

**MANULIFE INVESTMENT MANAGEMENT
TIMBERLAND AND AGRICULTURE
Boston, Massachusetts**

2023 LEADING HARVEST RE-CERTIFICATION AUDIT:
SUMMARY REPORT, DIRECT OPERATED PROPERTIES

June 22, 2023





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Certification Audit Re-Certification Audit Surveillance Audit Scope Extension

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

INTRODUCTION

This report summarizes the results of the recertification audit conducted on Manulife Investment Management Timberland and Agriculture (Manulife) managed production agriculture properties. The audit was conducted by Matt Armstrong, lead auditor for Averum. Matt Armstrong has had experience with Leading Harvest throughout its development, is an assurance provider for multiple sustainability programs, and has expertise in production agriculture on multiple crop types in North American regions. Site visits were assisted by Andrew Zetterberg, Field Auditor. The audit process and reports were independently reviewed by Kyle Rusten, who is a certified public accountant in the state of California and has expertise on multiple crop types in the United States. All senior members of the audit team hold training certificates in ISO 17021:2015 (Conformity Assessment), 14001:2015 (Environmental Management Systems), as well as IAF MD-1:2018 (Certification of Multiple Sites).

SCOPE AND OBJECTIVE

In 2023, Averum was engaged by Manulife to perform an audit of sustainability performance on 78,571 acres of managed agricultural operations and determine conformance to the principles, objectives, performance measures, and indicators of the Leading Harvest Farmland Management Standard 2020 (LH FMS). LH FMS objectives 1 through 12 were covered during site visits on properties in California and Washington. There was no substitution or modification of LH FMS performance measures.

COMPANY INFORMATION

Manulife is an independent agricultural investment firm. Farm operating management contractors are responsible for the day-to-day farmland management services for Manulife's properties. Manulife opted to certify 100 percent of their agricultural properties in 2023, allowing them to engage in broader sampling and simplifying the process of maintaining their certification in the future.

Ten (10) sites in Northern California and the Pacific Northwest combined were selected during the recertification audits. Managers overseeing decision making and standard compliance for sample regions were contacted for evidence requests and interviews. The properties in these regions are a representative sample of current practices in place and management decision making. The primary agricultural production on sites is wine grapes, apples, and cherries.

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

AUDIT PLAN

An audit plan was developed and is maintained on file by Averum. An online portal was established for Manulife coordinators to upload evidence and documentation securely for auditor review, and evidence was continuously uploaded throughout the audit. An opening meeting was held on April 21, 2023, preceding site visits. Following the meeting, a document review of the provided evidence was conducted by Averum. Field sites in California and Washington were examined on May 16th and May 24th and 25th. A closing meeting was held on June 22, 2023.

Opening Meeting: Conference Call

April 21, 2023

Attendees:

(Manulife) Holly Evers, Emmanuel Benjamin, Kevin Wright, Casey Hubbs, Brett Calhoun, Roman Ochoa, Brent McGowan, David Bergvall, Natasha Wise, Yasenia Gomez, Natalie Gomez

(Audit Team) Matt Armstrong, Andrew Zetterberg

Topics:

- Introductions of participants and their roles: Matt Armstrong
- Introduce audit team: Matt Armstrong
- Status of findings of the previous audits: Matt Armstrong
- Audit plan: Matt Armstrong
- Expectations of program user staff: Matt Armstrong
- Method of reporting: Matt Armstrong

Closing Meeting: Conference Call

June 22, 2023

Attendees:

(Manulife) Holly Evers, Emmanuel Benjamin, Kevin Wright, Casey Hubbs, Brett Calhoun, Roman Ochoa, Brent McGowan, David Bergvall, Natasha Wise, Yasenia Gomez, Natalie Gomez

(Audit Team) Matt Armstrong, Andrew Zetterberg, Kyle Rusten

Topics:

