, E-1, 2 Sharp, forested ridge up to 30 yds high, divides two ponds. Observable from shores, east road access.

THE CHIMNEY - Mt Katahdin Twp - Map 51, D-1 A deep cleft, or nearly-enclosed cleft, in the N face of Chimney Peak. Blocked internally by 4 huge "chockstones." It is a difficult climb, only attempted by experienced climbers. Baxter Park trail crosses top.

COOS CANYON - Swift River, Byron - Map 18, C-5 500-yd gorge at famous gold panning locality has interesting rock crystals, potholes, hydraulic erosion features. Popular scenic area, roadside stop.

CROCKER CIRQUE - Carrabassett Valley - Map 29, D-5 Glacial cirque between N and S Crocker Mts, features reflective pool at bottom. Accessible by Appalachian Trail.

DAMARISCOTTA REVERSING FALLS - Damariscotta, Newcastle - Map 7, A-3 At two locations (Rte 1 bridge, Rtes 129-130 bridge), reversing falls caused by tidal flow occur under right conditions. Good practice run for canoeists.

DESERT OF MAINE - Freeport - Map 6, C-1 Shifting sand dunes, result of glacial outwash. Exposed water table shows vari-colored sands. Parking fee.

ENFIELD HORSEBACK - Passadumkeag - Map 55, B-5 Sharp-crested continuous ridge rises steeply from swamp to 20 yds high. Used for study by University of Maine. Traversed by road.

GOOSE FALLS - Brooksville - Map 15, B-2 Reversing falls at outlet of Goose Pond, run by canoeists and kayakers.

STARBUCK MOUNTAIN - Freeburg - Map 4, A-1 Short, direct ascent over open, grassy slope and ledges along old ski line to wooded shoulder; trail continues to summit. Good views of Saco valley, White Mts. Base to summit, 1 mi; elev gain 500 ft.

STREAKED MOUNTAIN - Paris, Hebron - Map 11, D-2, 3 Summit offers fine views in all directions and interesting rock formations (mica, quartz, black tourmaline). Though moderately steep, well-marked trail is good family hike; trail goes to right of power line. Base to summit (manned fire tower), 1 1/2 mi; elev gain 800 ft.

SUGARLOAF AND SPAULDING MOUNTAINS - Carrabassett Valley - Map 29, D-4 Strenuous climb up second highest mountain in Maine to spectacular views in all directions from bare summit cone (radio tower, gondola terminal); trail follows ski lifts. From summit, blue-blazed trail continues to wooded Spaulding summit, with many views along way. Base of Sugarloaf to Spaulding summit, 5 mi; elev gain to Sugarloaf summit, 2500 ft.

TABLE ROCK - Grafton - Map 18, D-1 Rather steep climb up SW peak of Baldpate Mt to breathtaking views of Grafton Notch. Old Speck. Well-marked trail ascends steadily over roots, boulders, huge ledges (side trail, with caution, to system of slab caves), to reach massive flattened ledge. (For loop, continue up spur to AT and descend W). Base to summit, 1 mi; elev gain 900 ft.

TUMBLEDOWN MOUNTAIN - Twp 6 North of Weld - Map 19, B, C-1 Mountain mass features 3 peaks, jewel-like alpine lake. Accessed by network of trails (W approach, Chimney Trail, for experienced rock climbers). Brook Trail, most direct route (1 1/2 mi), leaves road to ascend steeply along brook to lake; well-marked. Parker Ridge Trail, easiest route, ascends open ledges (good views of Tumbledown range) to pond, continues to E and W peaks. Road to W peak, 3 mi; elev gain 1400 ft.

WEST KENNEBAGO MOUNTAIN - Steinstown, Upper Cuscutic - Map 28, C-3 Very pleasant climb to magnificent views in all directions. Popular family hike. Well-marked trail winds around outcrops through lush forest to summit (manned fire tower). Road to summit, 2 1/2 mi; elev gain 1800 ft.

WHITE CAP MOUNTAIN - Bowdoin College Grant East - Map 42, C-1, 2 Trail heads left, follows old route AT, then fire tower trail. Follows rocky stream bed on last steep section to summit (careful footing). Awesome views of Katahdin, nearby mountains, from bald plateau. Paper company road to summit (abandoned fire tower), 1 1/2 mi; elev gain 1600 ft.

GREAT BASIN - Mt Katahdin Twp - Map 50, D-5 Huge horseshoe-shaped glacial valley, with steep walls of Katahdin pink granite. Two floor ponds, awesome views. Traversed by Baxter Park trails.

GREAT HEAD - Bar Harbor - Map 16, C-4 One of highest coastal headlands in eastern US. Black and white speckled volcanic bedrock. Ruined lookout tower, grand views from trail. Limited parking.

THE GREAT HEATH - Columbia - Map 25, C-3 The largest heath, or raised bog, in Maine. Freshwater bog plantlife, good birdwatching. Accessible by canoe (Pleasant River).

GULF HAGAS - West Branch Pleasant River, Bowdoin College Grant East - Map 42, D-1 "Grand Canyon of the East." This outstandingly scenic 3-mi canyon contains 5 major waterfalls. Walls nearly vertical, up to 40 yds high; total hydraulic up 125 yds. Logs were once driven through this gorge! Appalachian Trail follows rim; good views.

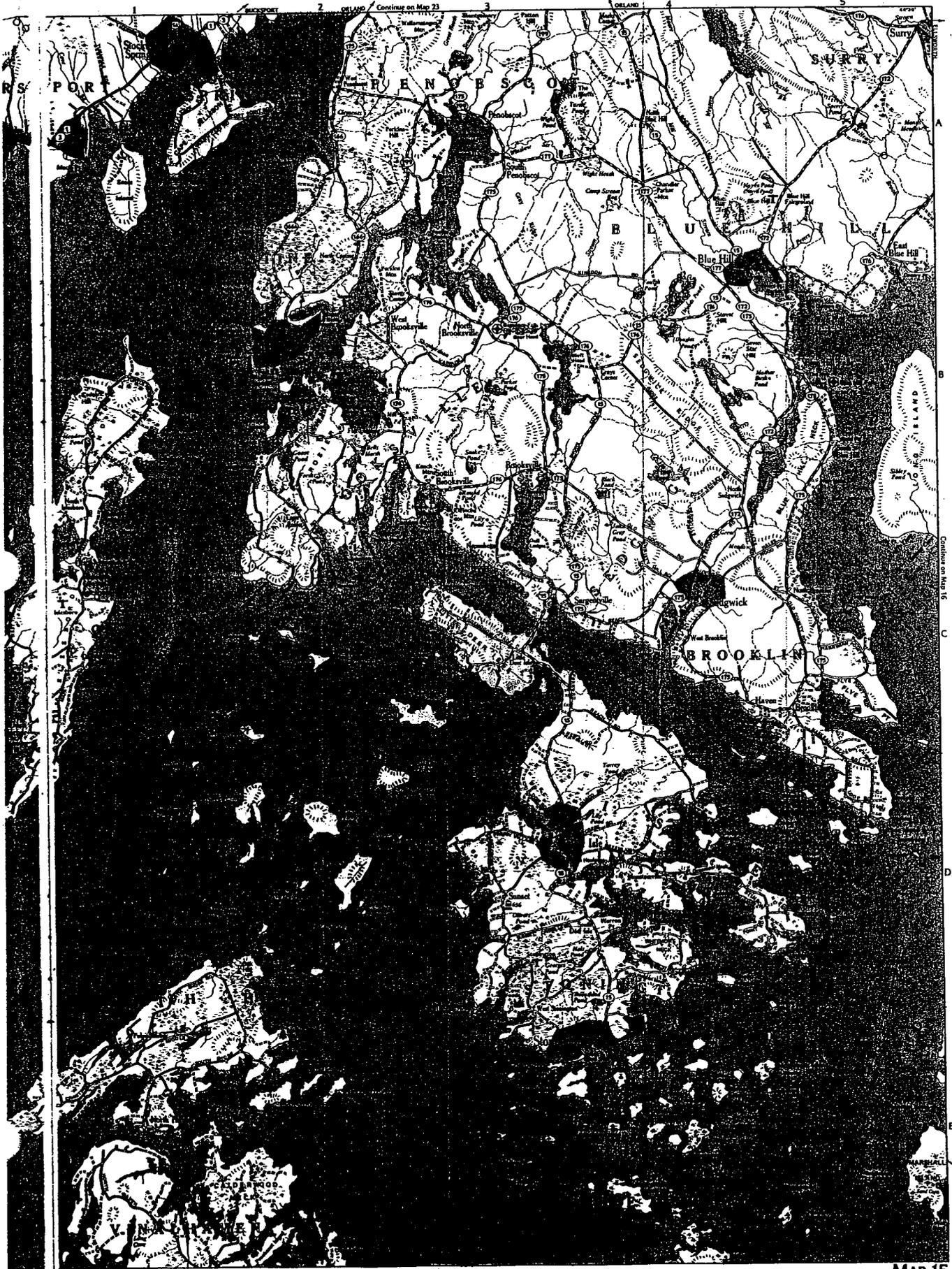
GULLIVER'S HOLE - Lubec - Map 27, B-4 Framing sea pocket visible from very high overlook. Trail.

