

APPENDIX C – MITIGATION MONITORING PROGRAM

1 The State Lands Commission (CSLC) is the lead agency under the California
2 Environmental Quality Act (CEQA) for the San Francisco Bay Fiber Optic Cables
3 Project (Project). In conjunction with approval of this Project, the CSLC adopts
4 this Mitigation Monitoring Program (MMP) for implementing mitigation measures
5 (MMs) for the Project to comply with Public Resources Code § 21081.6,
6 subdivision (a) and State CEQA Guidelines §§ 15074, subdivision (d), and 15097.

7 The Project authorizes Bandwidth Infrastructure Group, LLC (Applicant or
8 Bandwidth) to build infrastructure in terrestrial and marine areas connecting
9 Brisbane (San Mateo County) to San Leandro (Alameda County) in California.

10 1.1 PURPOSE

11 It is important that significant impacts from the Project are mitigated to the
12 maximum extent feasible. The purpose of an MMP is to confirm compliance and
13 implementation of MMs; this MMP will be used as a working guide for
14 implementation, monitoring, and reporting for the Project's MMs.

15 1.2 ENFORCEMENT AND COMPLIANCE

16 The CSLC is responsible for enforcing the MMP. The Project Applicant is
17 responsible for successfully implementing and complying with the MMs identified
18 in this MMP. This includes all field personnel working for the Applicant.

19 1.3 MONITORING

20 CSLC staff may delegate duties and responsibilities for monitoring to other
21 environmental monitors or consultants as necessary. Some monitoring
22 responsibilities may be assumed by other agencies, such as affected jurisdictions
23 (San Mateo County and Alameda County). The CSLC or its designee shall
24 ensure that qualified environmental monitors are assigned to the Project.

25 **Environmental Monitors.** An environmental monitor must be on-site during all
26 Project activities with the potential to create significant environmental impacts
27 or impacts for which mitigation is required to confirm implementation and
28 success of MMs.

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1 Along with CSLC staff, the environmental monitor(s) are responsible for:

- 2 • Confirming the Applicant has completed all necessary agency reviews
3 and received all necessary approvals to perform the Project
- 4 • Coordinating with the Applicant to integrate the MM procedures during
5 Project implementation
- 6 • Confirming that the MMP is followed

7 The environmental monitor would immediately request any changes from the
8 procedures in this MMP to CSLC staff or its designee and would not apply the
9 requested change until CSLC staff or its designee approve any change and its
10 correction.

11 **Workforce Personnel.** Implementing the MMP requires the full cooperation of
12 Project personnel and supervisors. Many of the MMs require action from site
13 supervisors and their crews. To facilitate successful implementation, relevant
14 mitigation procedures shall be written into contracts between the Applicant
15 and any contractors.

16 **General Reporting Procedures.** A monitoring record form would be submitted to
17 the Applicant, and once the Project is complete, copies of all the logs would be
18 submitted to CSLC staff. CSLC staff or its designated environmental monitor
19 would develop a checklist to track all procedures required for each MM and
20 would confirm that the timing specified for the procedures is followed. The
21 environmental monitor shall note any issues that may occur and take
22 appropriate action to resolve them.

23 **Public Access to Roads.** Records and reports are open to the public and will be
24 provided upon request.

25 **1.4 MITIGATION MONITORING PLAN**

26 Mitigation measures for Air Quality; Biological Resources; Cultural Resources;
27 Cultural Resources – Tribal; Greenhouse Gas Emissions; Hazards and Hazardous
28 Materials; Hydrology and Water Quality; Recreation; Transportation; and
29 Commercial and Recreational Fishing. All other environmental factors were
30 found to have less than significant or no impacts; therefore, they are not
31 included. The MMP includes the following information:

- 32 • **Potential Impact:** Impacts of the Project on the resource

- 1 • **Mitigation Measure:** Full MM(s) text
- 2 • **Monitoring/Reporting Action:** Action to be taken by the environmental
- 3 monitor or Lead Agency
- 4 • **Effectiveness Criteria:** How the agency can know if the MM is effective
- 5 • **Responsible Party:** Entity responsible to comply with the MM
- 6 • **Timing:** Before, during, or after terrestrial or marine Project areas
- 7 construction; during operation; etc.

8 1.4.1 AIR QUALITY

9 Potential Impact: Air Quality – Impacts on construction emissions
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10 **MM AIR-1: Use of Tier 4 Equipment.** All off-road diesel-powered heavy
11 equipment used to construct the Project shall be equipped with Tier 4 engines,
12 except for specialized equipment or when Tier 4 engines are not available.
13 Retrofits that achieve or exceed emission reductions equivalent to that of a
14 Tier 4 engine may be used in lieu of Tier 4 engines.

15 **MM AIR-2: Standard Control Measures for Construction Equipment.** The following
16 air quality control measures shall be implemented during terrestrial construction.

- 17 • Maintain all construction equipment in proper tune according to
- 18 manufacturer's specifications.
- 19 • Fuel all off-road and portable diesel-powered equipment with CARB-
- 20 certified motor vehicle diesel fuel (non-taxed version suitable for use
- 21 off-road).
- 22 • All on- and off-road diesel equipment shall not idle for more than
- 23 5 minutes continuously.
- 24 • Signs shall be posted in the designated queuing areas and job sites to
- 25 remind drivers and operators of the 5-minute idling limit.
- 26 • Diesel idling within 1,000 feet of sensitive receptors is not permitted.
- 27 • Staging and queuing areas shall not be located within 1,000 feet of
- 28 sensitive receptors.
- 29 • Electrify equipment when feasible.
- 30 • Substitute gasoline-powered in place of diesel-powered equipment,
- 31 where feasible.

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- 1 • Use alternatively fueled construction equipment on-site where feasible,
2 such as compressed natural gas (CNG), liquefied natural gas (LNG),
3 propane, or biodiesel.

