

Plan and conditions in the National Pollutant Discharge Elimination System Construction General Permit, impacts to surface and nearshore water quality would be less than significant.

#### **4.14.4 Alternative 2**

Alternative 2 training would increase over the No Action Alternative by approximately 5 percent, which is approximately 10 percent less than Alternative 1. The training events under Alternative 2 would continue to be located the same distance away from surface waters and wetlands, training would remain restricted away from wetland areas (Figure 4.14-1), and Range Control actions would be the same as Alternative 1. Training under Alternative 2 would not result in any change from Alternative 1 impacts to surface water and wetlands and would be less than significant.

Because there would be no difference in the proposed facilities between Alternative 1 and Alternative 2, construction impacts would be the same for Alternative 2 as described for Alternative 1.

#### **4.15 Cumulative Impacts**

Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects that is the focus of cumulative impact analysis. While impacts can be differentiated by direct, indirect, and cumulative, the concept of cumulative impacts takes into account all disturbances since cumulative impacts result in the compounding of the effects of all actions over time.

This analysis looks at the cumulative impacts from ongoing and future projects on Tinian and in the CNMI. A future action is considered reasonably foreseeable in this EIS if it is (1) included in a federal, state, or local planning document; (2) likely (or reasonably certain) to occur based on the recommendations of federal, state, or local planning agencies; (3) an existing permit application; or (4) a fiscal appropriation that is likely (or reasonably certain) to occur.

There are a number of planning documents that have been developed by CNMI agencies or are under development, where there is not sufficient detail available related to the implementation plan or timeline for the projects to be considered reasonably foreseeable, such as:

- Comprehensive Integrated Solid Waste Management Plan for the CNMI (2025): Future projects to include Development of Atgidon Landfill (development timeline still in planning stages, with goal to begin operations within 10 years of 2023, to coincide with the closure of the Puntan Diablo Small Community Exempt Landfill); Hardfill Site for Construction and Demolition waste (new planned facility); Recycle Center / Loose Waste Transfer; Recycle Center Expansion; Organics Processing Site – Emergency Green Debris Staging Area.
- Roadway Improvement Plans from CNMI 20-Year Highway Master Plan Final Report (2023): Future projects to include general roadway improvements; near-term recover conditions improvements; long-term (2040) improvements.
- Tinian Harbor Master Plan (2018): 20-year planning period for full build out with the goal to create a flexible terminal layout that can be used for both military and commercial vessel calls. The plan defines projects that could occur in three phases throughout planning period but the timeline for each phase and individual projects have not been fully defined or funded. In July 2023, the Commonwealth Ports Authority Board adopted a Resolution and Letter of Intent for a construction, repair, and maintenance project by the U.S. DoD at the

Port of Tinian. The Letter of Intent is meant to aid the DoD in securing congressional defense authorization funding for the project in the future, and projects that would be anticipated to occur within the next five years are described in Table 4.15-1.

- Ferry Feasibility Study and Transportation Master Plan (under development): Commonwealth Office of Transit Authority was awarded a grant in 2022 to develop a 20-Year Sustainable Transportation Master Plan and conduct an independent ferry feasibility study for the CNMI. Plans would provide/create multi-modal and intra/inter-island transportation options.
- Roadway, grading, and infrastructure improvement projects to be implemented by U.S. Naval Mobile Construction Battalion Detail Tinian (referred to as the Seabees): Since 2020 with the creation of expeditionary Camp Tinian by the Seabees, numerous roadway, grading and infrastructure projects have been conducted in the Military Lease Area. Projects in the community are also implemented when possible, such as the Marpo Heights Road project completed by the Seabees and USMC 7th Engineer Support Battalion in 2022. Future projects and their implementation schedules are in development as practicable.
- Hinemlu Forest Project, DoD Readiness and Environmental Protection Integration Program: The Tinian Mayor's Office is leading a project to rehabilitate a coastal strand and limestone forest trail used for recreation, traditional harvesting, and educational tours. The team will enhance important limestone habitat by removing invasive plants, planting native species, and maintaining fuel breaks in areas prone to wildland fires that destroy forest edges. The trail and habitat enhancement area is adjacent to turtle nesting areas and contains habitat important to many threatened and endangered species.

