



3.6 HAZARDOUS MATERIALS

This section analyzes potential impacts from the management of hazardous materials resulting from the resumption of operations of the railroad, routine maintenance and repair of the rail line during operations, rehabilitation activities at: Bakers Creek, Foss Creek, Black Point Bridge, and the new construction of Siding MP 1.0 - MP 2.0. The study area is the railroad right-of-way.

3.6.1 Regulatory Setting

The regulatory setting is based on the information that was available in 2008 when the March 9, 2009 DEIR was under preparation.

The handling, storage, transportation and disposal of hazardous materials and waste, and the remediation of contaminated soil and groundwater are highly regulated by several federal, state, and local regulatory agencies.

The extensive body of regulations and California's system of regulatory agencies provide a sound framework to minimize impacts to human health and the environment. The Environmental Consent Decree requires compliance with state hazardous materials and waste regulations and the implementation of State agency approved NWP operations plans. The Environmental Consent Decree also provides an additional level of oversight to assure that hazardous materials and waste will be properly managed when the railroad resumes operations.

3.6.1.1 *Federal Regulations*

Hazardous materials and waste are regulated by several agencies including the EPA, the Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Applicable federal regulations and guidelines are contained primarily in CFR Titles 10, 29, 40, and 49. Federal laws that govern the use, storage, and disposal of hazardous materials and waste include the following:

Resource Conservation and Recovery Act (RCRA). This regulation gives EPA the authority to control hazardous waste from the "cradle-to-grave". This includes the generation, transportation, treatment, storage and disposal of hazardous wastes. In



1984 RCRA was amended by the Hazardous and Solid Waste Act (HSWA) that affirmed and extended the federal system of controlling hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

This regulation provides a process and funding to clean up uncontrolled or abandoned hazardous waste sites as well as accidents, spills and other emergency releases of pollutants and contaminants into the environment.

Toxic Substances Control Act. TSCA was passed by Congress in 1976 to regulate the introduction of new or already existing chemicals. Subchapter I of TSCA is the original substance of the Act. Subchapter II, the Asbestos Hazard Emergency Response Act (AHERA) imposes requirements for asbestos sampling, management, and abatement in public schools, as well as providing requirements for training and certification. Although focused on public schools, the inspection and response actions protocol and certification requirements have been expanded to private buildings directly and indirectly through other regulations, particularly the Asbestos School Hazard Reauthorization Act (ASHARA). Asbestos inspections and response actions in buildings occupied by the public or workers are required to meet the notification requirements in OSHA regulations. Subchapter III requires EPA to publish a guide to radon health risks and perform studies of radon levels in schools and federal buildings. Subchapter IV requires EPA to identify sources of lead contamination in the environment, regulate amounts of lead allowed in products, and establish state programs to monitor and reduce lead exposures. TSCA also specifically regulates polychlorinated biphenyls (PCBs) except when totally enclosed.

Emergency Planning and Community Right to Know (EPCRA). EPCRA (Title III of the Superfund Amendments and Reauthorization Act, or SARA) requires facilities using or storing hazardous materials over a threshold quantity to prepare hazard assessments, prevention programs, and emergency response plans (ERPs). The ERPs must be filed with Local Emergency Planning Committees (LEPCs) to create awareness of hazards and thereby prevent public exposure, injury, and loss of life.

Additional federal regulations address worker exposure to safety and health hazards. The federal regulations are identified in Title 29 C.F.R. and are regulated and enforced by OSHA.



Surface Transportation Board (STB). The STB'S environmental rules became effective on September 29, 1991. [Ex Parte No. 55 (Sub-No.22 A), Implementation of Environmental Laws, 7 I.C.C 2nd 807.] These rules implement various environmental statutes that include the National Environmental Policy Act (NEPA), and the National Historic Preservation Act (NHPA). They (combine the STB's former environmental and energy regulations; revise and clarify environmental and historic requirements; require service of environmental reports on certain state, federal, and local agencies; and reclassify and clarify the types of actions for which environmental and/or other historic reports and analyses are required.

3.6.1.2 State Regulations

Hazardous Materials and Waste

California's regulations and statutes for hazardous materials and hazardous waste are contained in Health and Safety Code Section 25130 et. Seq. and Title 22 C.C.R. that are administered by the DTSC. State regulations addressing worker safety and health hazards are cited in Title 8 C.C.R. and regulated and enforced by the California Occupational and Health Administration (Cal/OSHA).