- Opening remarks: Matt Armstrong
- Statement of confidentiality: Matt Armstrong
- Closing summary: Matt Armstrong
- Presentation of the audit conclusion: Matt Armstrong
 - Non-Conformances: 0
 - Opportunities for Improvement (OFI): 0
 - Notable Practices: 9
- Report timing and expectations: Matt Armstrong

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

MULTI-SITE REQUIREMENTS

Manulife maintains operations on multiple properties in California and Washington. Manulife qualifies for multi-site sampling since the properties within the management system are centrally controlled and directed by regional management, with regular monitoring activities. Regional and site managers are responsible for developing corrective action plans regarding LH FMS conformance and reporting them to Manulife management. Manulife's current review and monitoring process is effective and ongoing.

Field visits and observations are conducted based on a sample of regions each year. Sampling methodology is provided in the LH FMS. In accordance with International Accreditation Forum Mandatory Documents (IAF-MD) methodology, all sites were initially selected at random with consideration of any preliminary examinations and then coordinated to ensure representative coverage of the complexity of the portfolio, variance in sizes of properties, environmental issues, geographical dispersion, and logistical feasibility.

Region	Crop	Properties Examined During Engagement
Northern California	Wine grapes	Eight (8) sites visited during audit <ul style="list-style-type: none">- 56,305 gross acres in production- California represents 72% of all acreage in portfolio- Management population: One (1) Regional Manager- Sites visited: Sonoma Geyserville, Sonoma Miller Creek, Sonoma Oak Meadows, Sonoma Carnelli, Sonoma Crane Creek, Sonoma Pepperwood, Napa Oak Knoll, Solano Ryer
Pacific Northwest	Apples, cherries	Two (2) sites visited during audit <ul style="list-style-type: none">- 8,031 gross acres in production- Pacific Northwest represents 10% of all acreage in portfolio- Management population: One (1) Regional Manager- Sites visited: Walla Walla, Oasis Orchard

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

AUDIT RESULTS

Overall, Manulife's agricultural operations conform to the objectives of the Leading Harvest Farmland Management Standard 2020 (LH FMS). Interviews and document reviews were performed to determine procedural and documentation conformance to the LH FMS. Documentation of practices was continuously supplied throughout the audit when requested. Documentation from multiple sites was provided to auditors. Field visits were performed on ten operating sites, with eight in California and two in the Pacific Northwest. Visits were on mature and developed properties, so ongoing management were observable and highlighted. Central and regional management representatives were present and interviewed to illustrate Manulife's conformance and policy implementation. Central office staff with roles that impact LH FMS conformance were interviewed to determine awareness of and support for LH FMS conformance, and to illustrate company practices and procedures not performed by farm managers. Manulife's Regional Managers served as guides and were available throughout the entire engagement, providing logistic support and honoring evidence requests wherever needed.

The following are summarized findings, per LH FMS performance measure. Specific non-conformances, opportunities for improvement, and notable practices are described in the Key Findings section of this report.

Objective 1: Sustainable Agriculture Management

1.1 Sustainable Agriculture Stewardship

Conformance Evidence

- Agricultural Stewardship Commitment
- Fieldguide client fact sheet
- Manulife Investment Management Agriculture Stewardship Principles
- Manulife Investment Management Agriculture & Timber (MIMTA) All Employee Training
- Manulife Agricultural Services (MAS) Stewardship Introductory Training
- Bonus calculation
- Stewardship report

Auditor Notes

- Manulife's stewardship principles and policies detail their commitment to proper stewardship of agricultural land.
- Manulife specifically states in their Agriculture Stewardship Principles their commitment to preserving prime farmland.
- MIMTA does not convert any prime farmland into non-agricultural uses. This includes renewable energy developments, which are only allowed on non-prime farmland.

Result: In Conformance, Notable Practice

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 1: Sustainable Agriculture Management (Continued)

1.2 Critical External Factors

Conformance Evidence

- Critical External Factors Reports

Auditor Notes

- Manulife is turning “projects into programs” when projects support long-term profitability and sustainability of agricultural production on farms. These types of projects include the use of bird boxes and planting pollinator habitats to increase crop health and support biodiversity.