Specific projects that are currently being implemented or have enough detail to be considered reasonably foreseeable are included in Table 4.15-1. Additionally, the analysis for each resource considers only the present and future actions that could result in potential impacts due to a temporal or geographic overlap with potential effects of the Proposed Action.

**Table 4.15-1 Present and Reasonably Foreseeable Future Actions**

<i>Reasonably Foreseeable Future Action</i>	<i>Time Frame</i>	<i>Status</i>
USAGM Closure Actions for Facilities on Tinian and Saipan USAGM would be responsible for the demolition and disposal of communications towers and other infrastructure from the Tinian and Saipan properties. This would include infrastructure not proposed for reuse by the USMC for the Proposed Action described in this Revised Draft EIS.	Current	Ongoing.
U.S. Air Force Agile Combat Employment (ACE) projects at North Field and in the Military Lease Area: <ul style="list-style-type: none"> <li>• Vegetation clearing and pavement improvements to runway Baker.</li> <li>• Vegetation clearing and pavement improvements to runways Charlie and Dog</li> <li>• Clearing and re-establishment of the boulevard lanes on 8th Avenue and Broadway. This is the west lane of both 8th Avenue and Broadway from the Military Lease Area boundary to the northern roundabout.</li> </ul>	Current	Vegetation clearance at North Field runway Baker began in late 2023 <sup>5</sup> .

<i>Reasonably Foreseeable Future Action</i>	<i>Time Frame</i>	<i>Status</i>
<p>U.S. Air Force Divert Activities and Exercises</p> <ul style="list-style-type: none"> <li>• Divert would conduct up to 720 operations (360 landings and 360 take-offs) during up to 8 weeks of the year with up to 265 temporary personnel. These activities would be included in the large training events that are included in the Proposed Action described in this Revised Draft EIS.</li> <li>• Construction underway for an underground fuel pipeline from the Tinian seaport to the Tinian International Airport and construct and operate support infrastructure at the seaport including, if needed, transfer of fuel via tanker truck. Construction anticipated to conclude in 2026.</li> </ul>	Current	Record of Decision for Final Supplemental EIS/OEIS signed in December 2022.
<p>Mariana Islands Training and Testing Activities – Ongoing (through 2027) and Future (beyond 2027)</p> <ul style="list-style-type: none"> <li>• At-sea training and testing activities would continue to occur in the Mariana Islands Training and Testing Study Area as described through 2027.</li> </ul>	Future	<p>Record of Decision for Final Supplemental EIS/OEIS signed in August 2020.</p> <p>Marine Mammal Protection Act - Letter of Authorization: valid through July 30, 2027.</p>
<p>Joint Region Marianas Integrated Natural Resources Management Plan (2024)</p> <ul style="list-style-type: none"> <li>• This plan addresses natural resources management of Navy and former U.S. Air Force holdings and leased lands on Guam, Tinian, and Farallon de Medinilla. Naval Facilities Engineering Systems Command, Marianas is responsible for the management of natural resources covered under this plan.</li> <li>• Reviews for operation and effect are required every 5 years per the Sikes Act, as amended.</li> <li>• The Plan includes a priority list of strategies and projects for natural resources management for a 5-year period.</li> </ul>	Current	5-year review for operation and effect of the 2019 Plan completed in early 2025.
<p>Projects in the process of being implemented from the Comprehensive Integrated Solid Waste Management Plan for the CNMI<sup>1</sup></p> <ul style="list-style-type: none"> <li>• Conversion of Puntan Diablo current open dump site to a Small Community Exempt Landfill that is permitted to accept municipal solid waste. The project is anticipated to take approximately 5 years to complete. Conversion may include closure of some acreage currently part of the open dump. Once permitted, the Puntan Diablo landfill would be anticipated to operate for no more than 10 years.</li> </ul>	Current and Future	Revised draft released for public review through May 2025.

