5.17 HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

This section assesses the potential exposure to hazardous materials, pollution prevention measures, and solid waste that would occur as a result of implementing the No Action Alternative and Alternatives B, D, and E.

5.17.1 SIGNIFICANCE CRITERIA

Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures,* has not established a significance criteria for hazardous materials, solid waste, or pollution prevention. The FAA considers a variety of factors in reaching a determination as to whether significant environmental impact on hazardous materials, solid waste, and pollution prevention would occur, including whether the action would:

- violate applicable Federal, state, tribal, or local laws or regulations;
- involve contaminated sites;
- produce an appreciably different quantity or type of hazardous or solid waste;
- exceed local disposal capabilities; or
- adversely affect human health or the environment.

5.17.1.1 Hazardous Materials

A waste is considered hazardous if it exhibits hazardous characteristics, such as corrosivity, reactivity, ignitibility, or is specifically listed as such by the U.S. Environmental Protection Agency (USEPA). Wastes excluded from regulation as hazardous waste include household wastes, animal wastes, flyash, oil, petroleum, slag, and wastes from ore processing. There are several Federal acts that regulate the handling of hazardous materials.

The Resource Conservation and Recovery Act of 1976 (RCRA) is intended to provide "cradle to grave" management of hazardous and solid wastes and regulation of underground storage tanks (USTs) containing chemical and petroleum products. The RCRA allows the USEPA to set standards for entities producing, storing, handling, transporting, and disposing of hazardous waste. The RCRA was amended with the Hazardous and Solid Waste Amendments of 1984 (HSWA) that addressed corrective actions and permitting of hazardous waste issues.

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) provides the authority with which the Federal government can compel people or companies responsible for creating hazardous waste sites to clean them up. Nicknamed "Superfund," it created a public trust fund to assist with the cleanup of inactive and abandoned hazardous waste sites and accidentally spilled or illegally dumped hazardous materials. Only sites listed on the National Priorities List (NPL) are eligible for funding from the “Superfund.”

The Toxic Substances Control Act of 1976 (TSCA), 42 USC §§ 2601 – 2697, was enacted by Congress to give the USEPA the ability to track the industrial chemicals currently produced or imported into the U.S. The TSCA states that:

- adequate data should be developed with respect to the effect of chemical substances and mixtures on health and the environment, and that the development of such data should be the responsibility of those who manufacture and those who process such chemical substances and mixtures;
- adequate authority should exist to regulate chemical substances and mixtures that create an unreasonable risk of injury to health or the environment, and to take action with respect to chemical substances and mixtures which are imminent hazards; and
- authority over chemical substances and mixtures should be exercised in such a manner as not to impede unduly or create unnecessary economic barriers to technological innovation while fulfilling the primary purpose of the TSCA to assure that such innovation and commerce in such chemical substances and mixtures do not create an unreasonable risk of injury to health or the environment.

The Pollution Prevention Act of 1990 (PPA) established the national policy that, whenever feasible:

- pollution should be prevented or reduced at the source;
- pollution that cannot be prevented should be recycled in an environmentally safe manner;
- pollution that cannot be prevented or recycled should be treated in an environmentally-safe manner; and
- disposal or other release into the environment should be employed only as a last resort, and should be conducted in an environmentally-safe manner.

In addition, Executive Order (EO) 12088, as amended, directs federal agencies to comply with "applicable pollution control standards" in the prevention, control, and abatement of environmental pollution; and consult with the USEPA, state, interstate, and local agencies concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollution.

FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures,* identifies actions that involve property listed (or potentially listed) on the NPL are considered significant pursuant to National Environmental Policy Act (NEPA). In addition, consideration of exposure to hazardous materials is required, but the impact can be mitigated below significance through project controls.

5.17.1.2 Existing Conditions

The proposed runway extension and runway safety areas for Runway 13/31 extend into areas of previously developed or otherwise human-altered land. The local area of the Gnoss Field Airport (DVO or Airport), including the areas proposed for runway extension, have been highly disturbed by land use practices including: historical Bay/Delta-lands reclamation, historical and on-going agricultural activities including cattle grazing, levee construction, channelization, and construction of the Airport facilities and the railroad grade.

As part of the Environmental Impact Statement (EIS) development process, field reconnaissance was conducted of the areas that would be disturbed by the Sponsor's Proposed Project or its alternatives. No evidence of hazardous materials, solid wastes, discolored soil or water, stressed vegetation, above or underground storage tanks, pits, ponds, or lagoons were observed (see Appendix L, *Hazardous Materials*). Previous sites of generation, transportation, storage, use, or release of hazardous materials are discussed below.

Review of several Federal, state, and local databases revealed that 12 records involving past, present, and potential generation, transportation, storage, uses or releases of hazardous materials have occurred within the American Society for Testing and Materials standard search distances of ¼, ½, and 1 mile of the Airport, as shown on **Exhibit 5.17-1, *Hazardous Materials – Existing Conditions***, and listed in **Table 5.17-1**. Of those 12 sites, six locations were identified at DVO's 451 Airport Road address. This database search is limited in its ability to identify the specific location of sites as it reports only the street address. Through discussions with Airport staff, more information is available for some of the sites.

Table 5.17-1
HAZARDOUS MATERIAL RECORDS WITHIN 1-MILE RADIUS OF DVO
Gnoss Field Airport

MAP ID*	DESCRIPTION	LOCATION
1	Underground Fuel Storage Tank	451 Airport Road, Novato, CA
2	Underground Fuel Storage Tank	451 Airport Road, Novato, CA
3	Underground Fuel Storage Tank (closed)	451 Airport Road, Novato, CA
4	Historic Fuel Spill	451 Airport Road, Novato, CA
5	Industrial Stormwater Discharge Permit	451 Airport Road, Novato, CA
6	Solid Waste Disposal	451 Airport Road, Novato, CA
7	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
8	Removal of 14 drums and fill from site	Intersection of Airport Road and Binford Road
9	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
10	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
11	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
12	Underground Fuel Storage Tank	351 Airport Road, Novato, CA

* Note: The Map ID corresponds to the labels in Exhibits 5.17-1, 5.17-2, 5.17-3, and 5.17-4.

Source: Environmental Data Resources Inc., EDR Radius Map Report, May 18, 2009. Landrum & Brown analysis, 2018.