State regulations are enforced by various branches of the California Environmental Protection Agency (Cal/EPA). The DTSC has primary regulatory responsibility for the generation, handling, storage, and disposal of hazardous materials and waste under the authority of the Hazardous Waste Control Law. In some cases DTSC will delegate the enforcement role to local jurisdictions. The Regional Water Control Boards (North Coast Regional Water Control Board north of northern Petaluma, and the Bay Area Regional Water Quality Control Board to the south) have regulatory responsibility for water impacts, including releases to streams, creeks and rivers, storm water pollution, and groundwater. The DFG has jurisdiction over impacts for fish and wildlife throughout the study area.

State and federal laws require planning to ensure that hazardous materials are handled, used, stored, and disposed of in a safe manner. In addition, they provide a regulatory framework to minimize impacts to health or the environment in the event of an accidental spill or release. Under AB 2185 *et al*: The Waters Bill, in addition to SARA Title III, handlers of hazardous materials are required to prepare a Hazardous Materials



Business Plan (Business Plan) that identifies the quantities and locations of hazardous materials storage. The purpose of the Business Plan is to provide emergency responders with critical information regarding hazardous materials present on the site that will facilitate a safe and effective response to an emergency. The Business Plan is submitted to the local certified unified program agency (CUPA), who then provides the information to the Governor's office of Emergency Service (OES).

Asbestos and Lead-Based Paint

State agencies regulating the management of asbestos include Cal/OSHA, the BAAQMD, MCAQMD, California Division of Occupation Safety and Health (DOSH), and DTSC. State and federal regulations require that asbestos containing materials subject to damage during demolition or renovation be abated in accordance with BAAQMD and MCAQMD requirements. Regulations pertaining to demolition and renovation of non-housing structures containing lead-based paint (LBP) are promulgated by DTSC, and DOSH. In California, regulation for the protection of workers involved in lead abatement activities are promulgated by OSHA (29 CFR 1926.62), DOSH and the California Department of Health Services (DHS).

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) includes fibrous minerals found in certain types of rock formations. NOA can take the form of long, thin, separable fibers. Natural weathering or human disturbance can break NOA down to microscopic fibers, easily suspended in air. California State Air Resources Board Section 93105: Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations, require specific control measures when any of the following conditions are present:

1. Any portion of the area to be disturbed is located in a geographic ultramafic rock unit;
2. Any portion of the area to be disturbed has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner / operator, or the Air Pollution Control Officer (APCO);
3. Naturally-occurring asbestos, serpentine, or ultramafic rock is discovered by the owner / operator, a registered geologist, or the APCO in the area to be disturbed



after the start of any construction, grading, quarrying, or surface mining operation.

Depending on the site activities and area of the site to be graded or otherwise disturbed, these measures may include an Asbestos Dust Mitigation Plan that must specify dust mitigation practices which are sufficient to ensure that no equipment or operation emits dust that is visible crossing the property line. The regional air districts must be notified if soil containing NOA will be re-used off-site in accordance with the state and federal regulations. In addition, NOA is also regulated by Cal/OSHA where workers may be exposed to any levels of asbestos.

Treated Wood Waste

Assembly Bill (AB) 1353 added sections 25150.7 and 25150.8 to the Health and Safety Code. This law required that DTSC adopt regulations specifying alternative management standards (AMSs) for treated wood waste (TWW). The AMSs went into effect on July 1, 2007. TWW as defined in 22 CCR 67386.4 when managed as specified in chapter 34 is exempt from the hazardous management requirements of title 22 chapters 12 through 20 (These include the standards applicable to generators of hazardous waste (22 CCR 66262)).

The AMSs lessen storage requirements, extends accumulation periods, allow shipments without a hazardous waste manifest and a hazardous waste hauler and allow disposal at specific non-hazardous waste landfills. The AMSs simplify and facilitate the safe and economical disposal of TWW.

Generators of TWW are subject to generators fees and must contact either DTSC's Fees Unit or the Environmental Fees Division of the Board of Equalization (BOE).

TWW is wood that has been treated with preserving chemicals such as creosote. Because the preserving chemicals are known to be toxic or carcinogenic, TWW has the potential of being considered hazardous waste. Although hazardous waste generators are required to properly identify their waste through knowledge or laboratory analysis, generators of TWW can presume their TWW is hazardous waste and avoid expensive laboratory testing. Generators can then manage their waste in accordance with the AMSs, (as an alternative to 22 CCR 66262) including disposal at certain non-hazardous



waste landfills. TWW becomes non-hazardous waste at the point of landfill acceptance (HSC 25150.8).