HEAD TIDE - Aina - Map 13, E-2 Holding pool above abandoned mill dam. At height of spring run, water is almost black with alewives and lampreys.

HEIGHT OF LAND - Township D - Map 18, A-4 Scenic overlook near crossing of Appalachian Trail; extensive views of White Mts and Rangeley area.

HOG BAY - Franklin - Map 24, E-4 Nesting site for migrating birds; attracts bald eagles and osprey. Roadside birdwatching spot.

(continued, next page)



S T A T E O F M A I N E
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF HAZARDOUS MATERIALS AND SOLID WASTE CONTROL

M E M O R A N D U M

TO: Jean Firth, ESIII Uncontrolled Sites

FROM: Troy Smith, Geologist
Division of Technical Services

DATE: November 18, 1999

SUBJECT: Trip Report, October 4-6, 1999, Callahan Mine Site,
Brooksville, Maine

The following is a summary of surveying and sampling activities that I participated in during the three-day investigation of the Callahan Mine Site. If you have any questions or comments, please contact me.

During the three-day site investigation Brian Beneski and I collected surface soil samples, subsurface soil samples, one surface water sample, and completed an elevation survey of the selected features to help determine the volume of material that remains at the site.

Subsurface Soil Sampling

On October 5, Brian and I collected subsurface soil samples from the former tailings pond. The purpose of the sampling event was to determine the approximate thickness of the tailings in the former pond and to collect deep soil samples for laboratory analyses. A trailer mounted hydraulic driven direct push instrument was used to advance a soil sampler and associated piping to the prescribed depth. An exploratory hole was made prior to sample collection to determine changes in soil texture that may represent stratigraphic changes. This was done by advancing a 1-inch outside diameter solid cone point and noting the relative changes in pressure that was required to advance the solid point. Once this information was obtained, the exploratory hole was abandoned and a new boring location was selected approximately 3 feet from the exploratory boring. Subsurface soil samples were collected from the second borehole to confirm the stratigraphy of the subsurface. Sample intervals were selected based on the textural changes noted during the exploratory boring. In addition to the samples collected to confirm the stratigraphy, subsurface soil samples from the tailings were collected for laboratory analyses.

The exploratory boring indicated that the soil texture is consistent from the surface to approximately 42 feet below the ground surface (bgs). At 42 feet, the texture changed significantly from a soft unit that did not require the use of the hydraulic hammer to advance the rods to a stiff unit that required continuous use of the hydraulic hammer to advance the rods. Resistance of the material increased with depth. At 55 feet, advancement of the solid point was terminated when it was determined that continued use of the hydraulic hammer might result in loss of equipment in the borehole.

Based on the exploratory hole, it was decided to attempt sample collection from 35 to 45 feet below the ground surface to determine the nature of the textural change. The first sample attempt from 35-37 feet did not recover any sample due to the consistency and texture of the tailings. A second sample from 37 to 39 feet recovered a complete two-foot sample of tailings. Several unsuccessful attempts were made to recover samples from 39 to 42 feet. One last sample was collected between 42 and 47 feet. The attached boring log for 99-TPd-11 provides the specific information of the depths and sample description.

Surface Soil and Surface Water Sample Collection

On October 6, Brian Beneski and I collected surface soil samples from the former tailings pond. Additionally, one surface water sample (TPR-50) was collected from a flowage that drains from the former tailings pond to Goose Pond. Sample containers were placed directly into the flowing water to allow direct filling of the containers.

Four surface soil samples (99-TPd-12, 99-TPd-13, 99-TPd-14, and 99-TPd-15) were collected using disposable samplers. One sampler was used at each location and disposed after each use. A shovel was used to remove the surface material, including organic and inorganic material. All samples were collected from 3 to 6 inches below the surface. A complete sample description is presented on the attached Sample Collection Data Sheets.

Elevation Survey

On October 4 and 6 Brian and I completed an elevation survey of the tailing pond; the tailings pile, waste rock pile #1, and waste rock pile #2. The purpose of the elevation survey was to help understand the volume of material present at the site and to confirm the elevation survey that was completed using the GPS units. The survey transect included the water level in Goose Pond and Dyer Cove. The elevation calculations are included on the attached table.