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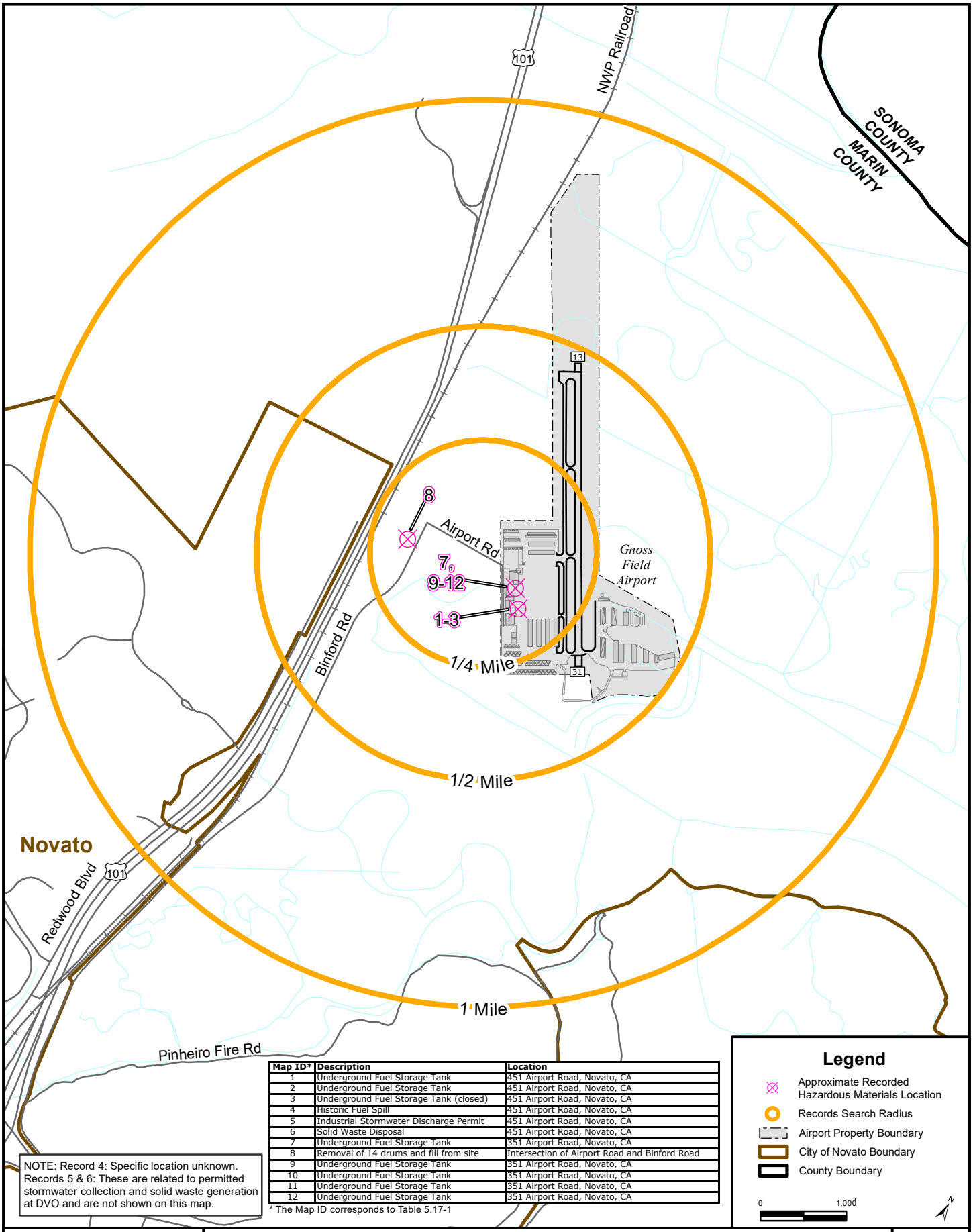

Map ID*	Description	Location
1	Underground Fuel Storage Tank	451 Airport Road, Novato, CA
2	Underground Fuel Storage Tank	451 Airport Road, Novato, CA
3	Underground Fuel Storage Tank (closed)	451 Airport Road, Novato, CA
4	Historic Fuel Spill	451 Airport Road, Novato, CA
5	Industrial Stormwater Discharge Permit	451 Airport Road, Novato, CA
6	Solid Waste Disposal	451 Airport Road, Novato, CA
7	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
8	Removal of 14 drums and fill from site	Intersection of Airport Road and Binford Road
9	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
10	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
11	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
12	Underground Fuel Storage Tank	351 Airport Road, Novato, CA

* The Map ID corresponds to Table 5.17-1

NOTE: Record 4: Specific location unknown. Records 5 & 6: These are related to permitted stormwater collection and solid waste generation at DVO and are not shown on this map.

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Gnoss Field Airport

Hazardous Materials Existing Conditions

EXHIBIT:
5.17-1

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The records for Location 4 reported the release of 40 gallons of aviation fuel from an aircraft that went off the runway and into a ditch adjacent to the runway on July 5, 2006. No further records were available and the status of the release is unknown. Because of the relatively small volume of the release and the time that has passed since the release, this site is not considered to be of importance in determining significant hazardous waste impacts.

The records for the first three of the six locations identified at the 451 Airport Road address reported USTs containing diesel, aviation fuel, or jet fuel, that have since been removed. In 1991, one jet fuel and two aviation gasoline USTs, each with a capacity of 10,000 gallons, were removed from Airport property, east of the manager's office. See **Figure 5.17-A, *Locations of Former Underground Storage Tanks***, for the location of the former USTs.

During removal, it was determined that the USTs and product lines were pitted and had holes in them. In 1999, during excavation work to replace a section of the storm drain sewer line, groundwater with a sheen and solvent-like and petroleum odors were encountered. Sixty-three tons of soil and 9,600 gallons of groundwater were subsequently removed from the excavation and transported off-site to proper disposal facilities. Soil samples of the excavated soil were also completed. It was then determined by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) that this subsurface contamination posed a potential threat to human health and water quality and needed to be addressed. In response, a sensitive receptor survey (SRS) and an additional subsurface investigation were conducted in 2009 and 2010, respectively. Based on the findings, the SFBRWQCB determined the site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with Section 25299.3 of the Health and Safety Code and that no further action related to the site is required.