A sampling and analysis study on TWW was conducted by DTSC in September 2008. The purpose of the study was to further evaluate the toxicity characteristics of copper-based and creosote treated wood. Representative samples were taken and prepared and analyzed per specified methods and procedures. The following are the results for creosote treated railroad ties:

- TCLP PCP & creosols were well below the toxicity characteristic level.
- PCP (total) was not detected in the used ties.
- Oak creosote ties had LC50 >500 mg/L (fish test).
- Douglas Fir (DF) creosote ties had LC50 < 500 mg/L.

The conclusions of the study stated that only used oak creosote treated railroad ties have the potential to be hazardous because these were the only type of railroad ties that failed one of the hazardous waste characteristic tests (acute aquatic 96-hr LC50 bioassay (fish test)). Because only this one type of railroad tie only showed characteristic for hazardous waste in one of the multiple tests that were conducted, it is not definitive that used creosote treated railroad ties are hazardous. It is therefore up to the generator to determine waste classification.

According to Li Tang of DTSC (916-322-2505), the railroad industry is currently discussing with DTSC the issue of whether or not treated railroad ties should be considered TWW or be considered as unregulated non-hazardous waste. The issue was not yet resolved as of August 2009.

Businesses that generate, handle or accumulate more than 1,000 lbs of TWW in 30 days and/or are engaged in activities that are expected to routinely generate this quantity of TWW in 30 days must meet the AMS requirements. The following provides a summary of these requirements:

- Get prior confirmation that a solid waste facility will accept TWW (22 CCR 67386.7(b)).



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- Store TWW off the ground by placing it on blocks, concrete surfaces or in containers. Bailing and palletizing is also considered to prevent ground contact (22 CCR 67386.6(a)).
- Do not store TWW beyond the allowed limits (block and tarp – 90 days, containment pad – 180 days, container/storage building – 1 year) (22 CCR 67386.6(a)(2)).
- Cover TWW during inclement weather (22 CCR 67386.6(a)(2)).
- Accumulate TWW away from public assess (22 CCR 67386.6(a)(1)).
- Do not burn TWW without a permit from DTSC (22 CCR 67386.3(a)(1)).
- Contact DTSC if planning to reuse TWW (22 CCR 67386.3(c)).
- Keep TWW from mixing with other waste (22 CCR 67386.3(a)(3)).
- Label all TWW bundles/shipments as required per 22 CCR 67386.5(b)).
- Keep shipment records for three years (22 CCR 67386.8(a) and (e)(1)).
- Notify DTSC within 30 days if generating more than 10,000 lbs per calendar year. If you generate more than 10,000/lbs the business must submit a TWW Notification form and obtain an Identification Number by calling 800-618-6942 (22 CCR 67386.9).
- Ship TWW only to authorized facilities (22 CCR 67386.11).
- Train employees involved in TWW handling and keep training records for three years. The training shall include applicable requirements of Cal/OSHA, hazardous waste regulations and TWW requirements (22 CCR 67386.12(a)).

TWW may be recycled only under the following conditions:

- Reuse on-site,
- At the time of reuse, reuse is consistent with FIFRA approved use, and
- Prior to reuse, the TWW is handled per the AMSs.

Spent Lead-acid Batteries

Because spent lead-acid batteries contain lead and sulfuric acid, lead-acid battery disposal is fully regulated as a hazardous waste management activity; however, when



recycling intact lead-acid batteries the handling requirements are less stringent. Processing of lead-acid batteries for recycling (i.e.: draining the electrolyte, crushing or other physical methods) is a fully regulated hazardous waste activity that requires a hazardous waste treatment permit from DTSC.

Spent lead-acid batteries are regulated under 22 CCR 66266.80 – 81. These batteries are equivalent in size and type to common vehicle batteries, including utility batteries and those used in emergency power supplies. Small sealed lead-acid “gel-cell” type batteries and large utility batteries, such as fork lift batteries are regulated as “universal waste” per 22 CCR 66273.2.

Undamaged batteries must be stored upright on a covered pallet over a non-reactive, curbed and sealed surface such as coated concrete or asphalt. Damaged batteries (cracked, broken, or missing caps) must be stored and transported in non-reactive, structurally secure, closed containers such as polyethylene buckets or drums. Containers must be properly labeled and dated with the accumulation start date.

Less than one ton of batteries may be stored up to one at any single location. If more than 10 batteries are shipped at a time, a hazardous waste manifest or bill of lading must accompany the shipment in accordance with DOT regulations.

Records must be kept for three years if more than 10 batteries are managed per year or more than 10 batteries are transported at a time. DTSC no longer requires the submittal of an annual battery report (22 CCR 66266.81(a)(7)(c)).