- MIMTA has a system in place for identifying critical external factors with its employees. The Critical External Factors Form incorporates environmental, economic, and social factors. The Forms are completed by Regional Managers and sent to the Sustainability Certification Specialist and the Vice President of MIMTA to ensure relevant topics are included on an external factor list MIMTA monitors

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 2: Soil Health and Conservation

2.1 Soil Health

Conformance Evidence

- Property disclosures
- California Sustainable Winegrowing Alliance Certifications
- Fertilizer records
- Regenerative ag principles inventory
- Soil Productivity Policy
- Stewardship Project Entry Forms
- Soil organic acid reserve analyses
- Regenerative agriculture program development

Auditor Notes

- Farm managers inject calcium nitrate through the dripline irrigation to help newly planted trees grow faster. Cow manure is provided to young trees for the first year to provide nitrogen, phosphorous, and potassium. Manure is more cost effective and helps with water infiltration into soil. Young trees are provided these types of nutrients for the first three years.
- Farm managers increase organic matter content of sandy soils by reincorporating crop residue into the ground. Pruning is left in the rows of production blocks to chop and mulch into the soil. Excess fruit is left on the ground and put back into soil.
- Soil testing is conducted between one and three years, depending on soil type. Visual indications of a crop health issue may prompt Farm Managers to conduct soil samples more frequently to identify the best method of correction.
- Plant tissue samples are tested annually during the Spring to check nutrient levels and if certain nutrient applications are needed.
- Sampling is performed internally and sent to Fruit Growers Lab for analysis, then the in-house viticulturist will create programs for nutrient applications.
- Cover crops include nitrogen-fixing plants such as sweet peas and beans. Covers are grown in the row middles during the winter and are mowed and reincorporated in the Spring.
- Herbicide is strip sprayed once or twice per year to control weeds.
- Third-party consultants, GS Long and Simplot, are used for soil health advisory. Consultants take soil samples and make crop amendment recommendations.
- Manulife's in-house viticulturist from management group creates a nutrient management plan for Manulife's farm management group. The Nutrient Management Plan (NMP) is informed by soil samples, tissue samples, and prior-year applications.
- Manulife's NMP calls for fertilizer usage rates and applications to be recorded. Soil amendments are based on current year weather projections, tree health, and prior year applications to create optimum crop production conditions.
- NMP includes applying compost in the fall. Compost is usually made of grape humus and cattle manure, and may include potash, lime, or other amendments based on soil tests.

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 2: Soil Health and Conservation (Continued)

2.1 Soil Health (Continued)

- Planting cover crops is considered a best management practice. Cover crops are planted during the first year's planting of a new production block.
- After cover crops are mowed later in the year, the clippings are reincorporated in the soil along with prunings and fallen fruit on the ground to increase organic matter.

Result: In Conformance

2.2 Soil Conservation

Conformance Evidence

- Nutrient Management Plan procedure
- Sediment and erosion control procedure
- Soil productivity policy
- California Sustainable Winegrowing Alliance Certifications

Auditor Notes

- Select sites are relatively flat and orchard and cover crop in the rows prevent erosion.
- Drip irrigation is used to water the orchards and mitigates runoff concerns.
- Compaction is monitored and combatted by performing a rip-shank of the soil on a five to six-year cycle.
- Natural depressions in the landscape move water off selected site into a riparian buffer zone enclosed by native vegetation. The vegetation keeps sediment and silt out of a nearby river. The soil profile is alluvial and gravel heavy, which means less sediment flows off of the sites.
- Soil compaction becomes an issue after several years of equipment traveling over the rows. Sites use a farm implement to aerate the soil by perforating the topsoil.
- Sites selected have no reported or observable issues with acidification or salinization.
- Irrigation system is tested for signs of iron, which may build up in the irrigation system and affect the uniformity of the drip system pressure holes.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 3: Water Resources