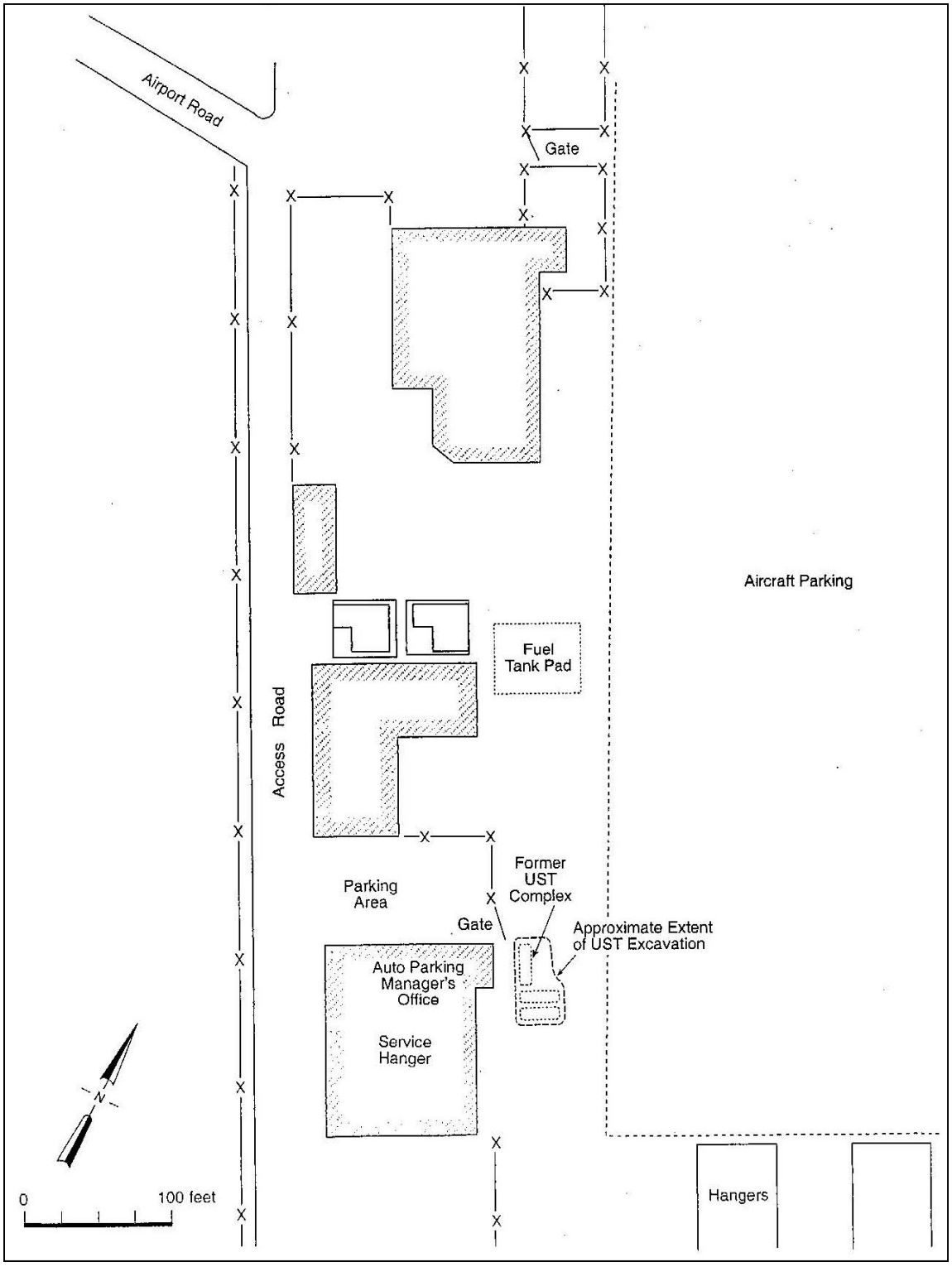
The SFBRWQCB also stated that there may be residual petroleum-contaminated soil and groundwater at this site that could pose an unacceptable risk as a result of future construction/redevelopment activities. However, the area that was remediated in association with the USTs is located immediately east of the Airport manager's office, outside of the Detailed Study Area (DSA), and would not be disturbed by construction of the Sponsor's Proposed Project or its alternatives. Also, no oil sheen or petroleum odors have been observed in the drainage ditches that enclose the runway.[1] This indicates that any potential residual petroleum contamination contained in soil or groundwater near the former USTs had not migrated through soil or groundwater to reach the location of the construction areas for the proposed runway extension alternatives, and therefore would not be affected by construction activities at those locations.

As such, it is assumed for the purposes of this Supplement to the Final EIS (SEIS) that any further remediation of contaminated soil or groundwater associated with construction near the former UST site would occur with or without implementation of the Sponsor's Proposed Project or its alternatives. Therefore, this information will be

[1] Email from Marin County Airport Manager D. Jensen to Landrum & Brown Analyst G. Elizondo, November 28, 2018.

included in the discussion of cumulative impacts. See Appendix L-1 for a copy of the correspondence regarding this issue.

Figure 5.17-A
LOCATIONS OF FORMER UNDERGROUND STORAGE TANKS
Gnoss Field Airport



The records for Location 5 identified at the 451 Airport Road address are for an active National Pollutant Discharge Elimination System (NPDES) permit with the RWQCB for the industrial storm water permit for Airport operations. Because this routine operations permit and its reporting activity are for the control of storm water runoff, this record is not considered to be of importance in determining significant hazardous waste impacts. NPDES permitting requirements are discussed in Section 5.6, *Water Quality*, Subsection 5.6.2.3, *Existing Permits*.

The records for Location 6 identified at the 451 Airport Road address indicate that the Airport facility produces approximately 0.33 tons per year of solid waste, which is classified as household waste. Because this is a routine reporting activity, this record is not considered to be of importance in determining significant hazardous waste impacts.

The record for Location 7 was for a historical UST at 351 Airport Road in 1968. No records were provided indicating the status of this UST and there are no reports of any releases from this UST. Based on the location of this site relative to the proposed runway extension and safety areas and the lack of any records indicating a release, Location 7 would not be affected by the Sponsor's Proposed Project or its alternatives.

The record for Location 8 was for the reported removal of 14 drums and fill from the intersection of Airport and Binford Roads in 1996, west of Airport property. The records and a check of the state GeoTracker website indicate that the case was issued a no further action letter. Given the status and the location of this site, Location 8 would not be affected by the Sponsor's Proposed Project or its alternatives.

Locations 9 through 12 are located at 351 Airport Road, west of Airport property. Each of these sites has one record of the presence of one or more active or removed USTs. There were no records of releases from any of these USTs. Based on the location of these sites relative to the proposed runway extension and safety areas and the lack of any records indicating a release, Locations 9 through 12 would not be affected by the Sponsor's Proposed Project or its alternatives.