<i>Reasonably Foreseeable Future Action</i>	<i>Time Frame</i>	<i>Status</i>
<p>Tinian Route 205 Extension Road Improvements<sup>6</sup></p> <ul style="list-style-type: none"> <li>Major siting permit issued by the CNMI Bureau of Environmental and Coastal Quality, Division of Coastal Resources Management in June 2024.</li> <li>Project area is located at the southside of Tinian, just east of the former Tinian Dynasty Hotel and Casino.</li> <li>Total length: 0.7 mi, includes paving the existing gravel road from the intersection with Route 206 intersection to Route 27 intersection.</li> <li>Includes improvements to the drainage system and conveyance to ponding basin, and utility adjustments.</li> </ul>	Current	Department of Public Works issued an invitation to bid for this project in February 2025.
<p>Harbor Improvement Projects being Implemented from the Tinian Harbor Master Plan<sup>7</sup></p> <ul style="list-style-type: none"> <li>The Navy's underwater construction teams have been conducting improvements related to these projects on the harbor since 2020. In September 2020, the CNMI Bureau of Environmental and Coastal Quality posted the Consistency Determination and received comments from the Division of Coastal Resources Management Marine Monitoring Team, and Division of Environmental Quality Water Quality Branch. These comments were incorporated into conditions for concurrence of the Consistency Determination.</li> <li>In 2023, a project involved welding zinc anodes on the port's north quay wall to provide cathodic protection and extend the lifespan of the strategic divert port, which is the only port for both military and commercial craft to access the island.</li> <li>Additional near-term (e.g., within 5 years) DoD improvement projects in the near term would include additional work on the quay wall, berths 1 and 2, and the roll-on roll-off ramp.</li> </ul>	Current	Upcoming DoD improvement projects anticipated to begin in fiscal year 2027 or 2028.

*Legend:* CNMI = Commonwealth of the Northern Mariana Islands; DoD = Department of Defense; EIS = Environmental Impact Statement; OEIS = Overseas Environmental Impact Statement; Port of Tinian = Honorable Jose Pangelinan San Nicolas Commercial Port of Tinian; U.S. = United States; U.S. Agency for Global Media.

*Sources:* <sup>1</sup> Office of Planning and Development 2023; <sup>2</sup> Marianas Variety 2023z; <sup>3</sup> Marianas Variety 2023y; <sup>4</sup> Marianas Variety 2022; CNN 2023; <sup>6</sup> Marianas Variety 2022 <sup>7</sup> NAVFAC Marianas 2020, Joint Region Marianas 2023, Saipan Tribune 2023.

#### 4.15.1 Public Access

Both Alternative 1 and Alternative 2 would result in less than significant impacts to public access due to temporary access controls implemented to preserve safety during training events. Development projects such as the improvements to existing roadways around the island of Tinian, and the U.S. Air Force Agile Combat Employment projects at North Field included in the reasonably foreseeable future actions would provide an overall benefit to public access within the Military Lease Area by improving roadway conditions and making the North Field National Historic Landmark more desirable to visit. As a result, the aggregate impacts of reasonably

foreseeable future actions along with either alternative would not result in significant cumulative impacts to public access.

#### **4.15.2 Land Use and Recreation**

Proposed training and construction under Alternative 1 and Alternative 2 would have a less than significant impact on land use with successful adoption of new leases and agreements, as these activities would be compatible and consistent with existing land use plans and policies and would not result in changes to land use within or outside the Military Lease Area. Development projects such as the improvements to existing roadways around the island of Tinian (Route 205 by the Tinian Department of Public Works and projects implemented by the U.S. Navy Seabees), and the U.S. Air Force Agile Combat Employment projects at North Field would be consistent with the CNMI Comprehensive Land Use Plan. Additionally, the planned future development of the CNMI's small community exempt landfill at the Atgidon site within the Military Lease Area included in the CNMI Integrated Solid Waste Management Plan would be compatible with proposed military training. Thus, as a result, the aggregate impacts of reasonably foreseeable future actions along with either alternative would not result in significant cumulative impacts on land use.