4 **Location:** Terrestrial Project areas

5 **Monitoring/Reporting Action:** Contract specifications

6 **Effectiveness Criteria:** Reducing construction-related emissions released

7 **Responsible Party:** Applicant

8 **Timing:** During construction

9

Potential Impact: Air Quality – Impacts on localized dust levels

10 **MM AIR-3: Minimize Fugitive Dust.** Minimize fugitive dust during construction by
11 implementing the following measures:

- 12 • Reduce the amount of disturbed area where possible.
- 13 • Use water trucks / construction trailers or sprinkler systems in dry weather in
14 sufficient quantity to prevent airborne dust from leaving the site.
- 15 • Implement dust control measures as soon as possible following completion
16 of any soil-disturbing activities.
- 17 • Establish a policy that vehicle speed for all construction vehicles is not to
18 exceed 15 miles per hour (24 kilometers per hour) on any unpaved
19 surface.
- 20 • Water all active construction areas (including storage piles) as needed to
21 suppress dust. Base the frequency on the type of operation and the soil
22 and wind exposure.
- 23 • Cover or maintain at least 2 feet (0.6 meter) of space between the
24 material and the top of the container on haul trucks transporting soil,
25 sand, or other loose material on and off the site.
- 26 • Sweep adjacent public roads if visible soil material is carried out from a
27 work site.

28 **Location:** Terrestrial Project areas

29 **Monitoring/Reporting Action:** Contract specifications

30 **Effectiveness Criteria:** Reducing localized dust levels

31 **Responsible Party:** Applicant and Contractors

32 **Timing:** During terrestrial Project areas construction

1 **1.4.2 BIOLOGICAL RESOURCES**

2 **Potential Impact: Biological Resources – Impacts on special-status species and**
3 **habitats**

4 **MM BIO-1: Provide Worker Environmental Awareness Training.** Bandwidth shall
5 provide environmental awareness training before starting construction activities
6 for all construction personnel (including new personnel as they are added to the
7 Project) working on the terrestrial and marine Project components. This training
8 would be given by biological monitors (approved by CSLC staff) to help the
9 trainees understand the following:

- 10 • Surrounding common and special-status species and their habitats
- 11 • Sensitive natural communities and ESHAs
- 12 • Applicable regulatory requirements
- 13 • MMs designed to avoid or minimize impacts on sensitive resource areas

14 The training materials shall be developed and approved by CSLC staff at least
15 30 days before starting Project activities in the terrestrial and marine work areas.
16 The biological monitors shall maintain a list of all contractors who have been
17 trained and shall submit this list and the final training material to CSLC staff within
18 30 days after construction starts and shall provide an updated final list after
19 construction is completed.

20 The lead biological monitor, which would be the monitor with the most
21 professional experience if more than one monitor is selected for the Project, shall
22 be the main contact for reporting any special-status species observed in or near
23 the Project area by any employee or contractor. Bandwidth shall provide the
24 contact information for the lead biological monitor and the biological monitors
25 to on-site construction workers, USFWS, CDFW, and CSLC staff before
26 construction starts.

27 **Location:** Terrestrial and marine Project areas

28 **Monitoring/Reporting Action:** Training materials approved by CSLC staff at least
29 30 days before Project activities.

30 On-site biological monitor to submit list of trained personnel and training
31 materials to CSLC within 30 days of the start of construction and after
32 completion.

33 **Effectiveness Criteria:** Educating all personnel on potential special-status species
34 and habitats in the work area

- 1 **Responsible Party:** Applicant and CSLC
- 2 **Timing:** Before, during, and after terrestrial and marine Project areas construction

3 **Potential Impact: Biological Resources – Impacts on special-status species and**
4 **habitats (cont.)**

5 **MM BIO-2: Conduct Biological Surveying and Monitoring.** A biological monitor
6 (typically with a college degree in a field of biology or environmental science,
7 knowledge of species surveying for, and experience with pre-construction and
8 construction monitoring), approved by CSLC staff, shall be present on-site to
9 survey the work area for special-status species and nesting birds (as applicable)
10 before starting work in the terrestrial work area to minimize potential impacts on
11 any special-status species or other wildlife that may be present during Project
12 construction. Because the eastern cable landing site is adjacent to the shoreline
13 and the potential western cable sites are not, the biological monitor would also
14 observe the shoreline adjacent to the eastern cable landing site for special-
15 status species before starting work in the terrestrial area. When work would
16 occur at the eastern or western marine HDD exit locations, the biological
17 monitor would observe the shallow tidal flats surrounding the HDD exit locations
18 for foraging by special-status species such as birds. Observations of the marine
19 HDD exit locations would occur from shore.

20 The biological monitor must be on-site full-time during the initial equipment
21 mobilization and site preparation (including fence installation), during the final
22 demobilization phase of construction at the cable landing sites, and during all
23 HDD exit location work (observed from the shore). In addition, the biological
24 monitor must make weekly site visits during Project construction for all work on
25 the cable landing site. From shore, the biological monitor would monitor the
26 work at the HDD exit locations in case of special-status species such as birds
27 foraging nearby during low tides. While on-site or observing the HDD exit
28 locations from shore, the biological monitor has the authority to stop all work,
29 and Bandwidth shall contact the appropriate agency, (i.e., CDFW or USFWS and
30 Commission staff) to discuss ways to protect the special-status species. If a
31 biological monitor was not monitoring the Project site during construction when
32 a special-status species was observed on the site, the biological monitor would
33 be contacted immediately to determine the appropriate course of action.

34 Construction monitoring reports will be submitted daily during above-described
35 construction between the OHWM on the eastern and western locations within
36 CSLC's jurisdiction and otherwise weekly outside of CSLC's jurisdiction.