| Rod Location | Tripod Location | Instrument Height | Top Hair | Mid-Hair | Bottom Hair | Vertical angle | sin of VA | Distance | VA * Distance | Relative Elevation Difference | Elevation |
|------------------------|-----------------|-------------------|----------|----------|-------------|----------------|-----------|----------|---------------|-------------------------------|-----------|
| Sealevel in Goose Pond | TL-10 | 5.8 | 10.88 | 8.92 | 7.00 | -13.28 | -0.229 | 387.50 | -88.74 | -91.85 | 0 |
| Tailings Pond 1 | | 5.8 | 13.75 | 11.75 | 9.75 | -2.13 | -0.037 | 400.00 | -14.80 | -20.75 | 71 |
| Tailings Pond 2 | | 5.8 | 13.58 | 12.42 | 11.33 | -3.73 | -0.013 | 225.00 | -2.93 | -9.54 | 82 |
| Tailings Pile, turn | | 5.8 | 4.50 | 3.00 | 1.58 | 0.36 | 0.006 | 292.00 | 1.81 | 4.61 | 96.46 |
| Tailings Pile, turn | TL-11 | 5.6 | 8.08 | 7.25 | 6.50 | 0.00 | | 158.33 | | -1.65 | 96.46 |
| Mid Level, WRP #1 | | 5.6 | 6.25 | 4.83 | 3.50 | 4.27 | 0.07 | 275.00 | 20.35 | 21.12 | 119.23 |
| Top of WRP #1, R-1 | | 5.6 | 7.25 | 4.83 | 2.50 | 8.21 | 0.14 | 475.00 | 67.45 | 68.22 | 166.33 |
| Top of WRP #1, R-2 | | 5.6 | 12.00 | 8.46 | 6.83 | 8.21 | 0.14 | 517.00 | 73.41 | 70.55 | 168.66 |
| Top of WRP #1, R-2 | TL-12 | 5.6 | 12.67 | 6.83 | 2.83 | 8.56 | 0.14 | 984.00 | 137.76 | 136.53 | 172.44 |
| Mid Level, WRP #1 | | 5.6 | 5.83 | 3.83 | 2.00 | 8.56 | 0.14 | 383.00 | 53.62 | 55.39 | 91.3 |
| Base of WRP #1 | | 5.6 | 12.33 | 11.00 | 9.67 | | | 266.00 | | -5.40 | 30.51 |
| Sealevel in Dyer Cove | | 5.6 | 13.50 | 12.83 | 12.08 | -11.67 | -0.20 | 142.00 | -28.68 | -35.91 | 0 |
| Top of WRP #2 | | 5.6 | 10.00 | 8.50 | 7.00 | 11.07 | 0.19 | 300.00 | 57.30 | 54.40 | 90.31 |

Reference Elevation is assumed to be 0 water level in Goose Pond and Dyer Cove

Elevation Summary

| | |
|----------------------------|------------|
| Goose Pond | Assumed 0 |
| Tailings Pond | 71-82 feet |
| Tailings Pile | 96 |
| Waste Rock Pile #1 | 166-172 |
| Base of Waste Rock Pile #1 | 30 |
| Dyer Cove | Assumed 0 |
| Waste Rock Pile #2 | 90 |

Sample Collection Data Sheet

rev 10/99

Date: 10/6/99

Weather: Mostly Sunny 50's

Site Name: Callahan Mine Site, Brooksville

Sample Location: Tailings Pond

Sample Designation: 99-TPd-12

Persons Collecting the Sample: SMITH, Beneski

Laboratory Number: 99E-DIN-10889

10892

10893

Sample Type:

Surface Soil

Subsurface Soil

Sediment

Surface Water

Groundwater

Product

Other: _____

Sample Collection Method:

Used shovel to dig 6" Deep hole. Used Disposable gloves to collect samples 3-6" from side walls + Base of hole.

Sample Description:

Sample Collection Depth: 3-6"

Sample Color: Light Gray

Sample Texture: Silty fine Sand tailings

Odors Noted: None

Field Screening Results: None

Notes or Descriptions

0-3" Light gray + Light brown silty fine SAND grained tailings w/ vegetation

3-6" Light gray silty fine SAND sized tailings

Sample Collection Data Sheet

rev 10/99

Date: 10/6/99

Weather: Mostly Sunny 50's

Site Name: Callahan Mine Site, Brooksville

Sample Location: Tailings Pond

Sample Designation: 99-TPd-13 (DUP 99-TPd-14)

Persons Collecting the Sample: SMITH, Beneski

Laboratory Number: 99E-DIN-10897, 10898, 10899
TPd-14, 10868, 10895, 10896

Sample Type:

| | | |
|---|---------------------------------------|--------------------------------|
| <input checked="" type="radio"/> Surface Soil | <input type="radio"/> Subsurface Soil | <input type="radio"/> Sediment |
| <input type="radio"/> Surface Water | <input type="radio"/> Groundwater | <input type="radio"/> Product |
| Other: _____ | | |

Sample Collection Method: Used a shovel to dig 6" Hole. Used disposable gloves to fill sample containers from 3-6".
Removed soil from side walls + base of hole

Sample Description:

Sample Collection Depth: 3-6"

Sample Color: Light Gray

Sample Texture: Silty fine sand tailings

Odors Noted: None

Field Screening Results: None

Notes or Descriptions

0-3" Light gray + Light brown Silty fine sand size tailings and vegetation

3-6" Light gray Silty fine sand size tailings

99E-DIN-10868, 10895, 10896 are Duplicates designated as 99-TPd-14.

Sample Collection Data Sheet

rev 10/99

Date: 10/6/99

Weather: Mostly Sunny, 50's

Site Name: Callahan Mine Site, Brooksville

Sample Location: Tailings Pond Drainage

Sample Designation: TPR-50

Persons Collecting the Sample: BENESKI

Laboratory Number: 99E-DIN-10910

Sample Type:

Surface Soil

Subsurface Soil

Sediment

Surface Water

Groundwater

Product

Other: _____

Sample Collection Method:

Placed laboratory container directly into flowing stream and collected water.

Sample Description:

Sample Collection Depth: 1-4"

Sample Color: Clear

Sample Texture: N/A

Odors Noted: None

Field Screening Results: None

Notes or Descriptions

None

FILE

Location Hamletville Date 10/2/77
 Project / Client Callahan Mine
Newcast Breezy 40's

Brian Beneski
 Troy Smith

Purpose: Use trailer mounted Craggbe
 to determine Depth of tailings + collect
 Samples

9:00 Arrive + select location

9:25 Begin Setup
 with Probe w/ solid point on inch
 pipe to determine sample interval

Location 99-TPd-11

23 - 3' sections

6 - 3' Slotted pipe

Location 11 Date 11
 Project / Client 11 12

| Time | Ref | Comments | TD |
|-------|-------|--|-------|
| 9:45 | 3' | Weight of Rod | |
| 9:48 | 5-3' | " " " | 15' |
| 9:55 | | Used Hammer a little | 27-30 |
| | | " " | 30-32 |
| | | WOR | 32-33 |
| | 14-3' | Became Difficult - No more WOR/A using hammer to advance | |
| | 15-3' | ⊙ - 42' very difficult + Bang | |
| | 17-3' | Rods total | |
| 10:10 | | Still very Bony/Rocky Stopped + Began Removal | 50 |
| 11:00 | | Begin Advancing Sampler 1 Sampler Rods N | |
| | | Sampled 35-37' No Recovery | |
| | | 37-39' a Recovery | |
| | | Sample 10872 | |

Reference 24

Sampled 42-47'

① 47' - Lt gray sand - few tailings

10891 + 10870

M. SAN 575 No Bacteria

Brian
ToyPurpose: Collect surface soil
Samples in tailings pond &
Survey Elevations

900 Arrive

Brian collected surface
water samples from stream
discharge in from tailings pond
TPED # 0910905 Surface soil location #13
3" Lt gray + Lt brown w/vegetation
3" Lt gray silty f. sand tailings

TPED -13 10897, 898, 899

TPED -14 10868, 895, 896

98

Location _____

Date _____

Project / Client _____

920 TPD-12

3" Lt gray + Lt br. Silty Sand tailings
w/ vegetation

3" Lt gray Silty S. Sand tailings

#s 10889, 10892, 10893

930 TPD-15

0-6" Orange + Yellowish Orange
Silty S. Sand tailings

10869, 10887, 10888

All samples collected w/ disposable
Sampler after digging 6" w/ shovel

RECLAMATION PLAN, GOOSE POND
BROOKSVILLE, MAINE

Prepared by: Frederick M. Beck, Callahan Mining Corporation
Endorsed by: Goose Pond Reclamation Society
Date: August 15, 1972

RECLAMATION PLAN, GOOSE POND
BROOKSVILLE, MAINE

Prepared by: Frederick M. Beck, Callahan Mining Corporation
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Date: August 15, 1972

Introduction

Since February, 1968, Callahan Mining Corporation has been mining and milling zinc and copper minerals from an open pit mine which occupies a portion of the former Goose Pond, a state-owned tidal estuary, and adjacent privately-owned land on the west side of Goose Pond. Goose Pond is located on the northwest coast of Cape Rosier, a peninsula located in Brooksville, Maine on the eastern shore of Penobscot Bay.