Both Alternative 1 and Alternative 2 would result in less than significant impacts to recreation due to temporary restrictions during training events. As described for public access above, the development projects included in the reasonably foreseeable future actions listed in Table 4.15-1 draw additional visitors to Tinian and/or improve access to Tinian, which could result in additional visitors to the Military Lease Area. As a result, there may be additional recreational visitors affected by temporary public access restrictions during training events. However, such restrictions would be temporary and access for recreational activities within the Military Lease Area training areas would be maintained where it would be safe to do so while training is occurring. As a result, the aggregate impacts of reasonably foreseeable future actions along with either alternative would not result in significant cumulative impacts on recreation.

#### **4.15.3 Socioeconomics**

Temporary activation of surface danger zones in waters north of Tinian during live-fire training at the Multi-Purpose Maneuver Range could significantly affect fishing and boating under the Proposed Action. Military activities that temporarily limit access to popular fishing, recreational, or cultural sites as part of the Proposed Action would be communicated to the public in advance of events to allow time for alternate plans to be made, and Range Control would continue to work with the CNMI and Tinian Municipality to avoid and minimize impacts related to public access within the Military Lease Area, consistent with safety protocols. None of the reasonably foreseeable future actions listed in Table 4.15-1 would have the potential to incrementally increase or exacerbate these potential impacts. If multiple construction projects were to occur simultaneously, a temporary shortage of hotel rooms for workers could occur. Current and reasonably foreseeable projects would have slight impacts on public services due to the associated population increases. Population increases would increase demand for public services such as medical, law enforcement, and firefighting services. These services, particularly medical care, may not be able to manage additional demand adequately during periods of simultaneous project construction. Thus, the aggregate impacts of reasonably foreseeable future actions have the

potential to result in minor cumulative impacts on certain socioeconomic resources and accessibility by residents, businesses, and tourists.

Some of the project listed in Table 4.15-1 would be anticipated to contribute positively to socioeconomic conditions on Tinian, such as the improvements to the Port of Tinian and improved maintenance of the runways and roadways at the North Field National Historic Landmark that would encourage tourism. Indirect beneficial impacts would also likely result from secondary spending from construction workers and military personnel on Tinian as a result of Alternative 1 or Alternative 2. Thus, a cumulative minor to moderate beneficial economic impact would result.

#### **4.15.4 Biological Resources**

The Proposed Action includes vegetation clearing, construction, and periodic training activities that could affect terrestrial and marine biological resources, including habitat loss, noise disturbance, and temporary access restrictions. However, with the implementation of best management practices, avoidance and minimization measures, and continued coordination with regulatory agencies under the Endangered Species Act and Marine Mammal Protection Act, these effects would be less than significant. The reasonably foreseeable actions in Table 4.15-1 that involve construction or development, such as the U.S. Air Force's Agile Combat Employment projects at North Field, other roadway improvements that would occur on Tinian are unlikely to impact terrestrial biological resources important to the function of ecosystems, of special public importance, or protected under federal or state law, as they are focused around already disturbed areas such as roadways and the North Field runways. The development and use of the Puntan Diablo site as a permitted Small Community Exempt Landfill and its eventual closure over the next 10 years, would also be unlikely to have a negative impact on terrestrial biological resources, as the open dump currently exists and would be subject to management under the future permitting conditions.