- 1 **Location:** Terrestrial and marine Project areas
- 2 **Monitoring/Reporting Action:** On-site biological monitor to verify.
- 3 The monitor will submit daily monitoring reports for work within the CSLC's
- 4 jurisdiction and weekly reports for work outside the CSLC's jurisdiction.
- 5 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
- 6 impacts on special-status species and habitats potentially present
- 7 **Responsible Party:** Applicant and CSLC
- 8 **Timing:** Before and during construction

9 **Potential Impact: Biological Resources – Impacts on special-status species and**
10 **habitats (cont.)**

11 **MM BIO-3: Delineate Work Limits to Protect Sensitive Biological Resources.**
12 Natural areas outside the construction work area shall not be disturbed. Before
13 starting Project construction, sensitive biological resource areas within and
14 adjacent to the cable landing site work areas shall be staked and flagged by
15 the biological monitor (**MM BIO-2**). The location of the staking and flagging and
16 barrier fencing, if applicable, would be documented in the daily monitoring log
17 and provided to CSLC before starting construction. These demarcated areas
18 shall be inspected daily by construction personnel throughout the construction
19 area to make sure that they are visible for construction personnel. If construction
20 personnel note damage to the demarcated areas, they shall notify the
21 biological monitor, who will come to the site, if not present, and fix the barriers.

- 22 **Location:** Terrestrial Project areas
- 23 **Monitoring/Reporting Action:** On-site biological monitor to delineate and
- 24 document in the monitoring log.
- 25 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
- 26 impacts on special-status species and habitats potentially present
- 27 **Responsible Party:** Applicant and CSLC
- 28 **Timing:** Before and during construction

29 **Potential Impact: Biological Resources – Impacts on sensitive biological**
30 **resources**

31 **MM BIO-4: Install Covers or Escape Ramps in Open Trenches.** To prevent wildlife
32 species from accidentally being entrapped during construction, all excavated
33 holes to be left open overnight shall have a cover or soil ramp installed, allowing
34 wildlife an opportunity to exit. If escape ramps are installed, the construction
35 inspector or the biological monitor must inspect excavations before starting
36 construction each day to confirm that no wildlife species are entrapped. If any

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1 wildlife species are entrapped and the biological monitor is not on the site, the
2 construction inspector shall notify the biological monitor, who will travel to the
3 site to remove wildlife species that are unable to escape on their own. Any
4 wildlife handling shall be conducted under the biological monitor's applicable
5 collection permit or as authorized by the appropriate wildlife agency. If a
6 biological monitor is not on-site, a local biologist (with appropriate permits) may
7 be called out to remove any species.

8 **Location:** Terrestrial Project areas

9 **Monitoring/Reporting Action:** On-site construction inspector/monitor to inspect
10 daily before starting construction.

11 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
12 impacts on wildlife species potentially present

13 **Responsible Party:** Applicant and CSLC

14 **Timing:** During construction

15 **Potential Impact: Biological Resources – Impacts on nesting birds**

16 **MM BIO-5: Conduct Pre-Construction Nesting Bird Surveys and Implement**
17 **Avoidance Measures.** If construction occurs during the bird nesting season (from
18 February 1 to September 1), the following conditions (designed to protect both
19 special-status and non-special-status birds) shall be implemented:

- 20 • No more than 1 week before starting Project-related construction, a
21 biological monitor, approved by CSLC staff, shall survey within the
22 biological study areas to look for nesting activity.
- 23 • If no active nests are detected during these surveys, no additional
24 measures are required.
- 25 • If an active nest is found, an appropriate avoidance buffer shall be
26 established around the bird nest site to avoid disturbance or destruction
27 of the nest until the end of the breeding season (generally August 31) or
28 until after the biological monitor determines that the young have fledged
29 and moved out of the area (this date varies by species). Suitable buffer
30 distances may vary between species. The extent of these buffers shall be
31 determined by the biological monitor in coordination with the applicable
32 wildlife agency (i.e., CDFW and/or USFWS) and would depend on the bird
33 species, level of construction disturbance, line-of-sight between the nest
34 and the disturbance, ambient levels of noise and other disturbances, and
35 other topographical or artificial barriers. Disturbances shall not occur

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1 within the protective buffer(s) until all young birds have fledged, as
2 confirmed by the biological monitor.

- 3 • A biological monitor shall be hired by Bandwidth, approved by the CSLC
4 (**MM BIO-2**), and shall be on-site every day if construction activities
5 happen during bird nesting season and a nest is identified within the
6 protective buffer area.

7 **Location:** Terrestrial Project areas

8 **Monitoring/Reporting Action:** If construction occurs during the nesting season,
9 conduct nesting bird surveys 1 week before starting Project construction.

10 On-site biological monitor to verify and coordinate with USFWS/CDFW.

11 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
12 impacts on nesting birds

13 **Responsible Party:** Applicant and CSLC

14 **Timing:** Before and during construction

15 **Potential Impact: Biological Resources – Impacts on herring spawning**

16 **MM BIO-6: In-Water Work Window.** In-water work would occur only from June 1
17 through November 30 to protect herring spawning populations and adult longfin
18 smelt migrating to and from spawning locations.

19 **Location:** Marine Project area

20 **Monitoring/Reporting Action:** Contract specifications.

21 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
22 Pacific herring to be impacted during the spawning season.

23 **Responsible Party:** Applicant

24 **Timing:** Before construction

25 **Potential Impact: Biological Resources – Impacts on longfin smelt**

26 **MM BIO-7: Fish Screen on the Jet Sled Intake.** A screen would be installed on the
27 jet sled intake to reduce the chance of fish being pulled into the jet sled intake
28 with the jetting water. The fish screen would adhere to the following criteria,
29 provided by the California Department of Fish and Wildlife:

- 30 • The screen will be designed to allow uniform flow distribution through the
31 entire face of the screen during use.
- 32 • If the screen is self-cleaning, the specific screen intake velocity will be
33 0.2 feet per second, which is the protection velocity for delta smelt

