

# Former Contoocook Valley Paper Company

## Henniker, New Hampshire

*prepared for*  
**New Hampshire Department of  
Environmental Services**  
**Concord, NH**



**Sanborn, Head & Associates, Inc.**  
*Consulting Engineers & Scientists*  
NH, ME, MA, VT, NY, OH, UK

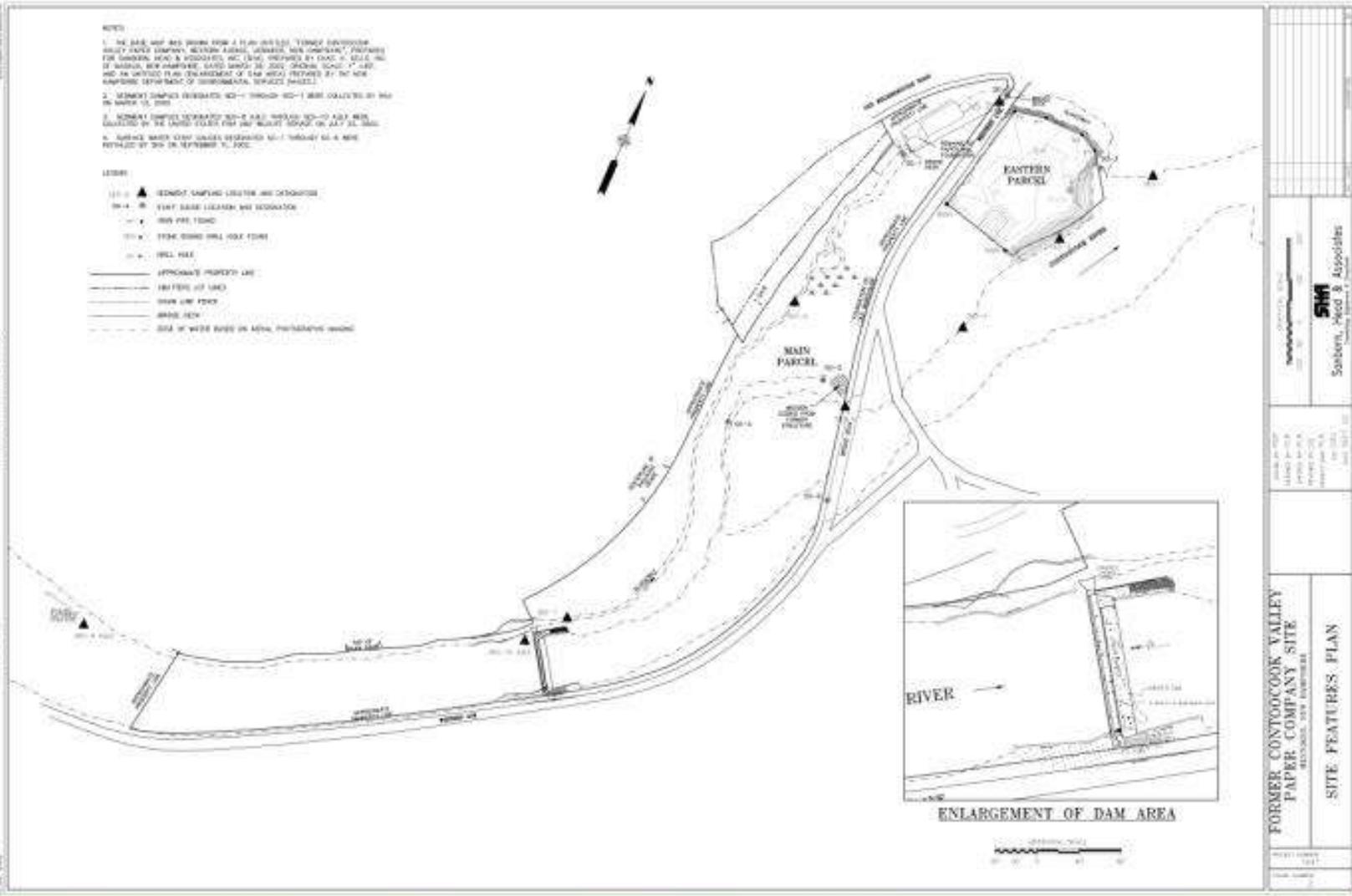
*prepared by*  
**Paul Rydel**

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## Site Characterization Work Completed in Two Phases:

- **1999-2000 (Report Submitted to NHDES March 2000); and**
- **2002 (Draft Report Submitted to NHDES September 24, 2002)**