Based on the research and interviews conducted for the presence of hazardous materials, it is concluded that no NPL or potentially eligible NPL sites are present within the DSA. The records of previous spills or actions find that none of these sites are located within the areas that would be disturbed for the Sponsor's Proposed Project or its alternatives.

As discussed in Section 4.8.3, fill aggregate rock material has been imported to DVO over the years to raise the project site elevation in preparation for construction of the runway and other facilities at DVO. Some of this material has been found to test positive for asbestos. In October 2017, during the rehabilitation of Runway 13/31, the construction contractor's routine testing identified Naturally Occurring Asbestos (NOA) in the aggregate rock base material that was exposed during the construction work associated with the rehabilitation of the Runway 13/31. The NOA was detected in the imported aggregate rock base material, not in the soils that occur naturally on the project site.

5.17.1.3 Future Conditions: 2024

This section presents the impacts from the Sponsor's Proposed Project and its alternatives to the existing or potential hazardous materials at DVO and surrounding properties.

Alternative A:
No Action

Because the 2024 No Action Alternative would not result in further development, this alternative would have no impacts on the existing hazardous materials at DVO.

Alternative B:
Extend Runway to the Northwest by 1,100 Feet (Sponsor's Proposed Project)

Based on the research and interviews conducted for the presence of hazardous materials, it is concluded that no NPL or potentially eligible NPL sites are present within the area of disturbance for Alternative B (Sponsor's Proposed Project) (see **Exhibit 5.17-2, *Hazardous Materials – Alternative B***). The records of previous spills or actions find that none of the sites are located within the areas that would be disturbed for Alternative B. Therefore, Alternative B would not result in significant impacts to known hazardous materials.

Construction activities associated with Alternative B are expected to include the short-term use or generation of hazardous and non-hazardous materials and waste common to construction including petroleum hydrocarbon-based fuels, lubricants, and oils, paints, and cleaning solvents for the construction equipment. In addition, asphalt and/or concrete materials would be used to construct the runway and taxiway extensions and paints would be used for the markings. Marin County would include pollution prevention measures in contracts with contractors to control and properly manage these materials. Appropriate material management measures would be followed to prevent pollution and to minimize the use and manage disposal of hazardous and non-hazardous substances. Examples of these measures include a stormwater pollution control plan and best management practices (BMPs) for construction activities. A more complete list is included in Appendix L.

Implementation of Alternative B would require additional fill be transported to DVO to construct the runway extension. While California regulations now preclude the quarrying of rocks with NOA for construction fill, existing fill material on the site may contain NOA. Implementation of Alternative B will require that existing aggregate material at both ends of Runway 13/31 be exposed while the runway extension is being constructed. This could potentially expose NOA in the existing aggregate rock at the DVO during construction.

Alternative D:
Extend Runway to the Southeast by 240 Feet and to the Northwest by 860 Feet

Based on the research and interviews conducted for the presence of hazardous materials, it is concluded that no NPL or potentially eligible NPL sites are present within the area of disturbance for Alternative D (see **Exhibit 5.17-3, *Hazardous Materials – Alternative D***). The records of previous spills or actions find that none of the sites are located within the areas that would be disturbed for Alternative D. Therefore, Alternative D would not result in significant impacts to known hazardous materials.

Construction activities associated with Alternative D are expected to include the short-term use or generation of hazardous and non-hazardous materials and waste common to construction including petroleum hydrocarbon-based fuels, lubricants, and oils, paints, and cleaning solvents for the construction equipment. In addition, asphalt and/or concrete materials would be used to construct the runway and taxiway extensions and paints would be used for the markings. Marin County would implement pollution prevention measures into contracts with contractors to control and properly manage these materials. Appropriate materials management measures would be followed to prevent pollution and to minimize the use and manage disposal of hazardous and non-hazardous substances. Examples of these measures include a stormwater pollution control plan and BMPs for construction activities. A more complete list is included in Appendix L.

Implementation of Alternative D would require additional fill be transported to DVO to construct the runway extension. While California regulations now preclude the quarrying of rocks with NOA for construction fill, existing fill material on the site may contain NOA. Implementation of Alternative D will require that existing aggregate material at both ends of Runway 13/31 be exposed while the runway extension is being constructed. This could potentially expose NOA in the existing aggregate rock at the DVO during construction.

Alternative E:
Extend Runway to the Northwest by 300 Feet

Based on the research and interviews conducted for the presence of hazardous materials, it is concluded that no NPL or potentially eligible NPL sites are present within the area of disturbance for Alternative E (see **Exhibit 5.17-4, *Hazardous Materials – Alternative E***). The records of previous spills or actions find that none of the sites are located within the areas that would be disturbed for Alternative E. Therefore, Alternative E would not result in significant impacts to known hazardous materials.