Due to depletion of the mineral reserve, mining ceased on June 15, 1972, and milling ceased on July 14. A total of 800,000 tons of ore was processed in the concentrating mill. The average ore grade was 1.30% copper, 4.91% zinc, 0.35% lead, and 0.50 ounces per ton silver.

Callahan operated the mine under a number of permits, licenses, and leases. The only specific state reclamation requirement for the area underlying the former Goose Pond is contained in the state mining lease wherein "Lessee will cooperate with Lessor, its various agencies, and the Officials of the town of Brooksville . . . in the planning, funding, and implementation of a program for the rehabilitation of the said lands upon the completion of mining activities thereon. The details of such program, including the funding and administration of same and the source of funds to accomplish the program shall be the subject of further discussion and negotiation between the parties." To this end, the Goose Pond Reclamation Society was formed and provides the forum for discussion and recommendation for reclamation as envisioned by the state, town, and company, in 1967. Appendix "A" contains the articles of incorporation and by-laws of the society. The state, town, and company are not obligated to accept the recommendations of the Society, but each group has indicated a willingness to cooperate with the Society and provide assistance and support whenever possible.

A reclamation plan has been prepared as a result of numerous meetings of the Society. The plan has been prepared by Callahan Mining Corporation, but reflects the consensus of opinion of the Goose Pond Reclamation Society and is endorsed by that group. This plan if followed requires modification in existing federal permits, action by certain state agencies, and considerable work by the Company. The following plan provides the basis on which these decisions can be made; lack of approval would require modification to the plan.

Appendix B is a preprint which details the operation of the mine. Although two years old, it provides background which is sufficiently current. If time permits, it should be read prior to considering the plan. The plan is described in three parts; planting and grading of disturbed areas above sea level, economic rehabilitation of the area,

Tailings Pond

Steps are being taken to assure that structural and chemical stability of the tailings pond will be maintained. Plates II and III indicate the area of the tailings pond and shows the location of a proposed drainage ditch which will keep the tailings drained. Vegetation will be planted on the area to provide a moisture barrier and to prevent erosion by wind and water. The U.S. Bureau of Mines is taking an active interest in the tailings and the Company and the Bureau are currently working jointly toward acceptable reclamation.

Economic Rehabilitation

In an effort to relieve the negative economic impact of the mine closure, Callahan is conducting a pilot project to determine the commercial feasibility of raising salmon and oysters under controlled conditions. The technology has been developed in other areas and it would appear that these technologies could be successfully applied to the Cape Rosier area. It is anticipated that a modest tax and employment base could be developed if the project proves feasible.

As part of the aquaculture project, analyses will be conducted periodically on water quality, both within and outside the pit area, and bioassays will be performed periodically to determine heavy metal accumulation in selected marine species. The company assay lab will be used for making most tests. Analytical assistance will be provided by the University of Maine's Darling Center and the Department of Sea and Shore Fisheries.

The following periodic tests will be conducted, both in the pit and from selected control points in Penobscot Bay:

- Temperature (surficial and with depth)
- Location of thermocline
- Salinity
- Turbidity
- Dissolved oxygen
- pH
- Heavy metals in shellfish, seaweed, and bottom sediments in locations agreed on by company and Department of Sea and Shore Fisheries

Below-Sea Level Reclamation

It is proposed that the end result of the Goose Pond reclamation should be a large salt water pond open to the tidal action of Penobscot Bay. Tidal exchange would be similar to the pre-1967 era.

In order to achieve this end result, the following steps are proposed:

1. Remove the fresh water dam.
2. Remove top three feet of concrete dam at Goose Falls to eliminate danger of ice damage to bridge deck, but provide a dam which would not allow tidal exchange.
3. Siphon salt water into pit to a level of 990'. Stop siphon and allow water to clarify and sediments to settle.

4. Test water at this level after one month for heavy metal content. . If significant quantities of heavy metal are present, retest one month later. When the Goose Pond Reclamation Society, after review, deems it advisable, siphon salt water into pit to a level of 1004'.
5. Periodic testing of Goose Pond waters will be undertaken during fall and winter months. If the Environmental Protection Agency, Department of Environmental Protection, Maine Department of Sea and Shore Fisheries, and the Corps of Engineers determine that there is not a significant pollution problem, the Goose Falls dam will be removed by Callahan Mining Corporation and replaced with a permanent spillway at an agreed upon elevation, which will be riprapped and constructed in such a way that it resembles a natural ledge. A reversing tidal action will be returned to Goose Pond.

Summary

The plan described above in general terms reflects over a year of careful study by the Goose Pond Reclamation Society and Callahan Mining Corporation. It is felt that the objective of providing a continuing tax and employment base combined with environmentally and aesthetically acceptable reclamation will be achieved if the plan is followed. Specific details will be addressed to those agencies directly concerned or responsible for certain items outlined in the plan.

Maine
REVISED STATUTES ANNOTATED
1964

*Prepared Under the Supervision
of the
Committee on Revision of Statutes*

Being the Tenth Revision of the
Revised Statutes of the State
of Maine, 1964

Volume 16A
Titles 37 to 37-B
Title 38
§§ 1 to 1060



ST. PAUL, MINN.
WEST PUBLISHING CO.

propagation and harvesting of shellfish and navigation and as habitat for fish and other estuarine and marine life. The habitat shall be characterized as free-flowing and natural.

B. The estuarine and marine life, dissolved oxygen and bacteria content of Class SA waters shall be as naturally occurs.

C. There shall be no direct discharge of pollutants to Class SA waters.

2. **Class SB waters.** Class SB waters shall be the 2nd highest classification.

A. Class SB waters shall be of such quality that they are suitable for the designated uses of recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation and navigation and as habitat for fish and other estuarine and marine life. The habitat shall be characterized as unimpaired.

B. The dissolved oxygen content of Class SB waters shall be not less than 85% of saturation. Between May 15th and September 30th, the numbers of enterococcus bacteria of human origin in these waters may not exceed a geometric mean of 8 per 100 milliliters or an instantaneous level of 54 per 100 milliliters. The numbers of total coliform bacteria or other specified indicator organisms in samples representative of the waters in shellfish harvesting areas may not exceed the criteria recommended under the National Shellfish Sanitation Program Manual of Operations, Part I, Sanitation of Shellfish Growing Areas, United States Department of Food and Drug Administration.

C. Discharges to Class SB waters shall not cause adverse impact to estuarine and marine life in that the receiving waters shall be of sufficient quality to support all estuarine and marine species indigenous to the receiving water without detrimental changes in the resident biological community. There shall be no new discharge to Class SB waters which would cause closure of open shellfish areas by the Department of Marine Resources.

3. **Class SC waters.** Class SC waters shall be the 3rd highest classification.