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- 1 (*Hypomesus transpacificus*) and is also considered protective of longfin
2 smelt. If the screen is not self-cleaning, the screen will be designed so that
3 the approach velocity is one fourth of the self-cleaning approach velocity
4 (0.05 feet per second). For non-self-cleaning screens, the frequency of
5 cleaning will be such that flow is not impaired and approach velocity is
6 not exceeded. A cleaning frequency of once per 5 minutes is considered
7 appropriate.
- 8 • The required screen area in square feet will be determined by dividing the
9 maximum diverted flow (cubic feet per second) by the allowable
10 approach velocity (feet per second) to get square feet of screen area
11 needed.
 - 12 • The screen surface will have a minimum open area of 27 percent, but
13 open areas of 40 percent or greater are recommended. Round openings
14 will not exceed 5/32 inch (3.96 millimeter). Square openings will not
15 exceed 5/32 inch (3.96 millimeters) diagonally. Slotted openings will not
16 exceed 3/32 inch (2.38 millimeters).
 - 17 • Screens can be constructed of any rigid material that allows water
18 passage but excludes fish. Stainless steel is recommended to reduce
19 corrosion-associated clogging. No sharp edges or projections that could
20 harm fish will be present. The largest screen open area possible for the
21 project should be used. If anti-fouling materials are used, they should not
22 be deleterious to fish or other wildlife.
 - 23 • The intake with the screen cover will be placed in the deepest area of
24 water possible for the jet sled location.
 - 25 • The plans and design of the fish screen showing the applicable screening
26 criteria will be provided to the California Department of Fish and Wildlife
27 for approval.

28 **Location:** Marine Project area

29 **Monitoring/Reporting Action:** Equipment design specifications. Approval
30 required from California Department of Fish and Wildlife.

31 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
32 longfin smelt to be impacted during Project activities.

33 **Responsible Party:** Applicant

34 **Timing:** Before construction

Potential Impact: Biological Resources – Impacts on marine species from entanglement with unburied cable

MM BIO-8: Cable Burial Surveys. Bandwidth would conduct an initial survey and periodic post-lay surveys of all installed fiber optic cables and conduits between the mean high tide lines to verify that the fiber optic cables and conduits were and would remain buried as initially planned or to the maximum extent feasible as determined by the initial post-lay assessment. These surveys would assess and report the following to CSLC:

- The depth of burial achieved along the fiber optic cable route.
- Any areas of fiber optic cable or conduit suspension greater than 3.3 feet from the SF Bay floor and an explanation of why the fiber optic cables could not be rerouted to avoid suspension.
- The consistency of fiber optic cable installation with the Project description.

These post-lay surveys and assessments would be conducted as follows:

- “As-built” plans showing where the improvements have been placed would be provided within 60 days of completing construction and additional post-lay surveys at a frequency to be determined by lease conditions.
- After any incident or activity, including but not limited to potential commercial fishing gear snags, severe earthquake in the vicinity of the fiber optic cables, or an extreme storm event that could result in excessive SF Bay floor scouring, that could result in the fiber optic cables or conduit exposure to the SF Bay floor surface.

Should a fiber optic cable be observed to have become unburied in any location where it should have been buried or had been buried, Bandwidth shall ensure reburial to the initial fiber optic cable burial depth at that location. A survey and burial report would be prepared and distributed to the CSLC and other responsible state agencies after each survey.

Location: Marine Project area

Monitoring/Reporting Action: Conduct a post-lay inspection survey at a frequency to be determined. The burial survey report will be distributed to responsible State agencies following each survey.

- 1 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
2 marine wildlife to be exposed to the cable and the potential for entanglement.
3 **Responsible Party:** Applicant and CSLC
4 **Timing:** After construction

5 **Potential Impact: Biological Resources – Impacts on marine wildlife**

6 **MM BIO-9: Cable Entanglements and Gear Retrieval.** If fishing gear snags on a
7 fiber optic cable and it is lost or cut, or if Bandwidth snags fishing gear,
8 Bandwidth shall use all feasible measures (for example, deploying divers), in
9 discussion with and guided by the local Fishing Association (San Francisco
10 Community Fishing Association), to retrieve the fishing gear or inanimate object.
11 Retrieval shall occur no later than 42 days after discovering or receiving notice
12 of the incident. If full removal of gear is not feasible, Bandwidth shall remove as
13 much gear as practicable to minimize harm to wildlife (e.g., fishes, birds, and
14 marine mammals). Within 14 days of completing the recovery operation,
15 Bandwidth shall submit to CSLC staff a report describing the following:

- 16 • Nature and location of the entanglement (with a map and/or GPS
17 coordinates).
18 • Method used for removing the entangled gear or object, or the method
19 used for minimizing harm to wildlife if gear retrieval proves infeasible.

20 **Location:** Marine Project area

21 **Monitoring/Reporting Action:** Retrieval of gear within 42 days of discovery.
22 Submit recovery report to CSLC within 14 days of completing the recovery
23 operation.

24 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
25 impacts on marine species potentially present

26 **Responsible Party:** Applicant and CSLC

27 **Timing:** Before, during, and after construction

28 **Potential Impact: Biological Resources – Impacts on marine native species**

29 **MM BIO-10: Control of Marine Invasive Species.** Bandwidth shall ensure that the
30 underwater surfaces of all Project vessels are clear of biofouling organisms
31 before arriving in state waters. The determination of underwater surface
32 cleanliness shall be made in consultation with CSLC staff. Regardless of vessel
33 size, ballast water for all Project vessels must be managed consistent with the
34 CSLC's ballast management laws and regulations, and Ballast Water

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1 Management Report and a Marine Invasive Species Program Annual Vessel
2 Reporting Form shall be submitted to CSLC staff at least 24 hours in advance of
3 arrival in state waters, as required by regulation.

4 **Location:** Marine Project area

5 **Monitoring/Reporting Action:** On-site monitor to verify.