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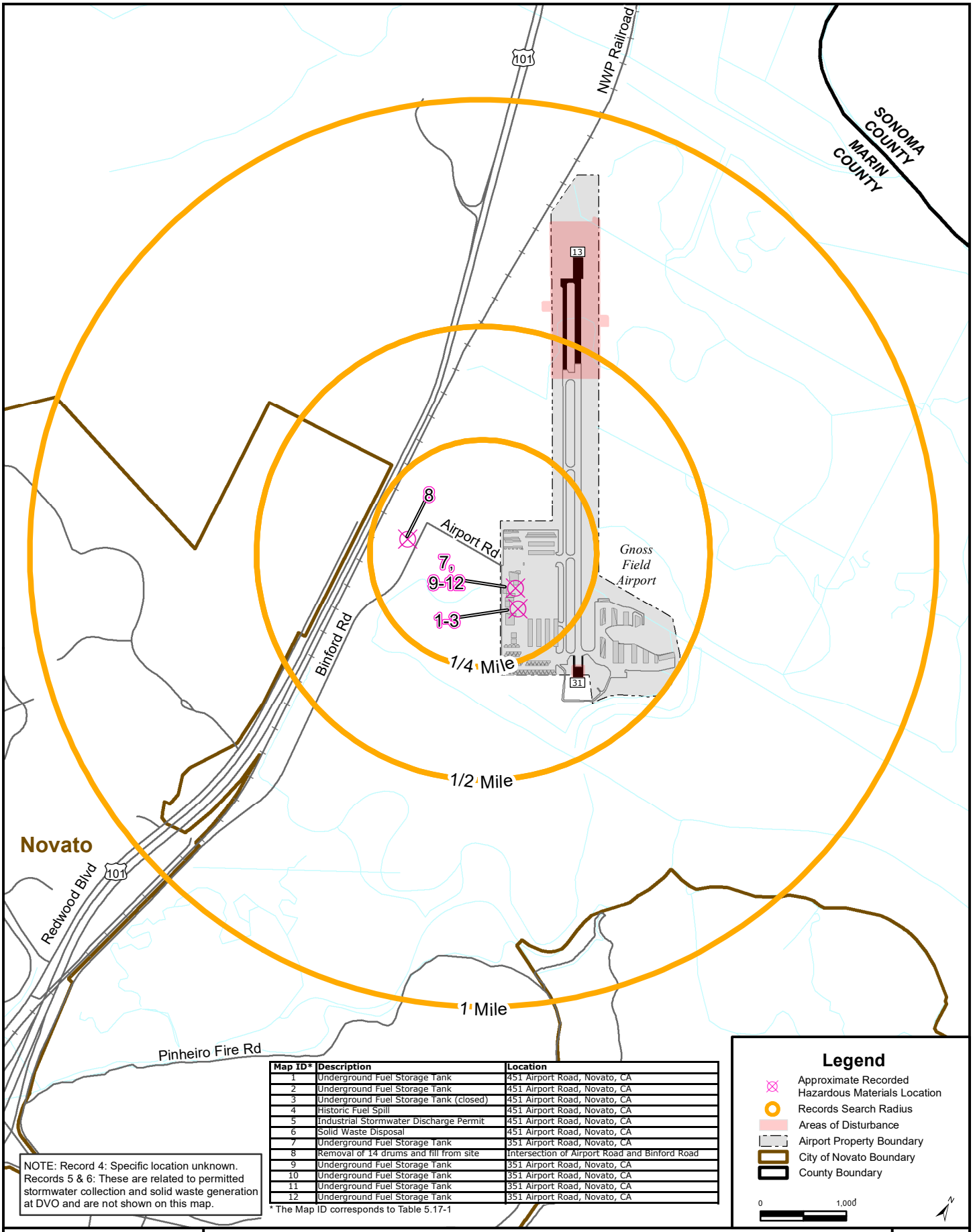

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6	Solid Waste Disposal	451 Airport Road, Novato, CA
7	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
8	Removal of 14 drums and fill from site	Intersection of Airport Road and Binford Road
9	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
10	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
11	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
12	Underground Fuel Storage Tank	351 Airport Road, Novato, CA

* The Map ID corresponds to Table 5.17-1

NOTE: Record 4: Specific location unknown. Records 5 & 6: These are related to permitted stormwater collection and solid waste generation at DVO and are not shown on this map.

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Hazardous Materials
Alternative B

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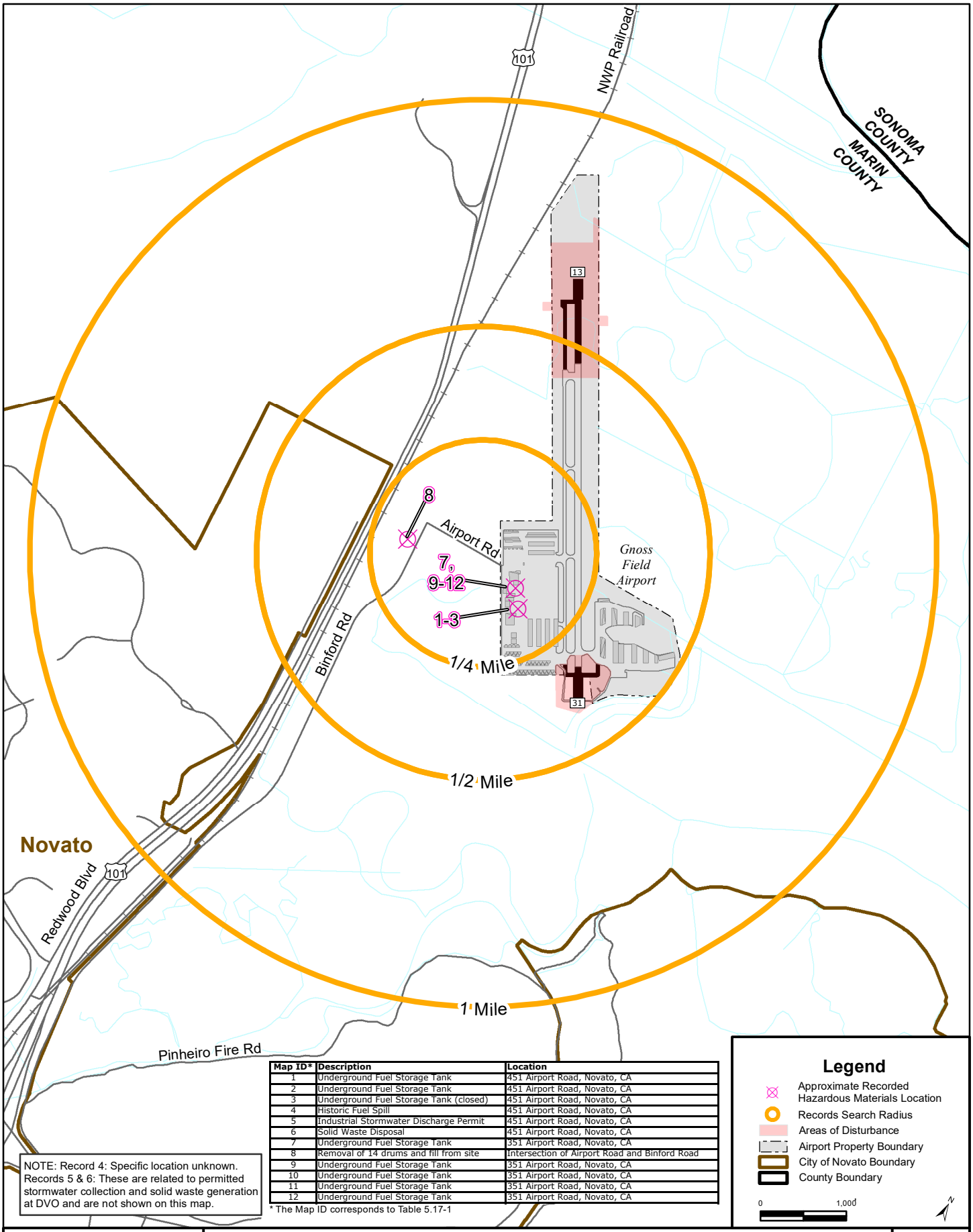

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7	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
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9	Underground Fuel Storage Tank	351 Airport Road, Novato, CA
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NOTE: Record 4: Specific location unknown. Records 5 & 6: These are related to permitted stormwater collection and solid waste generation at DVO and are not shown on this map.