3.6.1.3 *Environmental Consent Decree*

On July 14, 1999 the DFG, DTSC, NCRWQCB [“Agencies”], The Department of Justice, and NCRA entered into a Environmental Consent Decree in an effort to prevent environmental impacts (Environmental Consent Decree and Stipulated Judgment, Mendocino County Superior Court Case No. CV80240). The Environmental Consent Decree is a mandated non-discretionary action and not part of the proposed project.

In general, the Environmental Consent Decree requires NCRA to perform a variety of actions in four areas:



1. Remove illegally stored or discarded hazardous material, wastes, and other regulated substances from the rail line;
2. Prevent illegal discharges of earthen materials and wastes into the waters of the State;
3. Investigate and remediate potential soil and groundwater contamination at former maintenance facilities; and
4. Prepare and implement work plans for the handling, storage, transportation, and disposal of hazardous materials and waste during the operation of the rail line.

When the rail line resumes operations, NCRA and its operator must conform to provisions of the Environmental Consent Decree. Activities that fall under these regulations include the following:

1. Manage storm water to minimize the threat to surface water resources.
2. Prevent spills to soil, groundwater, or surface water resources.
3. Inventory and manage petroleum and hazardous materials and waste.
4. Characterize and properly recycle or dispose of waste.
5. Maintain flange greaser units.
6. Establish maintenance control practices and protocols to prevent the threat to surface and groundwater.
7. Prepare and implement environmental operations plans and a monitoring and reporting compliance program.

3.6.1.4 Agency Required Operations Plans

The Environmental Consent Decree requires the implementation of operations plans and BMPs to avoid environmental impacts associated with the operation of the railroad and light maintenance facilities. These requirements include regular monitoring, inspection and reporting of activities involving the use, transport, storage, and disposal of hazardous materials and wastes related to operations. The purpose of the plans and monitoring is to assure that the railroad operates in compliance with the Environmental Consent Decree.



In addition, the NCRWQCB, has issued and is currently updating WDRs for the line. The WDRs include specific requirements to minimize potential spills, releases, and impacts to water resources along the line, including practices for fueling, maintenance, repair, and herbicide application.

The following is a summary of subjects that are included in NCRA's operations plans.

Environmental Compliance Program: The operations plans provide an overview of the procedures for compliance with the Environmental Consent Decree. Central to the program is the description rail operations along the entire line, including location of light maintenance facilities, light maintenance activities, and primary and emergency fueling locations. The plans summarize requirements mandated in the Environmental Consent Decree, abatement orders, and waste discharge requirements; applicable regulations involving hazardous waste generator and waste minimization, hazardous materials management, water quality regulations, air quality; health and safety requirements; and data management, record keeping, and reporting requirements.

Hazardous Materials Management: The operations plans provide detailed protocols for the safe handling, storage, transportation, and disposal or recycling of hazardous materials. The plans summarize hazardous materials management activities and provide site-specific environmental compliance requirements and procedures for hazardous materials inventory, specific requirements for oil, gasoline, diesel, grease, batteries, and other hazardous materials that may be used in small quantities. In addition, the plans provide procedures for compliance with the Environmental Consent Decree and applicable environmental regulations. They also describe emergency response procedures, training requirements, and record keeping and reporting requirements, and BMPs to minimize impacts related to the handling of hazardous materials.

Hazardous Waste Management: The operations plans provide detailed protocols for the safe handling, storage, transportation, and disposal or recycling of hazardous waste. The plans will summarize hazardous waste management activities and provide site-specific environmental compliance requirements and procedures for waste products such as railroad ties, empty oil and grease drums, and oil-contaminated absorbent and personal protection media. In addition, the plans provide detailed procedures for hazardous waste identification, storage requirements, maintenance and inspection,



emergency preparedness and preparation, transportation, manifest and LDR requirements, and treatment protocol. They also describe emergency response procedures, training requirements, and record keeping and reporting requirements, and BMPs to minimize impacts related to the handling of hazardous waste.

Inspection and Maintenance: The operations plans provide comprehensive inspection and maintenance protocols for operational activities related to potential environmental impacts. For the rail line as a whole, the plans provide procedures for regular routine inspection of signals and crossings, bridges, culverts, ties, track, tunnels, and embankments, as well as emergency inspections following major rainstorms, earthquakes, and floods. They also provide protocol for inspection of engines for maintenance and repair purposes, flange oiling units along the line, locomotive temporary and overnight storage areas, and the light maintenance facilities. The inspection and record keeping will be conducted in conformance with requirements set forth in the Environmental Consent Decree and Regulatory standards. Included in the plans are BMPs designed to minimize impacts associated with of the railroad.