6 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
7 impacts on marine native species

8 **Responsible Party:** Applicant and CSLC

9 **Timing:** During marine construction

10 **Other applicable MMs for potential impacts on biological resources**

11 **MM HYD-1: Develop and Implement Stormwater Pollution Prevention Plan** (see
12 Hydrology and Water Quality)

13 **MM HAZ-1: Develop and Implement Spill Contingency and Hazardous Materials**
14 **Management Plans.** (see Hazards and Hazardous Materials)

15 **MM HAZ-2: Prepare and Implement an Inadvertent Return Contingency Plan** (see
16 Hazards and Hazardous Materials)

17 **1.4.3 CULTURAL RESOURCES**

18 **Potential Impact: Cultural Resources – Impacts to shipwrecks, archaeological** 19 **sites, and/or historic, cultural, or tribal resources**

20 **MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural**
21 **Resources.** Before disturbing the ground, Bandwidth shall contact culturally
22 affiliated tribes and retain a culturally affiliated tribal monitor if requested.
23 Bandwidth shall also retain a qualified archaeologist, jointly with any requested
24 culturally affiliated tribal monitor, to train construction staff to be able to identify
25 potential cultural and tribal cultural resources. If potential cultural or tribal
26 cultural resources are uncovered during Project implementation, all earth-
27 disturbing work within 100 feet of the find must be suspended or redirected until
28 an approved archaeologist and tribal monitor, if retained, has evaluated the
29 nature and significance of the discovery.

30 If a potentially significant cultural or tribal cultural resource is discovered, the
31 CSLC, and any local, state, or federal agency with approval or permitting
32 authority over the Project that has requested and/or required notification shall
33 be notified within 48 hours. The location of any such finds must be kept
34 confidential and measures shall be taken to secure the area from site

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1 disturbance and potential vandalism. Impacts on previously unknown significant
2 cultural or tribal cultural resources shall be avoided through preservation in
3 place if feasible. Damaging effects on tribal cultural resources shall be avoided
4 or minimized following the measures identified in Public Resources Code section
5 21084.3, subdivision (b), if feasible, unless other measures are mutually agreed to
6 by the lead archaeologist and culturally affiliated tribal monitor that would be
7 as or more effective. A treatment plan, if needed to address a find, shall be
8 developed by the archaeologist and, for tribal cultural resources, the culturally
9 affiliated tribal monitor, and submitted to CSLC staff for review and approval
10 prior to implementation of the plan. If the archaeologist or tribe determines that
11 damaging effects on the cultural or tribal cultural resource shall be avoided or
12 minimized, then work in the area may resume.

13 Title to all abandoned shipwrecks, archaeological sites, historic or cultural
14 resources, and tribal cultural resources on or in the tide and submerged lands of
15 California is vested in the state and under CSLC jurisdiction. The final disposition
16 of archaeological, historical, and tribal cultural resources recovered on state
17 lands under CSLC jurisdiction must be approved by CSLC.

18 **Location:** Terrestrial and marine Project areas

19 **Monitoring/Reporting Action:** Qualified archaeologist retained and notification
20 of permitting agencies. A treatment plan may be developed as needed.

21 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
22 impacts on archaeological resources

23 **Responsible Party:** Applicant and CSLC

24 **Timing:** Before and during construction

25 **Potential Impact: Cultural Resources – Impacts to human remains**

26 **MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains.** If human remains
27 are encountered, all provisions provided in California Health and Safety Code
28 section 7050.5 and California Public Resources Code section 5097.98 shall be
29 followed. Work shall stop within 100 feet of the discovery, and both an
30 archaeologist and CSLC staff must be contacted within 24 hours. The
31 archaeologist shall consult with the County Coroner. If human remains are of
32 Native American origin, the County Coroner shall notify the Native American
33 Heritage Commission (NAHC) within 24 hours of this determination, and a Most
34 Likely Descendent shall be identified. No work is to proceed in the discovery
35 area until consultation is complete and procedures to avoid or recover the
36 remains have been implemented.

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- 1 **Location:** Terrestrial Project areas
2 **Monitoring/Reporting Action:** Contact retained archaeologist and the CSLC
3 within 24 hours of discovery.
4 Archaeologist will consult with County Coroner.
5 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
6 impacts on human remains
7 **Responsible Party:** Applicant and CSLC
8 **Timing:** During construction

9 **Potential Impact: Cultural Resources – Impacts to previously unknown terrestrial**
10 **archaeological resources**

11 **MM CUL-3/TCR-3: Cultural and Tribal Resources Awareness Training.** Before
12 beginning construction, Bandwidth must hire a qualified archaeologist and a
13 culturally affiliated tribal monitor (if requested by culturally affiliated tribes) to
14 prepare a Cultural Resources Contractor Awareness Training subject to CSLC
15 approval. The training shall be given by a qualified archaeologist and a
16 culturally affiliated tribal monitor (if one is available) to all construction personnel
17 before working on the Project, and the training shall include, but not be limited
18 to, the following:

- 19 • Guidance on identifying potential cultural resources encountered
20 • The probability of exposing cultural resources
21 • Clear direction on procedures if a find is encountered

- 22 **Location:** Terrestrial Project areas
23 **Monitoring/Reporting Action:** Qualified archaeologist retained and training for
24 all personnel prior to working on the Project.
25 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
26 impacts on archaeological resources
27 **Responsible Party:** Applicant and CSLC
28 **Timing:** Before construction

1 **1.4.4 CULTURAL RESOURCES - TRIBAL**

2 **Applicable mitigation measures for potential impacts on cultural resources -**
3 **tribal**

4 **MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural**
5 **Resources** (see Cultural Resources)

6 **MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains** (see Cultural
7 Resources)

8 **MM CUL-3/TCR-3: Cultural and Tribal Resources Awareness Training** (see Cultural
9 Resources)

10 **1.4.5 GREENHOUSE GAS EMISSIONS**

11 **Applicable mitigation measures for potential impacts of greenhouse gas**
12 **emissions**

13 **MM AIR-1: Use of Tier 4 Equipment** (see Air Quality)

14 **MM AIR-2: Standard Control Measures for Construction Equipment** (see Air
15 Quality)

16 **1.4.6 HAZARDS AND HAZARDOUS MATERIALS**

17 **Potential Impact: Hazards and hazardous materials – Impacts from accidental**
18 **release of hazardous materials**

19 **MM HAZ-1: Develop and Implement Spill Contingency and Hazardous Materials**
20 **Management Plans.** At least 30 days before start of construction of the Project,
21 Bandwidth shall submit the following plans for review and approval by CSLC
22 staff:

23 **Worker Health and Safety Plan**

24 A final Worker Health and Safety Plan (WHSP) that has been reviewed and
25 approved by the San Mateo County Divisions of Environmental Health shall
26 address measures to minimize risks from landfill gases and potential worker
27 exposure to hazardous materials associated with construction activities at the
28 western cable landing sites and within 1,000 feet of the former Brisbane Landfill.
29 The WHSP shall be prepared by a qualified geologist or engineer.