3.1 Water Use

Conformance Evidence

- Water Use and Quality Management Policy
- Sustainable Water Supply Workgroup meeting summary
- The San Joaquin Valley Water Collaborative Action Program (CAP) white paper draft
- 2023 California Water Leaders participation records

Auditor Notes

- Pumps on select sites have variable frequency drives (VFD) which allows users to control water flow or pressure to actual demand.
- Manulife uses FieldIn software to track water usage. FieldIn relies on data collected from soil moisture probes to inform irrigation.
- Manulife uses overhead sprinklers for frost protection, and drip irrigation is used to irrigate vines. Drip line puts out one gallon per hour per emitter. Irrigation is applied variably based on the vines' needs. Soil moisture probes are the most common measure tracked to decide when to use irrigation.
- Select sites track evapotranspiration with Tule technology.
- The Groundwater Sustainability Agency (GSA) currently has no limits on groundwater well water usage.
- Water quality tests are anywhere from once a year to three times per year. The main component of water quality testing focuses on mineral hardness since the presence of iron may clog the drip irrigation lines. Results are monitored throughout the site and in the irrigation lines.
- The farm labor contractor (FLC) works with GSAs in the area on refining models used to inform water withdrawals and how much is needed to support the health of a standard vineyard.
- Manulife Investment Management Timberland and Agriculture (MIMTA) Senior Management maintains a presence with California Water Leaders and Collaborative Action Programs where the investment management community tends to be underrepresented.
- Manulife manages water use with the FieldIn app and their technology that depends on soil probes to monitor water usage, soil moisture, and moisture retention.
- Weather causes water usage rates to be inconsistent year-to-year. Warmer years require extra cooling from top sprinklers and cause more moisture to evaporate from the soil.
- The water district places a limit based on the amount requested at the beginning of the year. If more water is needed, an additional request can be made.
- Sites selected use Tule technology to track evapotranspiration levels to inform irrigation rates and frequency.
- Manulife depends on the weather station to monitor heat and detect frost potential to determine when sprinklers should be used to protect crops from excessive heat or frost.

Result: In Conformance, Notable Practice

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 3: Water Resources (Continued)

3.2 Water Quality

Conformance Evidence

- Soil organic acid reserve analyses
- Nutrient Management Plan procedure
- Water Use and Quality Management Policy
- Agricultural Chemical Use Policy
- Application records
- Sediment and erosion control procedure

Auditor Notes

- The orchards are scouted 1-2 times per week by third-party consultants. Some Manulife staff are also trained to scout and are present on the sites daily.
- Orchards are 100% no-till after the first year of planting. Tillage of 12-16 inches is performed when a new orchard is being planted then another till is done during year 1 of planting.
- Scouting for irrigation happens weekly to make sure plants appear healthy and there are no issues with irrigation. Scouts are looking at plant shoot tips and give it a score based on water stress.
- Manulife designates staff to scout irrigation to find abnormalities or opportunities for increased efficiency in the irrigation design.
- Annual tissue tests to determine crop amendments dependent on which nutrients vines may need.
- The Snake River is about 200 feet from the nearest production block. Farm management practices have not been found to affect the river.
- Several creeks and rivers border production land on selected sites visited in California. Buffer strips of vegetation border the sites and collect water runoff from rainstorms. These strips of vegetation filter out sediments and prevent runoff into waterways.
- Chemical applications are targeted at the canopy or in the direct root zone. Applications are avoided during the rainy season to avoid nutrient runoff.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 4: Crop Protection

4.1 Integrated Pest Management

Conformance Evidence

- Agricultural Chemical Use Policy
- Crop protectant prescriptions
- California Sustainable Winegrowing Alliance Certifications
- Integrated Pest Management procedure