Storm Water Pollution and Prevention: The operations plans describe stormwater planning as part of the NPDES stormwater permit requirements for NCRA rail operations. The plans address construction activities that include demolition, excavation, grading, repair of culverts, and any other construction activity that disturbs more than one acre of soil. The purpose of the plans are to describe the proposed construction activities and all temporary and permanent erosion and sediment control measures, pollution prevention measures, inspection/monitoring activities, and record keeping that will be implemented during any proposed construction or rehabilitation project.

The operations plans also include protocol to manage storm water at specific areas where activities may impact surface water via storm water runoff. It will satisfy the SWRCB Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS00001 (General Permit), and WDR for Discharges of Storm Water Associated with Industrial Activities and the Environmental Consent Decree.

The plans address outdoor activities associated with locomotive light maintenance areas, light rail maintenance areas, refueling operations, storage of hazardous material



and/or waste in amounts that would require filing a Hazardous Material Business Plan with the Counties of Mendocino, Napa, Sonoma, or Marin.

They also include protocol for spill prevention and response, BMPs, sampling and inspections, and record keeping.

Contingency and Emergency Preparedness and Response: The operations plans provide direction and protocol for emergency response involving rail accidents, derailments, hazardous material or waste spills, and other emergencies. It summarizes NCRA's and its operators emergency response roles and responsibilities, arrangements and contact information with local authorities, procedures to minimize emergency situations, security measures, communication and alarm systems, and specific protocols for response.

Waste and Debris Cleanup: In 2003 NCRA prepared a Waste and Debris Cleanup Plan and technical specifications to remove hazardous materials, wastes and debris from nine rail former maintenance sites, two in the RRD (Hopland and Willits), and seven in the ERD. The 2003 cleanup avoided areas located within sensitive or potentially sensitive areas (wetlands; habitat for endangered or threatened species; cultural resource sites; etc.). In addition, the cleanup focused on the former maintenance sites, and did not address discarded rail ties and other debris locally scattered along the railroad right-of-way. Removal of the previously discarded railroad ties and debris within the RRD has been addressed through other projects (notably the track rehabilitation project analyzed in the cumulative impacts section), and is not part of the proposed project. The handling and removal of waste ties during routine maintenance and repair associated with the operation of the railroad, handling of small amounts of hazardous materials/waste at the three maintenance areas, and cleanup of incidental spills or releases that may occur on occasion will be conducted in accordance with NCRA's BMPs (Appendix A).

3.6.2 Environmental Setting

The environmental setting is based on the information that was available in 2008 when the March 9, 2009 DEIR was under preparation.

This section describes the existing conditions along the rail line.



The three primary sources of information used to evaluate the existing conditions are the SMART EIR that presented conditions and evaluated impacts between Novato and Cloverdale, the Environmental Consent Decree environmental assessment that evaluated conditions of the entire NCRA rail line, and sampling and remediation documents prepared for the southern part of the rail line by Northwest Pacific Railroad. In addition, several hy-rail reconnaissance surveys along the entire rail line between Lombard and Willits were conducted to verify the conditions as represented by the three sources.

3.6.2.1 SMART EIR

The SMART EIR presented the existing hazardous materials conditions between Novato and Cloverdale based on a hazardous materials assessment prepared by Mactec (2005), a regulatory file review, and a reconnaissance of the bridges along its project site.

The SMART EIR identified three sites with a potential to affect the proposed SMART project due to soil and groundwater impacts during their construction activities: Masonite Corporation, Eposti Ford/Lampson Trust, and the former Ecodyne cooling facility. None of these sites are located on the railroad right-of-way.

As part of the SMART EIR 2005, MACTEC conducted an investigation to assess the presence of asbestos and LBP at the bridge crossings along the SMART project corridor. Of the eleven bridges assessed, four had the potential for asbestos and LBP. The remaining seven bridges had the potential for only LBP. It is assumed that the bridges not assessed by MACTEC in 2005 are similar. In addition, the EIR cited the potential for soil at crossings with high vehicular traffic to be potentially contaminated with aeriually-deposited lead (ADL).

3.6.2.2 Environmental Consent Decree

NCRA conducted an assessment of the rail line to recommend actions to obtain compliance with paragraphs 3 through 49 of the Environmental Consent Decree. The purpose of the assessment was to achieve the following:

1. Conduct a comprehensive review of NCRA's level of compliance with the Environmental Consent Decree, and



2. Develop a plan that would, when implemented, establish compliance as the rail line is repaired and operations resumed.