A. Class SC waters shall be of such quality that they are suitable for recreation in and on the water, fishing, aquaculture, propagation and restricted harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation and navigation and as a habitat for fish and other estuarine and marine life.

B. The dissolved oxygen content of Class SC waters shall be not less than 70% of saturation. Between May 15th and September 30th, the numbers of enterococcus bacteria of human origin in these waters may not exceed a geometric mean of 14 per 100 milliliters or an instantaneous level of 94 per 100 milliliters. The numbers of total coliform bacteria or other specified indicator organisms in samples representative of the waters in restricted shellfish harvesting areas may not exceed the criteria recommended under the National Shellfish Sanitation Program Manual of Operations, Part I,

D. Saco.

(1) Goosefare Brook from its origin to head of tide—Class C.

(2) Milliken Brook—Class C.

1985, c. 698, § 15.

¹ No subpar. (2) was enacted.

² No par. B was enacted.

Historical Note

Derivation:

R.S.1954, c. 70, § 15.

Laws 1955, c. 426, §§ 1 to 3, 5, 7.

Laws 1957, c. 322, § 8.

Laws 1959, c. 183, §§ 1, 2.

Laws 1963, c. 23.

Laws 1963, c. 54, § 1.

Laws 1963, c. 420, § 2.

Laws 1965, c. 153.

Laws 1965, c. 425, § 22.

Laws 1967, c. 17.

Laws 1967, c. 304, §§ 19 to 23.

Laws 1969, c. 538, § 1.

Laws 1971, c. 138, § 2.

Laws 1971, c. 470, § 5.

Laws 1973, c. 423, §§ 4 to 6.

Laws 1977, c. 373, §§ 28, 29.

Laws 1979, c. 495, §§ 7, 8.

Laws 1985, c. 698, § 11.

Former § 369 of this title.

United States Code Annotated

Water pollution prevention and control, see 33 U.S.C.A. § 1251 et seq.

§ 469. Classifications of estuarine and marine waters

All estuarine and marine waters lying within the boundaries of the State and which are not otherwise classified are Class SB waters.

1. Cumberland County.

A. Cape Elizabeth.

(1)¹ Tidal waters lying westerly of a line beginning at Portland Head Light and running northerly to the southernmost point of land on Cushing Island—Class SC.

B. Cumberland.

(1)¹ Tidal waters located within a line beginning at a point located on the Cumberland-Portland boundary at approximately latitude 43°41'-18"N., longitude 70°-05'-48"W. and running northeasterly to a point located on the Cumberland-Harpswell boundary at approximately latitude 43°-42'-57"N., longitude 70°-03'-50" W.; thence running southwesterly along the Cumberland-Harpswell boundary to a point where the Cumberland, Harpswell and Portland boundaries meet; thence running northeasterly along the Cumberland-Portland boundary to point of beginning—Class SA.

C. Falmouth.

(1)¹ Tidal waters located within a line beginning at a point located on the shore at latitude 43°-42'-03"N. longitude 70°-15'-22" W. and running southwestly along the Falmouth-Portland boundary to the shore of Mackworth Island; thence running northerly along the western shore of Mackworth Island and the Mackworth Island Causeway to a point located at latitude 43°-41'-42" N., longitude 70°-14'-25" W.; thence



| | | |
|---|--|--|
|  | <h2>Holbrook Island Sanctuary</h2> | |
| Designation | State Park (see home page for details of designation) | |
| Dates of Operation | Open All Year | |
| Location | Borders Penobscot Bay south of Bucksport in Brooksville | |
| Facilities | Scenic natural area of upland forests, rocky shores, and an offshore island provides opportunities for hiking, nature appreciation, and cross-country skiing in winter. Picnic tables are available, along with an area to launch canoes and kayaks. | |
| Telephone | (207) 326-4012 | |
|  | Go directly to Day Use Fee Information |  |
| | Go directly to Rules for State Parks and Historic Sites | |

| | | |
|---|---|--|
| GO TO: | | |
|  | BP&L Facility Map |  |
| | BP&L Facility Chart |  |
| | | BP&L Home Page |

Learn about the [Friends of Holbrook Island Sanctuary](#)

Holbrook Island Sanctuary

Quick Index

- [Introduction](#)
- [Visitor Information](#)
- [Exploring the Sanctuary's Habitats](#)
- [Rules](#)

Introduction

Holbrook Island Sanctuary borders Penobscot Bay south of Bucksport in Brooksville. This scenic natural area of upland forests, rocky shores, and an offshore island provides

opportunities for hiking, nature appreciation, and cross-country skiing in winter. Picnic tables are available, along with an area to launch canoes and kayaks.

Holbrook Island Sanctuary is open daily year round. Special arrangements for groups may be made by calling the Sanctuary office at (207) 326-4012 or by writing to: Holbrook Island Sanctuary, Box 280, Brooksville, Maine 04617.

Holbrook Island Sanctuary's trails can also be enjoyed by cross-country skiers. Parking areas are maintained during the winter for skiers' convenience.

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Visitor Information

Bordering Penobscot Bay in Brooksville, Holbrook Island Sanctuary protects many different ecosystems, which visitors can explore and enjoy.

From the beaches, mud flats, and rocky coast to the tops of steep hills that are actually old volcanoes, the sanctuary hosts a great diversity of plant and animal life. Stands of spruce-fir, pine, and mixed hardwoods, together with wetlands and meadows, encourage a multitude of colorful wildflowers that bloom from early spring until late fall. Down through these forests and old fields and around the marshes and ponds, alert visitors can see abundant signs of deer, fox, muskrat, beaver, otter, porcupine, bobcat, and coyote. This variety of habitats also offers excellent birding, especially during spring and fall migrations. Visitors can see great blue herons and ospreys nesting around the pond and estuary and may even spot bald eagles and peregrine falcons flying over the sanctuary headquarters.

Wishing to preserve this special environment and to encourage its use by other lovers of nature, Anita Harris, a long-time area resident, began acquiring land in Brooksville for a sanctuary in the 1960's. In 1971, she donated 1,230 acres to the State of Maine, in order "to preserve for the future a piece of the unspoiled Maine that I used to know."

Today, Holbrook Island Sanctuary has a unique place in the state park system. In keeping with Anita Harris' vision, the sanctuary will not be altered by modern park facilities and management techniques. Instead, a network of old roads, paths, and animal trails leads visitors to explore the shoreline, marshes, ponds, and forests. In each of these diverse ecosystems, visitors have a rare opportunity to experience a natural environment whose future is being shaped by natural forces rather than human hands.