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Gnoss Field Airport

Hazardous Materials
Alternative D

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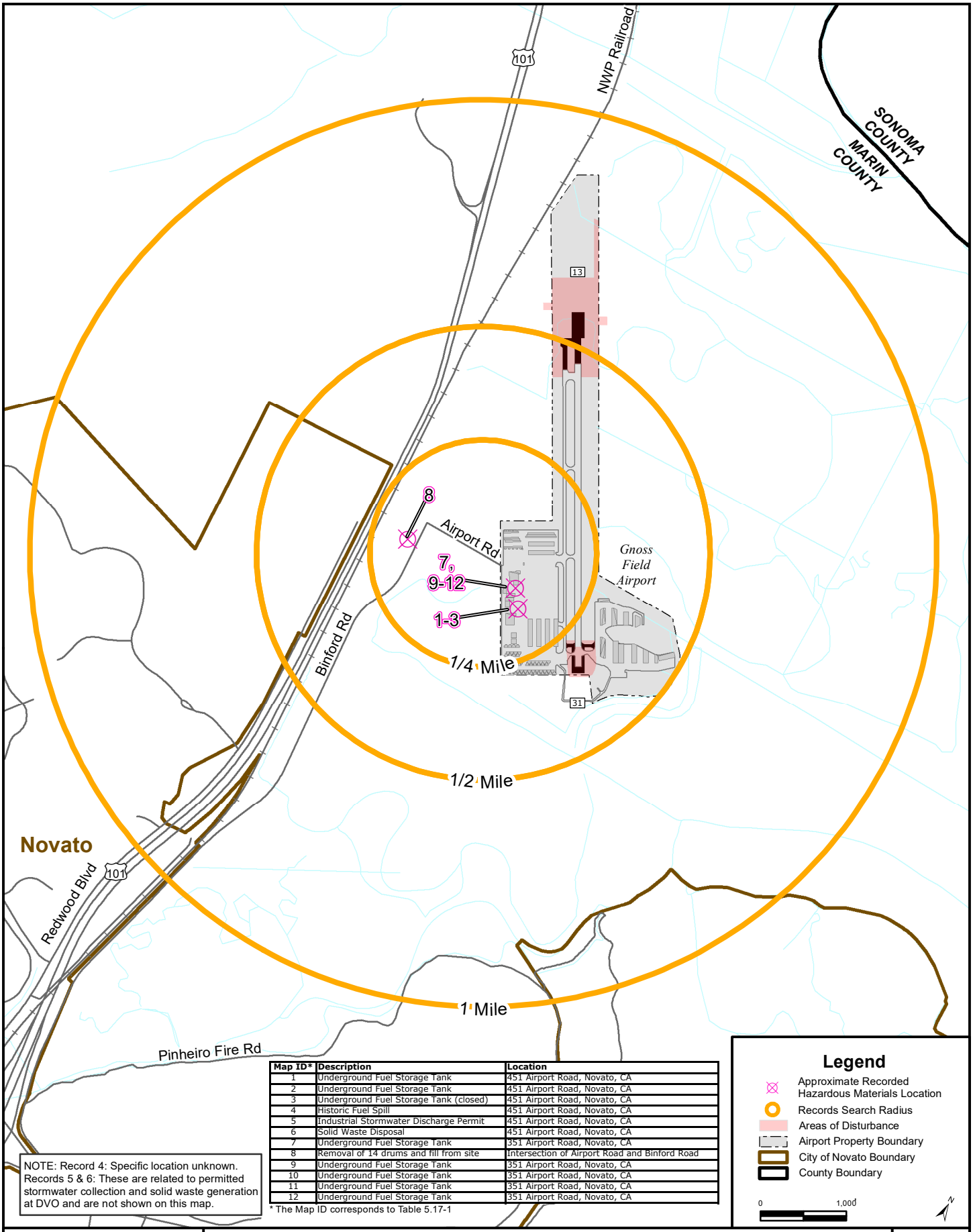

Map ID*	Description	Location
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NOTE: Record 4: Specific location unknown. Records 5 & 6: These are related to permitted stormwater collection and solid waste generation at DVO and are not shown on this map.

Supplement to the Final Environmental Impact Statement
Gnoss Field Airport

Hazardous Materials
Alternative E

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Construction activities associated with Alternative E are expected to include the short-term use or generation of hazardous and non-hazardous materials and waste common to construction including petroleum hydrocarbon-based fuels, lubricants, and oils, paints, and cleaning solvents for the construction equipment. In addition, asphalt and/or concrete materials would be used to construct the runway and taxiway extensions and paints would be used for the markings. Marin County would implement pollution prevention measures into contracts with contractors to control and properly manage these materials. Appropriate materials management measures would be followed to prevent pollution and to minimize the use and manage disposal of hazardous and non-hazardous substances. Examples of these measures include a stormwater pollution control plan and BMPs for construction activities. A more complete list is included in Appendix L.

Implementation of Alternative E would require additional fill be transported to DVO to construct the runway extension. While California regulations now preclude the quarrying of rocks containing NOA for construction fill, existing fill material on the site may contain NOA. Implementation of Alternative E will require that existing aggregate material at both ends of Runway 13/31 be exposed while the runway extension is being constructed. This could potentially expose NOA in the existing aggregate rock at the DVO during construction.

5.17.1.4 Mitigation for Naturally Occurring Asbestos During Construction

Any work that disturbs NOA may potentially create a human health hazard by exposing unprotected workers and the public to health hazards from production of airborne dusts with NOA in amounts that could exceed State of California requirements.[2] As implementation of Alternative B, D, or E would require excavation work at both ends of Runway 13/31 that could expose NOA in existing aggregate fill, protective measures are necessary to protect construction workers and the public.

Implementation of the following mitigation measures, which were previously used to protect construction workers and the public from NOA during the Runway 13/31 reconstruction project, will provide mitigation to protect construction workers and the public from inhaling NOA dust. With implementation of the mitigation measures described below, implementation of Alternative B, D, or E would not result in a significant impact on human health or the environment from exposure to hazardous materials.