Compliance with the Environmental Consent Decree is in process. The following is a summary of the tasks that NCRA have either completed or are in progress to meet the requirements outlined in the Environmental Consent Decree Assessment:

1. A SWPPP was prepared, approved by the Environmental Consent Decree agencies, and implemented at the Willits maintenance facility (Kleinfelder, 2003b).
2. Cleanup of hazardous wastes and regulated debris were removed from non-sensitive areas at the two facilities in the project corridor (Willits facility and the Hopland Station) within the project area (Kleinfelder, 2003a, 2003c, 2005). Cleanup of waste ties and other debris along the line and in sensitive areas (wetlands, river banks) is planned during the rehabilitation of the rail line before operations begin.
3. Site characterization plans to investigate potential chemical impacts to soil and groundwater at Willits and Hopland are in preparation.
4. Work plans for the safe operation of the rail line to be submitted to the State Agencies for approval are in progress.

3.6.2.3 *Northwest Pacific Railroad Investigations and Remediation*

In 1992 and 1993 the NWPRR conducted a Phase I environmental site assessment of the line to identify potential areas of concern along the 140-mile segment between Novato and Willits. Based on the findings NWPRR implemented a Phase II and III sampling and screening program (Geomatrix, 1996). The program consisted of shallow soil sampling in areas of staining or active discharge; geophysical surveys to locate underground storage tanks; and borings at historical and existing structures that may have contributed to spills or leaks. In addition, screening criteria were developed to identify areas requiring remediation.

Based on the data collected to date, the following is a summary of existing conditions at various sites within the study area.



Former Willits Maintenance Yard

The Willits Yard was the primary maintenance facility throughout the history of the railroad. Based on site visits, historical review, information in the Environmental Consent Decree, review of NCRWQCB files, and observations during a diesel release cleanup in 2004, significant soil and groundwater contamination is anticipated. Contaminants may be varied: heavy-end hydrocarbons such as oil and aged bunker-C oil (pre-diesel fuel); kerosene (heating of cabooses), diesel and gasoline (from fueling activities), volatile and semi-volatile organic compounds (VOCs and semivolatile organic compounds [SVOCs] from solvents); polynuclear aromatic hydrocarbons (PNAs, from treated rail ties); metals, including lead and chromium (waste oil); and herbicides (from annual spraying).

Former Train Depots

Contamination of soil along the line and at former train depots occurred from releases from light running maintenance activities, prolonged drips from parked engines on sidings and spurs, and nearly 100 years of running trains. The principal contaminants are petroleum hydrocarbons common to rail operations: oil, grease, and diesel fuel, and metals from waste oil.

Based on soil and groundwater data from the NWPRR documents, four locations were identified as requiring remediation: Oliveto Station (milepost 69.1), Parnum Paving (milepost 122.0), Calpella Station (milepost 120.1), and Redwood Valley Station (milepost 122.0). Most locations, however, were found to have limited concentrations of petroleum hydrocarbons and the gasoline additives benzene, toluene, ethylbenzene, and xylenes (BTEX).

Metal Bridges

The SMART EIR reported small amounts of potential asbestos-containing materials in some of the bridges. Based on the SMART EIR and historic knowledge, paint applied to the metal bridges, particularly those used in the 1940s through the 1960s, are likely lead-containing.



Buildings and Structures

Buildings at Willits and the former train depots contain building materials that commonly contain asbestos (roofing, plaster, stucco, flooring, drywall and joint compound, window glazing, and others).

3.6.2.4 *Existing Conditions at Rehabilitation and Construction Sites*

Bakers Creek

The railroad embankment that crosses Bakers Creek is located within McGee Canyon approximately 3.5 miles northwest of Redwood Valley. It is a rural, undeveloped area where the railroad begins a steep ascent into the hills toward Ukiah. Aerial photographs and site reconnaissance indicate that there has been no industrial development within one mile of the site. There are no sidings or crossings at the canyon where locomotives could be fueled or repaired. Other than the washed out embankment fill (see Section 3.4, Geology), the area is relatively undisturbed. Observations at the site showed no evidence of excessive oil within or along the rail line as commonly present on sidings where engines park or were maintained. Field observations and geologic maps of the area indicate that ultramafic rock units such as serpentinites are not present at the site.

Foss Creek

The Foss Creek site is located north of the City of Healdsburg in a developed area. On the west side of the embankment is a levee that is part of a flood control retention basin. At the site Foss Creek flows southward and sub-parallel to the railroad right-of-way as it flows toward the Russian River in Healdsburg. The railroad embankment was constructed of fill placed on floodplain deposits adjacent to an abandoned creek channel approximately 20 feet east of the modern channel.