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- 1 A. The WHSP shall include, at a minimum, measures to:
- 2 a) Address the potential for the presence and migration of landfill gases
- 3 during construction.
- 4 b) Minimize risks of exposure by construction workers to anticipated
- 5 hazardous materials, to potential unanticipated waste types, and to
- 6 potential landfill gas accumulation post-construction by operational and
- 7 maintenance personnel.
- 8 c) Assure Project stability and structural integrity associated with any
- 9 incompetent waste fill material that may be present.
- 10 B. Bandwidth shall undertake development in accordance with the approved
- 11 final WHSP. Any proposed changes to the approved final WHSP shall be
- 12 reported to CSLC and San Mateo County Division of Environmental Health.
- 13 No changes to the approved final WHSP shall occur without written approval
- 14 from CSLC and San Mateo County Division of Environmental Health.

15 **Soil Waste Excavation and Management Plan**

16 A final Soil and Waste Excavation and Management Plan (SWEMP) that has

17 been reviewed and approved by the San Mateo County Division of

18 Environmental Health shall address soil and waste management for construction

19 activities at the western cable landing sites. The SWEMP shall be prepared by a

20 qualified geologist or engineer.

- 21 A. The SWEMP shall include, at a minimum, the following:
- 22 a) A description of the specific locations, methods, and procedures for
- 23 staging, stockpiling, managing, characterizing, testing, and disposing of
- 24 soil (including bentonite material), groundwater, and waste material
- 25 expected to be encountered during construction.
- 26 b) Procedures for managing unanticipated waste types that may be
- 27 encountered during construction.
- 28 c) BMPs for odor and dust control, including, but not limited to, measures to
- 29 reduce the potential for exposure of staged and stockpiled materials to
- 30 wind and stormwater runoff.
- 31 d) Provisions for characterizing and testing soil, groundwater, and waste
- 32 material in accordance with California Department of Toxic Substances
- 33 Control (DTSC) Protocol for Burn Dump Site Investigation and
- 34 Characterization. Testing should include, at a minimum, volatile organic
- 35 compounds (VOCs), semi-volatile organic compounds (SVOCs),

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1 polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons
2 (PAHs), dioxins and furans, organochlorine pesticides (OCPs), and
3 California Administrative Metals (CAM-17) heavy metals.

4 e) Provisions for proper waste disposal at authorized facilities capable of
5 receiving the waste(s).

6 B. Bandwidth shall undertake development in accordance with the approved
7 final SWEMP. Any proposed changes to the approved final SWEMP shall be
8 reported to CSLC and San Mateo County Division of Environmental Health.
9 No changes to the approved final SWEMP shall occur without written
10 approval from CSLC and San Mateo County Division of Environmental Health.

11 **Spill Contingency and Hazardous Materials Terrestrial Plan**

12 Measures for terrestrial operations shall include, but not be limited to, identifying
13 appropriate fueling and maintenance areas for equipment, a daily equipment
14 inspection schedule, and spill response procedures including maintaining spill
15 response supplies on-site. The Spill Contingency and Hazardous Materials
16 Terrestrial Plan (SCHMTP) could be prepared separately or the elements of the
17 SCHMTP could be included in the SWEMP.

18 The terrestrial SCHMTP will identify the actions and notifications to occur if
19 contaminated soil is encountered during onshore excavation. Bandwidth shall
20 notify the of San Mateo and Alameda Counties' Divisions of Environmental
21 Health within 24 hours of discovering contaminated materials during Project
22 construction activities. Work in the area suspected of contamination shall stop
23 until the notified agencies, together with Bandwidth, have determined the next
24 steps.

25 The terrestrial SCHMTP will identify, at a minimum, the following BMPs related to
26 using hazardous substances:

- 27 • Follow manufacturer's recommendations on use, storage, and disposal of
28 chemical products used in construction.
- 29 • Avoid overtopping construction equipment fuel gas tanks.
- 30 • During routine maintenance of construction equipment, properly contain
31 and remove grease and oils.
- 32 • Conduct all fueling of equipment at least 100 feet from wetlands and
33 other waterbodies.
- 34 • Properly dispose of discarded containers of fuels and other chemicals.

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- 1 • Maintain a complete list of agencies (with their telephone numbers) to be
2 notified of potential hazardous material spills, including but not limited to,
3 the CSLC's 24-hour emergency notification number and the California
4 Governor's Office of Emergency Services (Cal OES) contact number.

5 **Spill Contingency and Hazardous Materials Offshore Plan**

6 For offshore activities involving work vessels, the primary work vessel (cable-lay
7 vessel) will be required to carry onboard a minimum 400 feet of sorbent boom,
8 five bales of sorbent pads at least 18 inches by 18 inches square, and a small,
9 powered vessel for rapid deployment to contain and clean up any small
10 hazardous material spill or sheen on the water surface. The Spill Contingency
11 and Hazardous Materials Offshore Plan (SCHMOP) shall provide for the
12 immediate call out of additional spill containment and clean-up resources in the
13 event of an incident that exceeds the rapid clean-up capability of the on-site
14 work force. These offshore measures may be provided as part of a separate
15 SCHMOP or combined with the terrestrial plan (SCHMTP) as described above.

16 **Location:** Terrestrial and marine Project areas

17 **Monitoring/Reporting Action:** All plans to be submitted to CSLC at least 30 days
18 prior to start of construction.