Activities related to the Joint Region Marianas Integrated Natural Resource Management Plan projects and measures as well as current and future training related to the *Mariana Islands Testing and Training EIS/OEIS* have been ongoing in the region and would continue to be implemented in consultation with local stakeholders and regulatory agencies. These processes ensure monitoring and adaptive management would be applied for both terrestrial and marine biological resources on Tinian and in the surrounding waters. Therefore, the aggregate impacts of reasonably foreseeable future actions and either alternative would not result in cumulative impacts on biological resources.

#### **4.15.5 Cultural Resources**

The Proposed Action components that would affect the historic runways within the North Field National Historic Landmark include the installation of a temporary airfield surface called AM2 matting, use of mobile aircraft arresting gear, clearing of vegetation to create the proposed drop zone between runways Able and Charlie, and the construction of water wells and tanks along the district's northeast boundary, just south of the Multi-Purpose Maneuver Range. The reuse of the airfield is viewed as consistent with its historical use and the proposed water infrastructure would be designed to have a low profile that would allow it to be screened by existing vegetation and would be painted an inconspicuous color to further blend in with the surrounding landscape. Co-use of the airfield by the U.S. Air Force and the USMC via the activities described above would not result in adverse cumulative effects to the North Field National Historic Landmark or other

adjacent cultural resources and their character-defining features. Range Control would continue to coordinate with the CNMI and Municipality of Tinian to schedule training events in designated training areas within the Military Lease Area, and would provide advance notice of any temporary periods when access controls would be required to preserve a safe separation from the public.

The associated actions with the potential to impact cultural resources are the U.S. Air Force's Divert activities and exercises and the U.S. Air Force Agile Combat Employment projects at North Field and in the Military Lease Area. The U.S. Air Force executed a Programmatic Agreement in 2016 for its Divert Activities, which occurred at and around TNI, resulting in adverse effects to TN-6-0030, West Field. Training and construction under the Proposed Action would not result in impacts to TN-6-0030.

The U.S. Air Force undertaking to conduct projects within North Field and the Military Lease Area, including vegetation clearing and the rehabilitation of runways is undergoing concurrent Section 106 consultation. The U.S. Air Force is proposing to restore the runways to their historical appearance using similar materials, construction techniques, and designs. Thus, the reasonably foreseeable actions described in Table 4.15-1 would not cause additional impacts to cultural resources on Tinian.

The aggregate impacts of reasonably foreseeable future actions along with either alternative would not result in adverse physical, visual, or noise effects and would result in less than significant cumulative impacts to cultural resources.

#### **4.15.6 Visual Resources**

The Proposed Action would result in less than significant short-term impacts to visual resources during construction of training infrastructure. Long-term visual impacts from project components such as surface radar towers, live-fire ranges, and Landing Zones are anticipated to be less than significant due to design considerations, minimization measures, and natural screening by vegetation and topography. The U.S. Air Force's Agile Combat Employment projects at North Field is anticipated to provide a cumulative beneficial visual impact by clearing overgrown runways and roadways in and around the North Field National Historic Landmark which would restore the setting to an operational airfield. The other reasonably foreseeable projects described in Table 4.15-1 would occur in already developed areas or on previously disturbed land and roadways that are located outside of the Military Lease Area. Therefore, the aggregate impacts of reasonably foreseeable future actions would result in moderate cumulative impacts on visual resources.

#### **4.15.7 Transportation**

The reasonably foreseeable actions in Table 4.15-1 that involve maintenance to roadways would result in a long-term benefit to transportation by improving roadway quality and access to or within the Military Lease Area, such as the Route 205 project and the U.S. Air Force's Agile Combat Employment projects at North Field. With the exception of the projects that would occur at North Field, the majority of the trips would be distributed on the roadway network in the southern portion of Tinian, outside of the Military Lease Area. The training events that would occur under the Proposed Action may overlap and add additional short-term traffic impacts as service members arrive and leave through the TNI and North Field, and the additional trips that would be added during the construction of training infrastructure. There is sufficient capacity on the local roadways

to accommodate these short-term increases. As all roads would continue to operate at an acceptable level of service, the aggregate impacts of reasonably foreseeable future actions would not result in cumulative impacts on transportation.