Review of aerial photographs and site reconnaissance indicate that the area is industrial and residential. No siding is present at the site, and there is no evidence for excessive oil or grease within the tracks or along the embankment. Field observations and geologic maps of the area indicate that ultramafic rock units such as serpentinites are not present at the site.



Black Point Bridge

The Black Point Bridge is situated within the Petaluma River about a half mile north of where it discharges into San Pablo Bay. On either side of the channel north of the bridge are levees to protect the former wetlands from flooding. This levee material was probably locally-derived from dredging sediments from the river bottom and depositing them along the margins. At the bridge location the sides of the channel appear to be natural floodplains.

East of the bridge are undeveloped fields. To the west, the floodplain rises to highlands that are occupied by residential units. Along the river are several docks that are accessed by the residents by wooden ramps.

Lombard Siding (MP 1.0 – MP 2.0)

The proposed new siding near Lombard involves the construction of an approximately 5,300 foot siding along the south side of the existing mainline. The right-of-way in this area is present on reclaimed tidal marshes and wetlands. Adjacent to the mainline between MP 1.0 and MP 2.0 are seasonal wetlands, and industrial and commercial developments. Details on the nature of the adjacent properties are present in Section 3.2: Biological Resources, and Section 3.11: Water Resources.

Novato Consent Decree (MP 35.5 – MP 18.7)

Improvements required by the Novato Consent Decree include establishing quiet zones involving improvements at fourteen or more crossings, welding of rails, fencing as required for safety, and landscaping to reduce the effects of glare from trains running after dusk. The existing crossings identified in the Novato Consent Decree include paved public roads, private crossings, and pedestrian or trail crossings. An unspecified number of additional crossings may also be required or recommended by the regulatory agencies (see Section 2.0, Project Description, for specific descriptions and mile posts).

The crossings are either developed (paved roads) or unpaved roads and trails where the ground has been disturbed by vehicular or pedestrian traffic. Specific improvements at crossings related to potential impacts from hazardous materials include construction of short mountable medians, 3-foot wide medians, quad gates, short pedestrian gates and swing gates. Except for part of a 200 feet median strip that extends off of the



railroad right-of-way at Hanna Ranch Road, road improvements, gates, and signage will be constructed on existing roads or disturbed areas adjacent to the crossings.

Fencing will be established on both sides of the track from north of Rush Creek Place to south of Hanna Ranch Road. Most of this part of the railroad line runs through the urban district of Novato. Landscaping type and location will be determined by the City of Novato during a simulation of an engine running down the tracks.

3.6.3 Impacts and Mitigation Measures

This section describes the potential environmental impacts on the proposed project related to hazardous materials and waste. A description is provided on the criteria used to determine the level of significance for potential impacts. Mitigation measures are described for any impacts that are considered to be significant.

3.6.3.1 *Significance Criteria*

The proposed project would have a significant impact on the environment if the proposed project will:

- Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials and waste;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials and waste into the environment.
- Handle hazardous or AHMs, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

3.6.3.2 *Impact Assessment Methodology*

Impacts were identified and assessed by comparing railroad operation elements with the significance criteria. Potential impacts associated with the operations of the trains, the construction of the new siding at Lombard, and rehabilitation activities at Bakers



Creek, Foss Creek, and Black Point Bridge were compared to the requirements set in environmental regulations and the Environmental Consent Decree. For impacts that were determined to be potentially significant, mitigations were developed to assure that regulatory requirements and provisions of the Environmental Consent Decree were met.

3.6.3.3 *Impacts and Mitigations*

Rehabilitation and Construction Activities

Bakers Creek

Impact HM-BC1: There is the potential that hazardous materials and waste could be mismanaged during the rehabilitation activities and potentially impact the surrounding resources. ***[Less Than Significant with Mitigation Measure HM-BC1]***

Mitigation HM-BC1: NCRA's BMPs for the management of hazardous materials and waste shall be implemented during the rehabilitation activities. If fill material is required, it shall be derived from a permitted quarry or certified as clean fill.

Foss Creek

Impact HM-FC1: There is the potential that hazardous materials and waste could be mismanaged during the rehabilitation activities and potentially impact the surrounding resources. ***[Less Than Significant with Mitigation Measure HM-FC1]***

Mitigation HM-FC1: NCRA's BMPs for the management of hazardous materials and waste shall be implemented during the rehabilitation activities. If fill material is required, it shall be derived from a permitted quarry or certified as clean fill.