19 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for a
20 release of hazardous materials to the environment

21 **Responsible Party:** Applicant

22 **Timing:** Before and during construction

23 **Potential Impact: Hazards and hazardous materials – Impacts from horizontal**
24 **directional drilling (HDD) activities**

25 **MM HAZ-2: Prepare and Implement an Inadvertent Return Contingency Plan.** A

26 Final Inadvertent Return Contingency Plan (either one report that describes a
27 plan for both terrestrial and marine areas or separate reports for each area)
28 shall be submitted to CSLC staff for review and approval at least 30 days before
29 starting construction in terrestrial and marine areas. The plan(s) must include the
30 following:

- 31 • Measures to stop work, maintain appropriate control materials on-site,
32 contain and remove drilling mud before demobilization, prevent further
33 migration of drilling mud into the waterbody, and notify all applicable
34 authorities in the case of an inadvertent return of any size.

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- 1 • Control measures of constructing a dugout or settling basin at the cable
2 landing site to contain drilling mud to prevent sediment and other
3 deleterious substances from entering waterbodies.
- 4 • Requirements for onshore biological monitors to monitor onshore and
5 offshore to identify signs of an inadvertent release of drilling fluids, which
6 may include the use of Rhodamine dye.
- 7 • An abandonment contingency plan in case the HDD operations are
8 forced to be suspended and a partially completed bore hole is
9 abandoned.
- 10 • Complete list of the agencies (with telephone number) to be notified in
11 case of an inadvertent return of any size, including, but not limited to, the
12 CSLC's 24-hour emergency notification number (562) 590-5201 and the
13 California Governor's Office of Emergency Services (Cal OES) contact
14 number (800) 852-7550.

15 **Location:** Terrestrial Project areas

16 **Monitoring/Reporting Action:** Submit report to the CSLC at least 30 days before
17 starting construction.

18 Onshore and offshore biological monitors to identify signs of an inadvertent
19 release of drilling fluids.

20 **Effectiveness Criteria:** Implementation of this MM will reduce the potential for
21 impacts on wildlife species potentially present

22 **Responsible Party:** Applicant and CSLC

23 **Timing:** Before and during construction

24 **Other applicable MMs for potential impacts on hazards and hazardous**
25 **materials**

26 **MM BIO-1: Provide Environmental Awareness Training** (see Biological Resources)

27 **MM BIO-3: Delineate Work Limits to Protect Sensitive Biological Resources** (see
28 Biological Resources)

1 **1.4.7 HYDROLOGY AND WATER QUALITY**

2 **Potential Impact: Hydrology and Water Quality –Impacts on hydrology and**
3 **water quality**

4 **MM HYD-1: Develop and Implement Stormwater Pollution Prevention Plan.**

5 Bandwidth shall develop and implement a Stormwater Pollution Prevention Plan
6 (SWPPP) consistent with the Statewide NPDES Construction General Permit
7 (Order 2009-0009-DWQ). At a minimum, the SWPPP shall include measures for:

- 8 • Maintaining adequate soil moisture to prevent excessive fugitive dust
9 emissions, preservation of existing vegetation, and effective soil cover
10 (e.g., geotextiles, straw mulch, hydroseeding) for inactive areas and
11 finished slopes to prevent sediments from being dislodged by wind, rain, or
12 flowing water.
- 13 • Installing fiber rolls and sediment basins to capture and remove particles
14 that have already been dislodged.
- 15 • Establishing good housekeeping measures such as construction vehicle
16 storage and maintenance, handling procedures for hazardous materials,
17 and waste management BMPs, including procedural and structural
18 measures to prevent the release of wastes and materials used at the site.

19 The SWPPP shall also detail spill prevention and control measures to identify the
20 proper storage and handling techniques of fuels and lubricants, and the
21 procedures to follow in the event of a spill. The SWPPP shall be provided to CSLC
22 staff a minimum of 30 days prior to Project implementation.

23 **Location:** Terrestrial Project areas

24 **Monitoring/Reporting Action:** Develop SWPPP and provide to CSLC 30 days prior
25 to Project implementation.

26 **Effectiveness Criteria:** Implementation of this MM will reduce the Project impacts
27 on hydrology and water quality

28 **Responsible Party:** Applicant and CSLC

29 **Timing:** During construction

1 **Other applicable MMs for potential impacts on hydrology and water quality**

2 **MM HAZ-1: Develop and Implement Spill Contingency and Hazardous Materials**

3 **Management Plans** (see Hazards and Hazardous Materials)

4 **MM HAZ-2: Prepare and Implement an Inadvertent Return Contingency Plan** (see

5 Hazards and Hazardous Materials)

6 **1.4.8 NOISE**

7 **Potential Impact: Noise – Impacts on sensitive receptors**

8 **MM NOI-1: Implement Construction Noise Control Measures.** The Applicant shall
9 ensure that its contractor implements specific noise attenuation measures to
10 ensure compliance with applicable City and County noise ordinances for the
11 duration of the construction period. Noise measures shall include the following
12 and shall be included in the construction specifications:

- 13 • Limit construction activities to the hours specified in each local noise
14 ordinance.
- 15 • Maintain all equipment in accordance with manufacturer's
16 recommendations to minimize noise emissions.
- 17 • Inspect all gasoline and diesel-powered equipment to ensure they are
18 equipped with properly functioning exhaust mufflers and intake silencers.
- 19 • Limit unnecessary idling.
- 20 • Use low noise emission equipment where feasible and practical.

21 **Location:** Terrestrial Project areas

22 **Monitoring/Reporting Action:** Contract specifications

23 **Effectiveness Criteria:** Implementation of this MM will reduce the Project impacts
24 on sensitive receptors.