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Exploring the sanctuary's habitats

- **Goose Pond Estuary and Salt Marsh**
 - *Access* : Lawrence Hill Road or via Harborside. Also by canoe.
 - *Look For* : Ledges made of volcanic ash rock and a "mountain" created by the copper mining operation formerly located here; great blue herons, goldeneyes, herring gulls, black ducks, kingfishers, and teal; Spartina grass and sea lavender.
- **The Shore of Penobscot Bay and Smith Cove**
 - *Access* : Lawrence Hill Road to Indian Bar Road to Backshore Trail or Indian Bar

- picnic area. Also by boat.
- *Look For:* Bald eagles and ospreys fishing; shells of sand dollars, sea urchins, and horseshoe crabs on the beaches; clams and mussels on the mud flats; seals on the ledges; gulls, cormorants, and bay ducks; seaside goldenrod.
- **Beaver Flowage and Fresh Pond**
 - *Access :* Lawrence Hill Road to flowage; Ice works, Aaron, and Fresh Pond trails to pond.
 - *Look For:* Beaver dams and lodges made of sticks; muskrat lodges made of cattails; deer and raccoon tracks; great blue herons, ospreys, and their nests; forget-me-nots; yellow, white, and pink water lilies in the pond.
- **Wooded Uplands**
 - *Access :* Both roads through sanctuary and all trails.
 - *Look For:* Panoramic views from the summit of Backwoods Mountain; apple trees, lilacs, and other signs of old house sites; woodpeckers, thrushes, warblers, and ruffed grouse; squirrels and porcupines; twinflower, shinleaf, and pink lady's-slipper.

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Rules

To help maintain the beauty of this natural area, please observe the following rules:

- Stay on designated trails. Trails are for walking only.
- Do not pick wildflowers, cut trees or shrubbery, or harass wildlife.
- Pets must be kept on a leash not more than 4 feet long.
- Use only charcoal for fires and build fires only in grills provided. Fires are not permitted on beaches.
- Camping is not permitted.
- Rules and regulations are posted on the park bulletin board.

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| HOLBROOK ISLAND SANCTUARY NATURE WALK SERIES Contact: Philip Far or Victoria Wade (207) 326-4012 | | |
|---|---|---|
| <i>Life in a Freshwater Pond</i> | July 16 (Thursday) Aug. 13 (Tuesday) | Discover nature in a freshwater environment. We will touch on the origins of ponds and the conditions needed for life while exploring the shore and water to identify and discuss each plant and animal's role in the freshwater system. Meet at Fresh Pond Trail parking lot at 9:30 a.m. 1 - 1 1/2 hrs. |
| <i>Owl Prowl</i> | July 18 (Thursday) Aug. 1 | Often heard but rarely seen is the Northern Barred owl. Join us for an educational experience about Maine's owls and a night time stroll to call in and see a wild barred owl. Meet at the Sanctuary Headquarters at 9:00 p.m.; don't forget to bring |

| | | |
|---|--|---|
| | (Thursday) | bug repellent and a flashlight. 1 hr. |
| <i>Tracking and the Art of Seeing</i> | July 23 (Tuesday) | Just because you do not see the animal does not mean its not there. The woods are full of clues as to what creatures make it their home. Join us for a walk and learn to recognize signs left from beetles to beavers. Meet at the Fresh Pond Trail parking lot at 9:30 a.m. 1 - 1 1/2 hrs. |
| <i>Wildflowers in Maine</i> | July 25 (Thursday) Aug. 6 (Tuesday) | Summer conditions in Northern New England are perfect for a wide variety of wildflowers. They simply paint the landscape in color. We will identify different floras and discuss their importance to wildlife. Meet at 9:30 a.m. 1 - 1 1/2 hrs. |
| <i>History of Cape Rosier</i> | July 30 (Tuesday) | Explore the old Hutchins Farm and learn local history of the Sanctuary's past human inhabitants. Meet at the Back Shore Trail on Indian Bar Road at 9:30 a.m. 1 - 1 1/2 hrs. |
| <i>Maine's Migratory Birds</i> | Aug. 8 (Thursday) | We will watch and listen for warblers and other migrants and discuss their migration routes from Maine to Central and South America. Conservation issues and backyard tips for migrants will also be included. Meet at the Back Shore Trail at 9:00 a.m. 1 - 1 1/2 hrs. |
| All walks will take place regardless of weather. Appropriate footwear, bug spray, cameras, and binoculars are recommended. | | |

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MEMORANDUM

TO: Jean Firth, Environmental Specialist III, Division of Remediation

FROM: Camille Parrish, Certified Geologist, Division of Technical Services

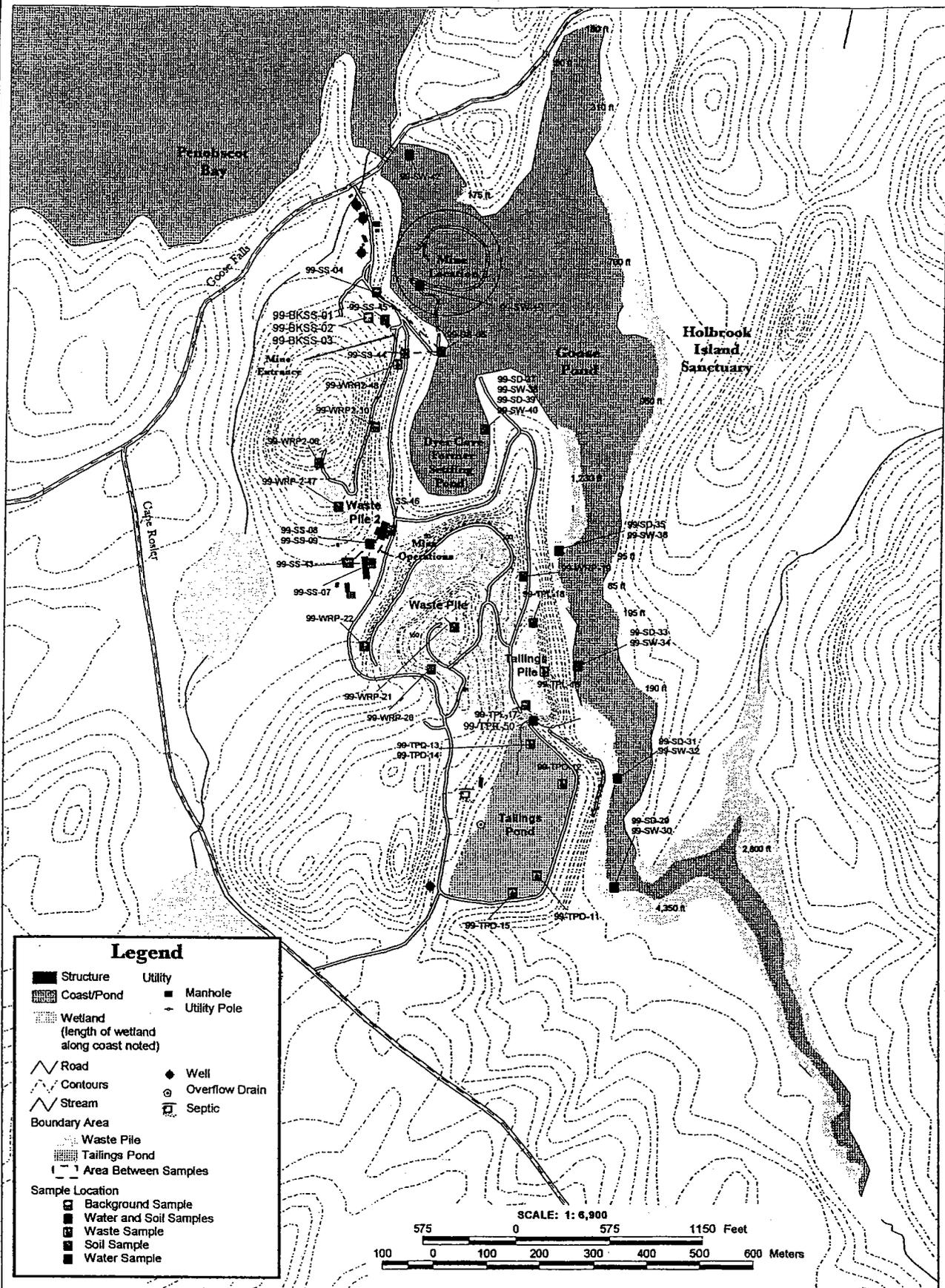
DATE: June 20, 2000 CP

SUBJECT: Wetland Delineation at Callahan Mine, Harborside, Maine

On June 1, 2000, a team of specialists from the MEDEP traveled to the former Callahan Mine in Harborside, Maine. The objective of the trip was to delineate the extent of the wetlands along Goose Pond. Goose Pond lies above the abandoned open pit Callahan mine and immediately adjacent to the tailings pond, waste rock, and other remnants from the mining operation.