Black Point Bridge

Impact HM-BP1: There is the potential that hazardous materials and waste could be mismanaged during the rehabilitation activities and potentially impact the surrounding resources. ***[Less Than Significant with Mitigation Measure HM-BP1]***

Mitigation HM-BP1: NCRA's BMPs for the management of hazardous materials and waste shall be implemented during the rehabilitation activities.



Impact HM-BP2: Rehabilitation activities (paint removal) at Black Point Bridge may impact fish and wildlife by introducing lead-based paint into the Petaluma River. **[Less Than Significant with Mitigation Measure HM-BP2]**

Mitigation HM-BP2: Unless tested and shown to be free of lead-based paint, paint removal shall be conducted in accordance with the Cal/OSHA Construction Standard (which lists prohibited activities and proper work practices). The CDFG shall be consulted in order to obtain and comply with any permitting requirements. Engineering controls that will prevent LBP from being released to the environment shall be implemented.

Lombard Siding (MP 1.0 – MP 2.0)

No impacts associated with the construction of the new siding at Lombard other than potential impacts associated with the management of hazardous materials and waste are anticipated. There is no evidence of existing contaminated soil at the site, and new fill will be derived from a permitted quarry. Due to the easy access, flat topography, and non-complex nature of construction, construction of the siding is considered relatively routine. Construction work will be conducted using standard methods and equipment, and, therefore, there is a low potential for significant spills or releases during construction.

Impact HM-LS1: Construction of the siding from MP 1.0 to MP 2.0 will include minor grading, placement of track ballast and clean fill, placement of 5,300 feet of new track, extending a culvert, reestablishing drainage ditches, widening an existing timber deck bridge, the embankment, and constructing culverts. There is the potential that hazardous materials and waste could be mismanaged during the construction of the new siding at Lombard. **[Less Than Significant with Mitigation Measure HM-LS1]**

Mitigation HM-LS1: NCRA's BMPs for the management of hazardous materials and waste shall be implemented during the construction activities. If fill material is required, it shall be derived from a permitted quarry or certified as clean fill.

Novato Consent Decree (MP 35.5 – MP 18.7)

Specific improvements at crossings vary depending on the type of crossing (public road vs. private or pedestrian), size of the street, and volume of traffic. They include



construction of short mountable medians, 3-foot wide medians, quad gates, short pedestrian gates and swing gates, and signage. Except for part of a 200 foot median strip that extends off of the railroad ROW at Hanna Ranch Road, all road improvements, gates, and signage will be constructed on existing roads or disturbed areas adjacent to the crossings. Construction of these improvements, involve heavy equipment that use diesel fuel, and it is likely that painting of fencing may be conducted on-site using spraying methods. Minor spills or uncontrolled overspray could create a significant impact to biological or water resources under certain conditions.

Impact HM-NCD1: There is the potential that hazardous materials and waste could be mismanaged during the rehabilitation activities and potentially impact the surrounding resources. *[Less Than Significant with Mitigation Measure HM-NCD1]*

Mitigation HM-NCD1: NCRA's BMPs for the management of hazardous materials and waste shall be implemented during the rehabilitation activities.

Operations

The operations of the railroad will not include hauling cargo of hazardous materials or waste. Therefore, the potential of releases of hazardous materials and waste during operations is primarily associated with routine maintenance and repair activities.

Impact HM-OP1: Spills and releases may occur during fueling and light running maintenance and repair activities. *[Less Than Significant with Mitigation Measure HM-OP1]*

Mitigation HM-OP1: NCRA's BMPs shall be implemented and shall include safe pre-determined fueling areas, spills and overtopping prevention procedures, and requirements for secondary containment such as drip pans or equivalent impervious ground covering.

Impact HM-OP2: Spraying herbicides along the rail line for weed abatement may cause impacts on and off the railroad right-of-way. *[Less Than Significant with Mitigation Measure HM-OP2]*

Mitigation HM-OP2: NCRA's BMPs shall be implemented. These BMPs shall include selection of a licensed and experienced spraying contractor, use of herbicides



PUBLIC DRAFT

3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.6 HAZARDOUS MATERIALS

authorized for use by the local permitting agencies, the use of alternative brush control measures as feasible, prohibition of spraying within 20 feet of a water course, and implementation of the Agency required monitoring program (see Section 3.6.1.4).

Impact HM-OP3: There is the potential that hazardous materials and waste could be mismanaged during routine maintenance and repair activities such as bridge, culvert, grade crossing signal, or track maintenance. ***[Less Than Significant with Mitigation Measure HM-OP3]***

Mitigation HM-OP3: Maintenance activities shall be conducted in accordance with NCRA's BMPs and applicable permits.