[2] M. Deignan. 2017. Marin County Airport, Gnoss Field Runway Renovation Project, Naturally Occurring Asbestos, NOA WORK PLAN, Runway 13/31 Renovation Project, October 18, 2017, Final Version.

The mitigation measures that were previously approved[3] and will be implemented are as follows:

- California Occupational Safety and Health Administration (Cal/OSHA) will be notified by the construction contractor a minimum of 24-hours prior to commencement of the grading, rock moving, or other disturbance of NOA activities.
- Caution signs meeting the specification of OSHA Construction Safety Order, Section 1529 (a)(7)(B) 1, shall be posted at any location where airborne asbestos concentrations may be present.
- Exterior air intakes at the airport's offices will be turned off for the duration of the NOA processing, as approved by County's Mechanical Engineering staff.
- Wind socks will be mounted at each downwind location where air monitoring will be performed to provide a visual indicator for the heavy equipment operators of the prevailing wind directions. Contractor will provide all necessary notifications to the Marin County airport management and FAA prior to installation of the wind socks.
- A weather station at the airport will be used to monitor prevailing wind direction and speed. The airport manager or project superintendent will notify the heavy equipment operators when wind speeds exceed 25 miles per hour consistently over a 5-minute period and work will cease. Work will not resume until wind speeds are consistently under 25 miles per hour, continuously.
- Equipment operators will position themselves to take advantage of the prevailing winds, whenever possible, so as not to be positioned downwind of the dust generation work Supervisors will be in radio contact with the operators and will radio the various workers to adjust their positioning where activities are within the potential dust plume.
- The use of rock crushing, screening and sorting equipment shall be prohibited for processing materials with more than 0.25% asbestos, as confirmed by California Air Resources Board Test Method 435 Determination of Asbestos Content in Serpentine Aggregate.
- Water truck operators will apply water in advance of all work that will disturb any Asbestos Containing Materials (ACM). Sufficient water shall be applied as part of the planned engineering controls, based on site observations and testing in compliance with the Asbestos Airborne Toxic Control Measure Plan (ATCM). The ATCM shall comply with Section 93105, Title 17, CCR. The ATCM shall be filed by the contractor with the Bay Area Air Quality Management District (BAAQMD) in a timely manner.
- If required, high-efficiency particulate air (HEPA)-filtered vacuums, stored near and/ other safety equipment within the regulated area will be used for emergency cleanups and local decontamination.
- DOP testing of HEPA-filtered vacuums will be performed at the start of the NOA handling operations to assure proper operation and efficiency.

[3] Ibid.

- No use of compressed air for cleaning will occur. Only wet cleaning and HEPA-filtered vacuuming will be done.
- A decontamination facility and wash station will be constructed in the area where ACM is being handled.
- Any construction vehicles leaving the work area shall be cleaned or decontaminated in compliance with the BAAQMD and ATCM requirement. The exact method of compliance is at the discretion of the contractor, but shall be listed in their work plan.
- A Regulated Area shall be established at the perimeter of the ACM work zone that will keep all other workers outside of the area of expected exposure. The Regulated Area will be marked with signage, barricades, warning tape to comply with 8 California Code of Regulations Section 1529 (b).

5.17.1.5 Mitigation for On-Site Personnel Exposure to Fuel Contamination

It is not anticipated that any residual petroleum contamination would be encountered during construction activities of Alternative B, D, or E. However, as an environmental mitigation measure to protect on-site personnel involved in subsurface construction activities, those workers will be trained in appropriate procedures to recognize soil and groundwater contaminated with petroleum hydrocarbons. If any such pollution is encountered, a work plan will be developed for approval of the San Francisco Regional Water Quality Control Board to properly avoid threats to human health or the environment. Proper management may include sampling, risk assessment, additional cleanup work, mitigation measures, or some combination of these tasks.

5.17.2 POLLUTION PREVENTION

FAA Order 1050.1F states that the RCRA, as amended by the Federal Facilities Compliance Act of 1992, governs the generation, treatment, storage, and disposal of hazardous wastes. The CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA or Superfund) and the Community Environmental Response Facilitation Act of 1992 provide for consultation with Natural Resources Trustees and cleanup of any release of hazardous substances (excluding petroleum) into the environment.

EO 12088, *Federal Compliance with Pollution Control Standards*, as amended, directs Federal agencies to comply with applicable pollution control standards in the prevention, control, and abatement of environmental pollution; and consult with the USEPA, state, interstate, and local agencies concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollution.

EO 12856, *Federal Compliance with Right-to-Know Laws and Pollution Prevention*, requires Federal agencies to report, in a public manner, toxic chemicals entering any waste-stream from their facilities, including any releases to the environment. This is required to ensure that generated waste is recycled to the maximum extent

practicable, as well as to ensure that any remaining wastes are stored, treated, or disposed of in a manner protective of public health and the environment. This is further required in an effort to improve local emergency planning, response, and accident notification. Finally, the requirement is designed to encourage clean technologies and safe alternatives to extremely hazardous substances or toxic chemicals. This is to be accomplished through revisions to specifications and standards, the acquisition and procurement process, and the testing of innovative pollution prevention technologies at Federal facilities.

The PPA encourages taking a broader look at waste with a view towards reducing pollution. All pollutants are to be minimized and waste creation is to be controlled, not just during the production process, but also in the design of products that will have less impact on the environment while in use and after disposal.

There would be no changes to the existing airfield configuration and Airport facilities with the No Action Alternative. Marin County would continue its current pollution prevention control through waste minimization with the implementation of any of the alternatives. Since pollution prevention programs will not change under Alternative A, B, D, or E, implementation of any of these alternatives would not have a significant impact on pollution prevention programs.