#### **4.15.8 Noise**

The aircraft and live-fire noise impact analysis included a quantitative analysis of potential cumulative impacts from existing operations (baseline) plus each alternative. The results of the modeling include noise contours which depict on a map the different noise levels associated with training-related activities under the Proposed Action (refer to the impact analysis in Section 4.8.3 Noise). Noise from current and ongoing training under the *MITT EIS/OEIS* would remain similar to existing training that occurs in the CNMI. In the future, when large or medium training under the Proposed Action would occur on Tinian, it may coincide with a larger regional training exercise such as those that have occurred in the past (i.e., Cope North or Valiant Shield), and aircraft would follow applicable course rules for using the Mariana Islands Range Complex that dictate where aircraft activity would occur to minimize or avoid impacts to human noise-sensitive receptors on Tinian and Saipan. Construction activities in the southern portion of Tinian south of the Military Lease Area, such as roadway improvements and the U.S. Air Force Agile Combat Employment projects at North Field and in the Military Lease Area comprise the majority of the reasonably foreseeable actions with the potential to contribute to Tinian's noise environment. For the Proposed Action, all activities take place in the Military Lease Area, and, with the exception of infrequent explosives training at the Multi-Purpose Maneuver Range and Explosives Training Range, the Proposed Action would result in a less than significant effect on noise outside the Military Lease Area. Range Control and the USMC would continue to work with the CNMI and Tinian Municipality to avoid and minimize impacts related to training and construction noise. The reasonably foreseeable actions, when considered with the Proposed Action, would not noticeably increase noise levels experienced by sensitive receptors from construction (short-term) or training (long-term) occurring in the Military Lease Area.

#### **4.15.9 Air Quality**

The reasonably foreseeable actions in Table 4.15-1 that involve construction or development, such as the U.S. Air Force's Agile Combat Employment projects at North Field, and Route 205 and other roadway improvements that would occur on Tinian have the potential to result in short-term, less than significant cumulative impacts to air quality and greenhouse gas emissions if the emissions were to occur at the same time as a training or any of the associated construction of range infrastructure. Additionally, periodic but also less than significant cumulative impacts to local and regional air quality would be anticipated to result from operational activities, including other military training events included in the *MITT EIS/OEIS* offshore study area. The Proposed Action would result in temporary, localized emissions of criteria air pollutants and greenhouse gases from construction equipment and vehicle use during range development and Base Camp construction, as well as from generators and vehicle use during training activities. These emissions are expected to be intermittent and dispersed. Because of the prevailing winds, phased construction schedule over 10 years, intermittent training events, and distance of the Military Lease Area from populated areas, the contribution of the Proposed Action to cumulative air quality impacts would be minor and less than significant.



The greenhouse gases resulting on a local level contribute cumulatively to global greenhouse gas concentrations that could affect climate. However, these local emission sources make no meaningful contribution to global atmospheric concentration of greenhouse gases.

#### 4.15.10 Public Health and Safety

Under the Proposed Action, the public would continue to be notified regarding which areas of the Military Lease Area that are temporarily closed to avoid health and safety risks from training, and the areas where public access is compatible with military training. The safety zones for the live-fire ranges would be established to further separate the public from any potential hazardous effects from training. The reasonably foreseeable projects in Table 4.15-1 have the potential to beneficially impact public health and safety, including the planned roadway maintenance projects, the U.S. Air Force's Agile Combat Employment projects to clear runways and roadways in and around North Field, and project to convert the current unregulated open dump at Puntan Diablo into a permitted Small Community Exempt Landfill. Therefore, the aggregate impacts of reasonably foreseeable future actions would not result in cumulative impacts to public health and safety or a cumulative impact to the protection of children from environmental health risks or safety risks.