25 **Responsible Party:** Applicant and CSLC

26 **Timing:** Before and after construction

1 **1.4.9 RECREATION**

2 **Potential Impact: Recreation – Impacts on offshore recreational activities**

3 **MM REC-1: Advanced Local Notice to Mariners.** At least 15 days before (1) start
4 of the HDD operation, and (2) start of offshore cable laying activity, a Local
5 Notice to Mariners ([https://www.dco.uscg.mil/Featured-Content/Mariners/
6 Local-Notice-to-Mariners-LNMs/District-11/](https://www.dco.uscg.mil/Featured-Content/Mariners/Local-Notice-to-Mariners-LNMs/District-11/)) would be submitted to the USCG
7 describing all activities in the SF Bay. A copy of the published notice shall be
8 provided immediately to CSLC. The Notice must include:

- 9 • Type of operation (i.e., jet sledding, diving operations, construction)
- 10 • Specific location of operation or repair activities (including whether there
11 is a possibility of exposed cable), including latitude and longitude and
12 geographical position, if applicable
- 13 • Estimated schedule of activities, including start and completion dates (if
14 these dates change, the USCG needs to be notified)
- 15 • Vessels involved in the operation
- 16 • VHF-FM radio frequencies monitored by vessels on the scene
- 17 • Point of contact and 24-hour phone number
- 18 • Chart number for the area of operation

19 **Location:** Marine Project area

20 **Monitoring/Reporting Action:** Local Notice to Mariners submitted to USCG at
21 least 15 days prior to (1) start of HDD operation and (2) start of offshore cable
22 laying.

23 A copy of the published notice will be submitted to CSLC immediately.

24 **Effectiveness Criteria:** Implementation of this MM will reduce the Project impacts
25 on offshore recreational activities

26 **Responsible Party:** Applicant and CSLC

27 **Timing:** Before and after construction

1 **1.4.10 TRANSPORTATION**

2 **Potential Impact: Transportation – Impacts on local marine vessel traffic**

3 **MM TRA-1: Marine Anchor Plan.** At least 30 days before starting construction,
4 Bandwidth will submit a Marine Anchor Plan to CSLC staff for review and
5 approval with the following:

- 6 • Map of the proposed acceptable anchor locations and exclusion zones
7 or offshore temporary anchoring or mooring for work vessels.
- 8 • Narrative description of the anchor setting and retrieval procedures to be
9 employed that will result in minimal impacts on the bay sediments and
10 floor. Anchor dragging along the bay bottom is not allowed.
- 11 • Coordinates of all dropped anchor points during construction shall be
12 recorded and included on the post-construction bay floor survey map.

13 **Location:** Marine Project area

14 **Monitoring/Reporting Action:** Provide plan to CSLC 30 days prior to construction

15 **Effectiveness Criteria:** Implementation of this MM will reduce the Project impacts
16 on local vessel traffic and provide safe anchoring.

17 **Responsible Party:** Applicant and Applicant's contractor

18 **Timing:** Before and during construction

19 **Potential Impact: Transportation – Reduce hazards on local roadways**

20 **MM TRA-2: Traffic Control Plan.** Before starting the Project activities, a Traffic
21 Control Plan shall be submitted to CSLC staff for review and approval. It shall
22 include measures such as appropriate signage, detour routes, and lane closure
23 to reduce potential hazards to motorists and workers during the Project. In
24 addition, the Traffic Control Plan shall address measures to allow emergency
25 vehicle access, and reduction of impacts to circulation, potential hazards to
26 motorists, bicyclists, pedestrians, and workers during the Project.

27 **Location:** Terrestrial Project areas

28 **Monitoring/Reporting Action:** Provide plan to CSLC 30 days prior to construction

29 **Effectiveness Criteria:** Implementation of this MM will reduce the Project impacts
30 on local traffic.

31 **Responsible Party:** Applicant and Applicant's contractor

32 **Timing:** Before construction

1 **Other applicable MMs for potential impacts on transportation**

2 **MM REC-1: Advanced Local Notice to Mariners** (see Recreation)

3 **1.4.11 COMMERCIAL AND RECREATIONAL FISHING**

4 **Applicable mitigation measures for potential impacts on commercial and**
5 **recreational fishing**

6 **MM BIO-7: In-Water Work Window** (see Biological Resources)

7 **MM BIO-8: Fish Screen on the Jet Sled Intake** (see Biological Resources)

8 **MM BIO-9: Cable Burial Surveys** (see Biological Resources)

9 **MM BIO-10: Cable Entanglement and Gear Retrieval** (see Biological Resources)

10 **MM BIO-11: Control of Marine Invasive Species** (see Biological Resources)

11 **MM REC-1: Advanced Local Notice to Mariners** (see Recreation)

12 **MM TRA-1: Marine Anchor Plan** (see Transportation)

13 **1.4.12 LIST OF ABBREVIATIONS AND ACRONYMS**

14 Applicant = Bandwidth Infrastructure Group, LLC

15 BIO = Biological

16 BMP = best management practice

17 Cal OES = California Governor's Office of Emergency Services

18 CAM = California Administrative Metals

19 CARB = California Air Resources Board

20 CDFW = California Department of Fish and Wildlife

21 CEQA = California Environmental Quality Act

22 CNG = compressed natural gas

23 CSLC = California State Lands Commission

24 CUL = Cultural

25 DTSC = California Department of Toxic Substances Control

26 ESHA = environmentally sensitive habitat area

27 HAZ = Hazardous

28 HDD = horizontal directional drilling

29 HYD = Hydrology

30 LNG = liquefied natural gas

31 MM = mitigation measure

32 MMP = Mitigation Monitoring Program

33 NAHC = Native American Heritage Commission

34 NOI = Noise

35 NPDES = National Pollutant Discharge Elimination System

36 OCPs = organochlorine pesticides

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- 1 OHWM = ordinary high water mark
- 2 PAHs = polycyclic aromatic hydrocarbons
- 3 PCBs = polychlorinated biphenyls
- 4 REC = Recreation
- 5 SCHMOP = Spill Contingency and Hazardous Materials Offshore Plan
- 6 SCHMTP = Spill Contingency and Hazardous Materials Terrestrial Plan
- 7 SF Bay = San Francisco Bay
- 8 SVOCs = semi-volatile organic compounds
- 9 SWEMP = Solid Waste Excavation and Management Plan
- 10 SWPPP = Stormwater Pollution Prevention Plan
- 11 TCR = Tribal Cultural Resources
- 12 TRA = Transportation
- 13 USCG = U.S. Coast Guard
- 14 USFWS = U.S. Fish and Wildlife Service
- 15 VHF-FM = very high frequency – frequency modulation
- 16 VOCs = volatile organic compounds
- 17 WHSP = Worker Health and Safety Plan