Auditor Notes

- Third-party consultants scout for pests 1-2 times per week. Internal PCAs handle all crop protection, which varies from site to site based on location.
- Deer, codling moth, gophers, and mites are the main pests on the vineyards. Codling moth traps are placed every 10 acres, and gopher traps are also placed throughout the sites.
- Thresholds are set by the Pest Control Adviser (PCA) but final decisions are made internally for chemical applications.
- Chemical sprays are avoided until a certain threshold is met. The thresholds are set internally and with the help of third-party.
- Third-party PCA recommends the types of chemicals that should be used and when.
- Deer fences are installed on sites to prevent deer from eating the vines.
- Gopher traps are placed on sites to prevent gophers from eating on a youthful block where roots are less established.
- Owl boxes are also on sites targeted to combat gophers.
- Insect sticky traps are placed near water borders to track the presence of blue-green sharpshooters that can carry disease into the vines.
- Pruning is one non-chemical method used to deter disease from clinging to a vine.
- An Integrated Pest Management (IPM) system is created every year by the viticulture department with the third-party manager.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 4: Crop Protection (Continued)

4.2 Crop Protectant Management

Conformance Evidence

- Agricultural Chemical Use Policy
- Training Rosters
- Qualitative respirator fit test record

Auditor Notes

- Chemicals are applied by contracted management staff.
- Staff are trained yearly on chemical sprays, and techniques and safety are also mentioned in weekly Monday safety meetings.
- All chemical and pest monitoring is handled internally by a PCA.
- Safety trainings are held frequently in a variety of ways. There are annual trainings on performing safe sprays, "tailgate" meetings every week where safety is always a topic and safety incidents are shared throughout management when a lesson or experience can be shared.
- All staff who perform chemical applications are properly trained.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 5: Energy Use, Air Quality, and Climate Change

5.1 Agricultural Energy Use and Conservation

Conformance Evidence

- Energy Efficiency and Air Quality Policy
- Manulife Investment Management (MIM) Farmland Management Services property dashboard
- California Sustainable Winegrowing Alliance Certifications
- Renewable projects list

Auditor Notes

- VFDs on well pumps help with energy conservation. Pumps are 100% electric.
- FieldIn app helps management monitor the efficiency of staff operating the machinery. Management uses the app to keep an eye on employee routes and usage to detect inefficiencies.
- FieldIn also can track equipment location and where it is housed using GPS to help with efficiency in moving equipment from one site to another and which equipment is closest to help with projects.
- Maintenance schedule is kept on all equipment to monitor and keep equipment running smoothly.
- Irrigation practices are geared towards saving energy. Irrigation is run when needed based on the components mentioned in the water objective.
- The preventative fungicide program is designed to use as few passes as possible.
- Manulife is demoing a software package designed to track equipment efficiency. Currently, they are using GPS and monitoring all implements on a tractor, if it is being operated efficiently, and if the routes taken are efficient.
- AgMonitor is being trialed to track weather, soil moisture, Tule data, pump power, and makes recommendations based on those data points.
- Information on renewable power project status' shared with auditors, multiple projects underway.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 5: Energy Use, Air Quality, and Climate Change (Continued)

5.2 Air Quality

Conformance Evidence

- California Sustainable Winegrowing Alliance Certifications
- Energy Efficiency and Air Quality Policy

Auditor Notes

- Equipment inventory is kept and tracked through FieldIn.
- Well pumps are 100% electric and select pumps are equipped with VFD's.
- Management actively tracks equipment usage and efficiency trends.
- Staff is trained upon hire on how to operate equipment safely and efficiently.
- Trainings are held weekly via tailgate meetings that range from safety to how to operate equipment efficiently.
- Equipment inventory is kept and a maintenance schedule is followed on a software called FixIt.
- Electric vehicles are being trialed on sites.
- Dust is mitigated by laying gravel on the roads in addition to using water trucks in the hot months and during harvest.
- Dust can be an issue on select sites, a binding material is applied to the roads to keep dust down and roads will be watered. Cover crop helps with dust control as well.