#### 4.15.11 Utilities

The impact analysis for the Proposed Action summarized in Section 4.11 included considerations related to the cumulative activities that would occur on Tinian, which included projects listed in Table 4.15-1. See Appendix M, *Utilities Studies* details the assumptions related to the cumulative projects listed above and how they were incorporated into the analysis. The Proposed Action would install its own potable water wells, and the demand would not create a significant impact on groundwater availability or quality. The development and use of the Puntan Diablo Small Community Exempt Landfill would help to ensure there is sufficient capacity to accept increased levels of municipal solid waste on Tinian. Additionally, the potential management measures developed to minimize potential impacts anticipated from the Proposed Action related to utilities are provided in Table 4.15-2.

**Table 4.15-2 Potential Management Measures Related to Utilities**

<i>Resource Area</i>	<i>Potential Management Measure</i>
Utilities (Solid Waste)	The USMC would develop a solid waste management plan for military operations on Tinian within the Military Lease Area Range Complex and only dispose of waste from military operations in compliant landfills authorized to accept DoD waste.
Groundwater (Water Quality), Public Health and Safety	The USMC would install up to four (4) groundwater monitoring wells at each of the two live-fire ranges and would establish a monitoring plan in collaboration with CNMI Bureau of Environmental and Coastal Quality.
Utilities (Potable Water), Groundwater (Water Availability and Water Quality)	The USMC would fund a one-time hydrogeological study to establish baseline data that could be used to support monitoring of Tinian's aquifer.
Utilities (Potable Water), Socioeconomics	The USMC would provide access to water for ranching needs at its tank dispensing sites.

*Legend:* CNMI = Commonwealth of the Northern Mariana Islands; DoD = Department of Defense; USMC = U.S. Marine Corps

Therefore, the aggregate impacts of reasonably foreseeable future actions would not result in cumulative impacts on utilities.

#### **4.15.12 Topography, Geology, and Soils**

The reasonably foreseeable actions in Table 4.15-1 are unlikely to impact topography, geology, and soils as they primarily involve construction and maintenance in disturbed areas outside of the Military Lease Area. Impacts associated with geological resources have the tendency to be site-specific and do not usually accumulate, other than erosion and sediment deposit. The training infrastructure projects related to the Proposed Action are physically distant from the other reasonably foreseeable projects that involve soil and ground disturbance, and thus, impacts would not be anticipated to overlap. Therefore, the aggregate impacts of reasonably foreseeable future actions would not result in cumulative impacts to topography, geology, and soils.

#### **4.15.13 Groundwater and Hydrology**

The Proposed Action would not impact groundwater quantity and quality. The Proposed Action would install its own potable water wells to support personnel during training events, for ongoing operations and maintenance needs, and for firefighting. The analysis in Section 4.13 demonstrated the demand associated with the proposed wells would have no impact on water quality at existing Commonwealth Utilities Corporation Maui Well Number 2. Based on the data collected on historical demand and the resulting analysis from the groundwater study (refer to Appendix M, Utilities Studies), there would be sufficient capacity in the Commonwealth Utilities Corporation to support the reasonably foreseeable projects described in Table 4.15-1. Additionally, the conversion of the Puntan Diablo site into a Small Community Exempt Landfill would have a beneficial impact to protecting groundwater quality compared to existing conditions. The facility would be required to follow applicable permit conditions to retain its status, which may include groundwater monitoring requirements, which are not in place for the current open dump. Therefore, the aggregate impacts of reasonably foreseeable future actions would not result in cumulative impacts to groundwater and hydrology.

#### **4.15.14 Surface Waters and Wetlands**

Many of the reasonably foreseeable projects listed in Table 4.15-1 would occur outside of drainage basins where ground disturbance by the Proposed Action would occur. Thus, due to the lack of surface water connectivity between the Proposed Action and the reasonably foreseeable projects, there would be a less than significant potential for cumulative impacts related to surface waters and wetlands.

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