5.17.3 SOLID WASTE

In accordance with 42 USC § 6901, a solid waste is considered to be any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. Solid waste does not include solid or dissolved material in domestic sewage or irrigation return flows, or industrial discharges that are point sources subject to permits under 33 USC § 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended.[4]

5.17.3.1 Regulatory Setting

The RCRA of 1976, which amended the Solid Waste Disposal Act, addresses non-hazardous (Subtitle D) and hazardous (Subtitle C) waste management activities. RCRA established an Interagency Coordinating Committee on Federal Resource Conservation and Recovery Activities which has the responsibility for coordinating all activities dealing with resource conservation and recovery from solid waste carried out by the USEPA, the Department of Energy, the Department of Commerce, and all other Federal agencies which conduct such activities pursuant to this chapter or any other act. The term “resource conservation and recovery activities” includes, but is not limited to, all research development and demonstration projects on resource conservation or energy; material recovery from solid waste; and all technical or

[4] 42 USC § 6903

financial assistance for state or local planning for, or implementation of, projects related to resource conservation, energy, or material recovery from solid waste.[5]

5.17.3.2 Existing Conditions

Municipal waste, the largest component of the solid-waste stream, includes garbage, refuse, and similar solid-waste material discarded from residential, commercial, institutional, and industrial sources. Marin County contracts with Novato Disposal (North Bay Corporation) for solid waste collection and diversion. The majority of solid waste produced at the Airport ultimately is received at the Redwood Landfill (RLI). The RLI is a 420-acre site owned by WMI and located at 8950 Redwood Highway, Novato, California. Roughly 222.5 acres of the property is dedicated to waste disposal/landfill activities. RLI is permitted to accept 2,310 tons of material daily.[6] The highest current operating elevation at the RLI is approximately 86-88 feet. The currently permitted maximum height for the landfill is 122 feet at the north peak and 166 feet at the south peak. According to Marin County, Environmental Health Services, the most recent aerial survey of the landfill was conducted on April 22, 2011. At that time, there were an estimated 18,288,000 tons of material (waste and cover) in place. The permitted maximum capacity of the landfill is 26,077,000 cubic yards, inclusive of waste and cover. In addition, Marin County manages a solid and hazardous waste recycling program for the County. Since 1990, Marin's public agencies and private waste haulers and facility operators have worked together to develop Marin's Integrated Waste Management Plan and to implement the recycling programs necessary to meet the State of California's 25 to 50 percent waste reduction mandates.[7] WMI estimates that nearly 75 percent of the solid waste received at RLI is recycled or reused. Furthermore, approximately 90 percent of organic waste received at RLI is turned into compost. DVO currently produces approximately 624 cubic yards of solid waste trash each year, which translates to approximately 109 tons per year. Another 300 cubic yards of material is recycled through the use of designated recycle dumpsters, which translates to approximately 55 tons per year.[8]

5.17.3.3 Future Conditions: 2024

The volume of solid waste generated at an airport is typically related to the number of people using the facility. Since DVO is a general aviation airport and no passenger records are available, the volume of solid waste is estimated based on the number of operations. Annual operations would increase in the future regardless of whether the proposed development is implemented and a proportional increase in the amount of solid waste generated would be expected. The runway extension proposed for the Airport would create solid waste from debris during construction.

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5 42 USC § 6911
6 Waste Management, Inc, *Redwood Landfill*, www.redwoodlandfill.wm.com, accessed July 2018
7 http://www.marinrecycles.org/about_jpa.cfm, accessed on October 18, 2011.
8 Estimated cubic yards to tons conversion based on 350 lbs./cubic yard for trash and 100 lbs./cubic yard for recyclable material.

Alternative A:
No Action

Alternative A does not include any new development or construction activity, so the amount of solid waste generated by DVO under Alternative A is based on the projected increase of operations through the year 2024. The projected two percent increase in operations would be expected to generate a slight increase in solid waste due to increased use of DVO. Given that the RLI is permitted to nearly double its capacity, and currently receives approximately 750,000 tons of solid waste each year, the additional solid waste generated at DVO would be easily accommodated. Based on these findings, the additional waste produced by the Airport would not have a significant impact on the County's or WMI's ability to transport and dispose of solid waste.

Alternative B:
Extend Runway to the Northwest by 1,100 Feet (Sponsor's Proposed Project)

According to forecasted operational activity at DVO, increased activity would occur at the same levels with or without the development proposed under Alternative B. However, some additional solid waste is expected to be produced during construction of the proposed runway and taxiway extension. Because Alternative B does not include demolition of existing structures, the solid waste that would be generated by construction is expected to be minimal and include packaging materials for products and equipment, metal and wood products from framing activities, and other miscellaneous trash. The additional solid waste produced at the Airport is anticipated to be no more than 10 tons over the course of the construction period. Much of this waste, such as cardboard, plastic wrapping, and plywood, may be reusable or recyclable, which would further reduce the amount of solid waste being deposited in the RLI. This additional solid waste would not have a significant impact on the County's or WMI's ability to transport and dispose of solid waste due to the capacity of the RLI. After construction, the amount of solid waste would return to the levels discussed for Alternative A, because the runway extension is not anticipated to increase activity at the Airport. Therefore, implementation of Alternative B would not have a significant impact related to solid waste.

Alternative D:
Extend Runway to the Southeast by 240 Feet and to the Northwest by 860 Feet

According to forecasted operational activity at DVO, increased activity would occur at the same levels with or without the development proposed under Alternative D. However, some additional solid waste is expected to be produced during construction of the proposed runway and taxiway extension. Because Alternative D does not include demolition of existing structures, the solid waste that would be generated by construction is expected to be minimal and include packaging materials for products and equipment, metal and wood products from framing activities, and other miscellaneous trash. The additional solid waste produced at the Airport is anticipated to be no more than 10 tons over the course of the construction period. Much of this

waste, such as cardboard, plastic wrapping, and plywood, may be reusable or recyclable, which would further reduce the amount of solid waste being deposited in the RLI. This additional solid waste would not have a significant impact on the County's or WMI's ability to transport and dispose of solid waste due to the capacity of the RLI. After construction, the amount of solid waste would return to the levels discussed for Alternative A, because the runway extension is not anticipated to increase activity at the Airport. Therefore, implementation of Alternative D would not have a significant impact related to solid waste.

Alternative E:
Extend Runway to the Northwest by 300 Feet

According to forecasted operational activity at DVO, increased activity would occur at the same levels with or without the development proposed under Alternative E. However, some additional solid waste is expected to be produced during construction of the proposed runway and taxiway extension. Because Alternative E does not include demolition of existing structures, the solid waste that would be generated by construction is expected to be minimal and include packaging materials for products and equipment, metal and wood products, and other miscellaneous trash. The additional solid waste produced at the Airport is anticipated to be no more than 10 tons over the course of the construction period. Much of this waste, such as cardboard, plastic wrapping, and plywood, may be reusable or recyclable, which would further reduce the amount of solid waste being deposited in the RLI. This additional solid waste would not have a significant impact on the County's or WMI's ability to transport and dispose of solid waste due to the capacity of the RLI. After construction, the amount of solid waste would return to the levels discussed for Alternative A, because the runway extension is not anticipated to increase activity at the Airport. Therefore, implementation of Alternative E would not have a significant impact related to solid waste.

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