Result: In Conformance

5.3 Climate-Smart Agriculture

Conformance Evidence

- Climate Smart Ag USDA Building Blocks
- Sustainability training

Auditor Notes

- Crop prunings are chipped and mulched to be reincorporated in the orchard rows.
- A maintenance schedule is kept for all equipment.
- Select equipment is outfitted with DEF engines and Tier 4 engines.
- GPS is used to track staff efficiencies in driving through FieldIn.
- Heat is the number one regional climate impact that affects the orchards in Washington. Orchards are outfitted with top sprinklers to combat the heat.
- Drip irrigation is also used, and soil moisture probes are routinely checked to see when irrigation is needed.
- Frost and heat are the two main concerns on the sites. Frost is combated with overhead sprinklers, weather stations and wind machines.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 6: Waste and Material Management

6.1 Management of Waste and Other Materials

Conformance Evidence

- Oil recycling invoices
- Hazardous Materials and Waste Management Policy
- Qualitative respirator fit test record
- Agricultural Chemical Use Policy

Auditor Notes

- The only non-organic waste generated is color up, a plastic that is laid out in between rows to reflect light up into the orchards to color the apples. It's non-recyclable and must be thrown away.
- Organic crop prunings are mulched and reincorporated back into the soil.
- Old irrigation lines are recycled, along with empty jugs and steel posts. Third-party management works with private recyclers in the local area.
- Empty chemical containers are triple rinsed and sent directly back to suppliers after no more than a week.
- All smaller plastic chemical jugs are cut and stored in a specified, fenced off area and then recycled with a local recycler.
- Pesticide containers are recycled through County-organized recycling events. They must be cleaned in a specific way before recycling.
- Waste is rarely burned on site. The only type of waste burned is vine removals when a block is pulled out to be replaced, and usually must be burned due to a disease presence.
- Metal is recycled with the local County or re-used on site for new vine plantings.
- No regulated materials are disposed of on site.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 6: Waste and Material Management (Continued)

6.2 Food and Agricultural Waste Resource Recovery

Conformance Evidence

- Winegrape sustainability Practices Memorandum
- Hazardous Materials and Waste Management Policy

Auditor Notes

- No excessive crop loss has occurred on the sites visited.
- There is sometime a frost that harms some crop but most is combated with applying water and wind machines to the orchards when a frost could occur.
- Frost can be combated with the overhead sprinklers installed and wind machines.
- To combat heat, making sure that there is enough water in the soil to feed the vine.
- Vines must have a sufficient canopy to shade the vines and fruit to protect it.
- No crop is stored on sites.
- Compost is applied in the Fall as a part of the NMP.
- The compost is grape hummus combined with cattle manure.
- Potash, lime, and other amendments are used based on soil needs.
- Cover crop, crop prunings and excess fruit are all reincorporated back into the soil.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 7: Conservation of Biodiversity

7.1 Species Protection

Conformance Evidence

- Biological resources and wetlands assessments
- At-Risk Species Policy
- Biological Resources Assessment during due diligence
- Biological assessment Response Memo
- Element occurrence reviews
- Biological reports
- Stewardship principles excerpt: SRI toolkit
- Jurisdictional Delineation Report
- Threatened & endangered species identification card

Auditor Notes

- Management group has direct access to the wildlife biologists under Manulife's employment. They can reach out to Manulife and collaborate on new projects, in addition to projects that Manulife wants to begin as well.
- Biologist's follow-up report states that wetland conditions were significantly improved after initial visit and remedial recommendations were implemented. Appropriate setbacks and grass filter strips reduced wetland encroachment.
- Special status species are identified in the due diligence process and clearly communicated to all staff.
- Best in class processes and documentation in place for biological assessments and status communication to staff and tenants.
- Manulife's wildlife Biologists have access to GIS mapping layers that point out any special sites and riparian areas.
- Manulife conducts an at-risk audit and assessments prior to new property acquisitions. No land has been designated as native habitat on sites selected, but buffers of native vegetation strips are planted on select sites.
- The due diligence process that Manulife performs includes a Phase 1 Environmental Site Assessment, ecological and biological reviews, and a Biodiversity Policy that employees follow.