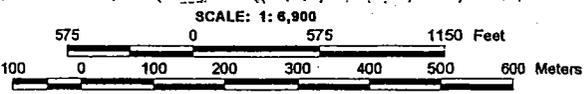
The wetlands were identified by vegetative type and hydrologic setting. Photographs were taken to document their nature and extent. They were then located using a Trimble GPS unit. A map illustrating the extent of the wetlands is presented in Attachment A.

ATTACHMENT A



Legend

| | | | |
|------------------------|---|--|----------------|
| | Structure | | Utility |
| | Coast/Pond | | Manhole |
| | Wetland (length of wetland along coast noted) | | Utility Pole |
| | Road | | Well |
| | Contours | | Overflow Drain |
| | Stream | | Septic |
| Boundary Area | | | |
| | Waste Pile | | |
| | Tailings Pond | | |
| | Area Between Samples | | |
| Sample Location | | | |
| | Background Sample | | |
| | Water and Soil Samples | | |
| | Waste Sample | | |
| | Soil Sample | | |
| | Water Sample | | |



Callahan Mine
Brooksville, ME

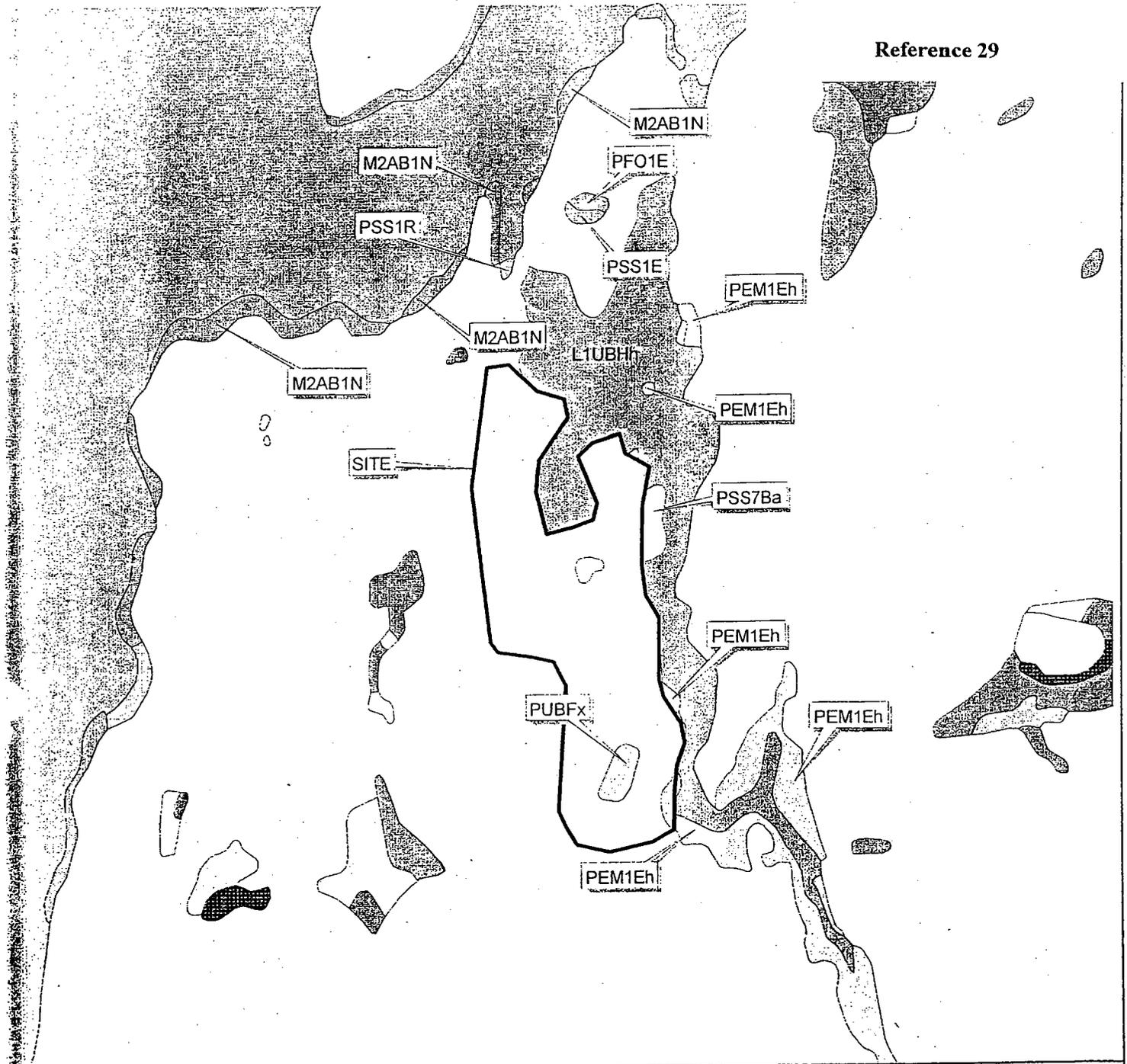


NOTES:

1. Stream, Pond, and Contour Data were gathered from the Maine OGIS 24K Data Layers.
2. All other features were surveyed using a Trimble ProXR GPS Unit.
3. Wells have an accuracy <1 meter; all other features +/- 3 meters.
4. This map is to be used for reference purposes only.

| | | | |
|------------------------------|-----------------------------------|--|---|
| SITE TYPE: Uncontrolled Site | MINOR CIVIL DIVISION: Brooksville | PROJECT MANAGER: Jean Firth | HOSS #: B - 241 - 87 |
| GWID: 1788 | DATE: June 1999 | PRODUCED BY THE MAINE DEP GIS UNIT; Erika K. Lloyd | path name: d:\Maine\Callahan Mine\Callahan Mine.apr |

Reference 29



ASE MAP IS A PORTION OF THE FOLLOWING 7.5 X 15' U.S.G.S. QUADRANGLE(S): CAPE ROSIER, MAINE

LEGEND

- PF01E: Palustrine, forested, broad-leaved deciduous, seasonal saturated
- PEM1Eh: Palustrine, emergent, persistent, seasonal saturated, diked/impounded
- PSS1E: Palustrine, scrub/shrub, broad-leaved deciduous, seasonal saturated
- PSS7Ba: Palustrine, scrub/shrub, evergreen, saturated, acid
- PSS1R: Palustrine, scrub/shrub, broad-leaved deciduous, seasonal tidal
- PUBFx: Palustrine, unconsolidated bottom, semipermanent, excavated
- M2AB1N: Marine, intertidal, aquatic bed, submergent algal, regular



S. FISH AND WILDLIFE NATIONAL
WETLANDS INVENTORY MAP

CALLAHAN MINE
HARBORVIEW
BROOKSVILLE, MAINE



REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

| | | |
|-----------------------------|-----------|----------|
| TDD # | DRAWN BY: | DATE: |
| 00-06-0020 | CAMPBELL | 09/06/00 |
| FILE NAME: | | FIGURE 1 |
| E:\ARC_APRS\S2\CALLAHAN.APR | | |

To: Fred Beck
From: Chan Mortimer

June 22, 1973
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Other areas which show some vegetative recovery will be planted with a variety of tree seedlings.