# Site Features Plan





**Site  
Photographs**

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## Work Completed to Date Included:

- **Surficial/Shallow –depth soil sampling/analysis (both parcels);**
- **Installation and sampling of 8 groundwater monitoring wells;**
- **Collection and analysis of 10 sediment samples (Contoocook River channel and on-site sluiceway);**

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## Work Completed to Date Included:

- **Excavation of 33 test pits (Eastern Parcel), from which soil/waste samples were collected/analyzed from selected locations;**
- **Historical Resources Survey;**
- **Site Survey-**
  - **NHDES (dam area); and,**
  - **SHA subcontractor (Mill Pond and Eastern Parcel)**

**SHA**



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## Mill Parcel

- **Historically operated as a paper mill from 1863 to 1987;**
- **Process wastewater discharged to on-Site sluiceway since 1872;**
- **Wastewater treatment system installed in 1975;**
- **Wastewater treatment system operation generated sludge requiring disposal;**
- **On-Site petroleum storage in above-ground storage tanks (removed in 1997); and,**
- **Poly-aromatic hydrocarbons (PAHs) found in some soil samples at concentrations exceeding NHDES guidelines.**

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## Eastern Parcel

- **Used for storage/staging of bulk paper products;**
- **Used for disposal (burial) of wastewater treatment sludge, paper waste, and miscellaneous mill wastes (scrap metal, concrete, etc..)**
- **Analysis of soil/waste samples collected from test pits detected metals, PAHs and poly-chlorinated biphenyls (PCBs) at concentrations which exceed NHDES guidelines;**

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## Eastern Parcel

- **Of the compounds detected, metals (antimony, barium, cadmium, chromium, lead) are the primary contaminants);**
- **NHDES guidelines for metals concentrations in soils generally established based on direct-contact types risks; and,**
- **Metals concentrations (cadmium and lead) in some soil/waste samples sufficiently elevated to meet regulatory definition of hazardous waste.**

## Eastern Parcel



## Site-Wide Findings

- **Sediment Quality-**
  - **Widespread detection of PAHs-however, concentrations generally comparable or higher at upgradient sampling locations;**
  - **Metals detected in one sediment sample (“SED-3”) collected from sluiceway downstream from mill at highest concentrations of all locations sampled-several of which exceed guidelines established in NHDES’ Sediment Policy; and,**
  - **Metals detected in sample SED-3 generally consistent with those detected in soil/waste samples from Eastern Parcel test pits.**

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## Site-Wide Findings

- **Groundwater Quality-**
  - **Only manganese detected at a concentration which exceeds NHDES guidelines.**

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## Historical Resources Survey

- **West Henniker area meets minimum requirements to be eligible for listing as a National Historic District;**
- **As such, future Site redevelopment or remediation requires consultation with the New Hampshire Division of Historical Resources (NHDHR); and**
- **Archaeological Survey may be needed prior to review of redevelopment plans by NHDHR.**

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## Remedial Action Plan (RAP) Summary

- **Excavation and off-Site disposal of contaminated soil/waste from the Eastern Parcel;**
- **Additional soil sampling/analysis-PAHs in Mill Parcel soils;**
- **Sediment toxicity testing-SED-3 area**
- **Confirmatory groundwater monitoring-Eastern Parcel**

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## Eastern Parcel Waste Removal

- **Removal appropriate as remedial action based on exceedances of NHDES guidelines for acceptable (risk-based) contaminant (principally metals) concentrations in soil/waste, and exceedance of state/federal hazardous waste criteria;**
- **Presence of contaminants at the observed concentrations not consistent with current condition/use/accessibility of the Eastern Parcel and the anticipated redevelopment plans;**
- **Based on explorations completed to date, the volume of material requiring removal is estimated to be approximately 2,000 cubic yards (cy); and**
- **Of the 2,000 cy, approximately half may be hazardous waste**

## Preliminary Opinion of Cost

### Main RAP Components

<b>RAP Component</b>	<b>Estimated Cost</b>	<b>Basis</b>
Soil Sampling (PAHs) and Reporting	\$5,900	SHA Estimate
Contaminated Soil Excavation, and Off-Site Disposal – Eastern Parcel	\$415,970	SHA estimate and discussions with disposal facilities
Sediment Toxicity Testing	\$10,000	Preliminary SHA Estimate
Groundwater Monitoring and Reporting (two rounds)	\$8,950	SHA Estimate
<b>TOTAL</b>	<b>\$440,640; say \$440,000</b>	