Result: In Conformance, Notable Practice

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 7: Conservation of Biodiversity (Continued)

7.2 Wildlife Habitat Conservation

Conformance Evidence

- California Sustainable Winegrowing Alliance Certifications
- At-Risk Species Policy
- Biodiversity Policy
- Site photos
- Riparian Site Management Policy
- 2022 Contributions Memo
- Contribution Summary Report
- Element occurrence reviews
- Committee tracking
- Sustainability projects tracker
- Threatened & endangered species identification cards

Auditor Notes

- Several creeks and rivers border production land on selected sites visited in California. Buffer strips of vegetation border the sites and collect water runoff from rainstorms. These strips provide wildlife habitats and nesting areas for birds on the property.
- There were no ecologically important sites on the properties visited.
- The due diligence process that Manulife performs includes a Phase 1 Environmental Site Assessment, ecological and biological reviews, and a Biodiversity Policy that employees follow.
- Research is conducted during the due diligence process and any protected or native habitats identified would be defined and staff would be educated on how to approach the areas.
- Manulife maintains a Biodiversity Policy that states their efforts to maintain or enhance agrobiodiversity and biodiversity of agricultural landscapes.
- One site in Washington started a project with local high school to help local pollinator habitat.
- A local high school built wood boxes for the pollinator habitat on one Washington site (25 bee boxes and 25 bat boxes).

Result: In Conformance, Notable Practice

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 7: Conservation of Biodiversity (Continued)

7.3 Avoided Conversion

Conformance Evidence

- HNRG Sustainability and Responsible Investing (SRI) toolkit

Auditor Notes

- Manulife follows a Sustainability and Responsible Investing (SRI) toolkit that has three purposes: to highlight issues at the beginning of due diligence, to guide the process during due diligence, and inform investment committees on how SRI-related items are expected to be addressed.
- Manulife maintains a Zero Deforestation Policy that states Manulife is committed to halting global deforestation and won't engage in deforestation or purchase land on which deforestation has occurred.

Result: In Conformance

7.4 Crop Diversity

Conformance Evidence

- Agriculture maps

Auditor Notes

- Using selective root stocks that are best depending on the site locations and geographic challenges that are present.
- Manulife also follows market conditions and varieties that are likely to either be in demand, or that buyers are in need of to help meet their goals.
- Cover crop is planted between the rows of the vineyards and orchards visited, and is reincorporated back into the soil profile after mowing.

Result: In Conformance

Objective 8: Protection of Special Sites

8.1 Site Protection

Conformance Evidence

- Due diligence procedures
- Stewardship Report Excerpt: SRI toolkit

Auditor Notes

- There are no special sites on the selected properties visited on this years audit.
- Manulife's wildlife biologists have access to GIS mapping layers that point out any special sites or riparian areas.
- Manulife hires a consultant when purchasing a site, to hold a biological assessment for wetlands and native species, a Phase 1 ESA, and if there are findings they will perform a Phase 2.
- Manulife provides its own research into sites when going through the due diligence process.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 9: Local Communities

9.1 Economic Wellbeing

Conformance Evidence

- Tax strategy

Auditor Notes

- Manulife source their supplies and on-farm needs through local vendors as much as possible.
- Manulife is current on all taxes paid at the Federal and State levels.
- H2A labor is used in Washington, they are hired by the agriculture management group employed by Manulife to operate the land.