Cost Estimates

Method 1:

Hydroseeding by Gordon Company, Pittsfield, Maine. This method would apply to about 30 acres of barren land and would be only to establish grasses on these areas.

Cost per acre: \$650--\$700

All Materials including hay mulch, seed mix, terratac (to hold down materials), fertilizer, labor, machinery would be included.

Total cost for 30 acres: \$19,500.00 -- \$21,000.00

Additional costs:

monthly salary for 3½ months \$3850.00

labor, fertilizer, materials

for this area and previously hydroseeded acreage about 1500.00

seeding inaccessible areas about 2000.00

TOTAL \$26,850.00

including tailings at same rate 6,500.00

\$33,350.00

Advantages:

1. Based on last year's experience, at least limited success is certain, and grasses would be established on many areas.

Disadvantages:

1. Cost
2. Trees would not become established in near future
3. Cost of revegetating the tailings pond is not included (although it could possibly be hydroseeded as well, adding \$6500--7000 to the cost.

Method 2:

Hydroseeding by EROCON, Toronto

Method would apply to same areas as Method 1.

Cost per acre \$368, not including seed, fertilizer, mulch

Cost per 30 acres \$11,040.00

seed @ 90/acre 2,700.00

fertilizer @60/acre 1,800.00

hay mulch @40/acre 1,200.00

PER ACRE THIRTY ACRES

TOTAL 558 16,740.00

Additional costs (as in Method 1) 7,350.00

If the tailings were included at this rate 24,090.00

\$29,670.00

Advantages:

1. Use of hydroseeder method probably best for est-

To: Fred Beck
From: Chan Mortimer

June 22, 1973
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- ablishing grasses, although company has not experience in immediate area
2. lower cost than Method #1.

Disadvantages:

1. No tree establishment
2. Possibility that cost would be higher if hay mulch were used. (Eric suggests possibility of hydroseeding without mulch).

Method 3:

Buy a hydroseeder, hydroseed 30 acres; seed tailings area by plowing method. Seed areas near water which can't be hydroseeded by hand. Spread hay mulch by hand. Plant tree seedlings around tailings pond, on other areas which have vegetation and which lack vegetation.

Method #3
w/ Eric
app

Materials:

| | |
|--|---------|
| A. Trees -- seedlings ----- | 500.00 |
| 3000 White Pine | 55 |
| 1000 European White Birch | 85 |
| 1000 Bristly Locust | 100 |
| 1000 Redosier Dogwood | 75 |
| 500 Scotch Pine | 20 |
| 400 Green ash | 25 |
| 385 hybrid Poplars | 105 |
| shipping | 35 |
| B. Grasses -- seed ----- | 3191.00 |
| 2000 lb. Ky 31 | 1100 |
| 1000 lb. Red Fescue | 800 |
| 1000 lb. Annual Rye | 250 |
| 500 lb. Dutch White Clover | 625 |
| 200 lb. Birdspot Trefoil | 396 |
| innoculant for Trefoil | 20 |
| 4700 lb. : 100 lb./acre for 40 acres and remainder for reseeding 1972 hydroseeded areas | |
| C. Fertilizer ----- | 763.48 |
| 8000 lb. 16-16-16 | 408.80 |
| 8000 lb. ammonium nitrate (≈ 2 tons/acre for 40 acres) | 354.68 |
| D. Hay ----- | 1600.00 |
| 80 tons @ \$20/ton (≈ 2 tons/acre for 40 acres) | |
| E. Terratack ----- | 1800.00 |
| (or other material to hold down mulch) 800 lb. (≈ 20 lb./acre for 40 acres) + shipping | |
| F. Salaries and Labor ----- | 4578.00 |
| A. monthly for 3½ months | 3850.00 |
| B. 2 @ \$1.80/hr. for 12 wks. | 1728.00 |
| G. Machinery ----- | 3750.00 |
| A. Purchase of Bowie Victor 500 Hydroseeder | 3100.00 |
| B. Shipping | 470.00 |
| C. 200 ft. tire hose | 180.000 |

To: Fred Beck
From: Chan Mortimer

June 22, 1973
page 4

H: Other ----- about-----1000.00 ..
A. Rental of bulldozer for
1 day 200.00
B. Rental of field equipt.
for tailings pond 200.00
C. Soil tests, etc. 300.00
D. Tools, etc. 300.00

TOTAL \$17,982.48

Note that more materials may be needed and added
expense might well add up to at least \$2000-3000.

TO
\$20,500.00
OR
\$21,000.00

An essential part of this method (and the other methods) is supervision, evaluation, and possible maintenance of the site after planting is completed. It is not unlikely that this will have to be done periodically for several years, but it will be most important during the first year.

Advantages:

1. Lower cost -- covers 40 acres plus upgrading 20-30 other acres (\$300-\$475/acre)
2. Continual on the spot supervision, greater possibility of adequate hydroseeding
3. Hydroseeding the best method for establishing vegetation
4. Includes tree planting, diversified strategy.

Disadvantages:

1. Potential shortage of water?
2. Possibility of machinery breakdown (hydroseeder)
3. Small hydroseeder will take longer than methods 1,2

Method 4:

All revegetation by hand. Trees and grasses planted manually as well as mulch and fertilizer. Same coverage as method three.

Materials:

A. Trees (as in method 3) 500
B. Grasses (") 3191
C. Fertilizer (") 1 763
D. Hay (") 1600
E. Asphalt 2000

(Terratack probably impossible to use, although another substitute might possibly work)

Salary and labor:

To: Fred Beck
From: Chan Mortimer

June 22, 1973
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| | | |
|--|-----------|--------------------|
| | 11,404 | |
| B. 2 @ \$1.80 for 12 weeks | 1728 | |
| C. 3 @ \$1.80 for 8 weeks | 1728 | |
| Other: | 1000 | 16,360 |
| same as in Method 3 | | |
| Rental of asphalt distributor | 900-2400 | 17,260 to 18,760 |
| @ \$300 a day | | |
| 3-8 days \$900-2400 | | |
| Possibility of more materials (as in Method 3) | 2000-3000 | 2,000 to 3,000 |
| | | \$19,260 to 21,760 |

Advantages:

1. cheaper than contract hydroseeding
2. includes trees as well as grasses

Disadvantages:

1. will probably not as successful as hydroseeding
2. appears more expensive than buying hydroseeder unless a substitute can be found for asphalt. There is 1 possibility called "Coterex."
3. Even if Coiterex is used price will be almost the same as buying hydroseeder, especially if hydroseeder is capitalized.

Summary

Method 3 appears best from both economic and vegetative points of view. Hydroseeder could be reused or sold.

A potential problem is that it will take 3-4 weeks for delivery of a hydroseeder, so it should be ordered as soon as possible.

ACM:lja