Result: In Conformance

9.2 Community Relations

Conformance Evidence

- Contribution Summary Report
- Bee boxes
- Significant stewardship projects

Auditor Notes

- Vino Farms is involved in the Sonoma County Wine Growers Ag Leadership program, which advocates the professional growth of vineyard workers.
- Donations have been made to groups who have been affected by recent fires in the wine grape community.
- Manulife contributes money to several stewardship programs throughout the year such as the American Bird Conservancy, Pollinator Partnership and Michigan State University Forest Carbon and Climate Program.
- Manulife also contributes money to other universities, research institutions, environmental NGO's, scholarships and more.
- Manulife's contributions in 2022 exceeded \$337,500.

Result: In Conformance, Notable Practice

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 9: Local Communities (Continued)

9.3 Local Communities and Indigenous Peoples

Conformance Evidence

- Social Responsibility Policy
- Stewardship training
- Due diligence procedure
- Stewardship Report Excerpt: SRI toolkit

Auditor Notes

- Manulife maintains a Social Responsibility Policy that employees must adhere to. The policy highlights the responsibility to provide a safe place to work, respect the rights of all employees, respect the rights of indigenous people and engage with local communities on social impacts related to farmland management.
- MIMTA policy requires that indigenous people are treated fairly and in a manner consistent with relevant international conventions. The policy also highlights Manulife's occupational health and safety programs.
- Sites visited this year did not have any Indigenous Communities in the area of production land.
- Initial point of contact is the property management group, who will then communicate to Manulife managers.
- Manulife tries not to advertise who is managing the property or who owns it.
- The public will usually reach out to the County Agriculture Commissioner who will then contact Manulife on any issues that arise.

Result: In Conformance

9.4 Public Health

Conformance Evidence

- Agricultural Chemical Use Policy
- Safety meeting slides
- Social Responsibility Policy

Auditor Notes

- Safety meetings are held daily before an on-site activity is started.
- Weekly meetings are held on different topics and incidents that have occurred to use as a learning opportunity.
- Annual injury, illness prevention program is held and includes a respiratory fit test, and other injury prevention trainings.
- Emergency mailboxes are kept on site that contain all required labor and agency postings.
- Most recent pesticide applications are kept as for the public and employees to see.

Result: In Conformance

Objective 10: Employees and Farm Labor

10.1 Safe and Respectful Working Environment

Conformance Evidence

- Workplace compliance posters
- Global hiring policy

Auditor Notes

- Manulife holds an Equal Employment Opportunity (EEO) and Pay Transparency Non-Discrimination Statement. The statement outlines Manulife's commitment to fair recruitment, hiring, retention, advancement, compensation and access to training.
- Manulife also maintains a Global Hiring Policy committing to the same standards above on all global entities.
- Manulife requires all tenants to post safety, anti-discrimination and respectful work environment postings in shops in the respective states.
- Manulife holds a Diversity, Equity and Inclusion Commitment to aid Manulife and its employees to grow an inclusive and diverse company that fosters a workplace where differences are recognized and valued.
- A policy handling discrimination, harassment and workplace violence is also on-file, promoting a safe and healthy work environment that promotes respect, dignity, inclusion and acceptance. Manulife states they will not tolerate discrimination, harassment, or violence in the workplace.
- Trainings on identifying fraud are also held to keep employees safe.

Result: In Conformance

Objective 10: Employees and Farm Labor (Continued)

10.2 Occupational Training

Conformance Evidence

- Safety matrix
- Qualitative respirator fit test record
- MFS safety principles
- Training rosters
- Safe Work Environment Policy
- Safety meeting slides

Auditor Notes

- Safety meetings are held weekly on different topics, and incidents that have occurred are reviewed to use as a learning opportunity.
- Annual injury, illness prevention program is held and includes a respiratory fit test, and other injury prevention trainings.
- Emergency mailboxes are kept on site that contain all required labor and agency postings.
- Most recent pesticide applications are kept as for the public and employees to see.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 10: Employees and Farm Labor (Continued)

10.3 Supporting Capacity for Sustainability

Conformance Evidence

- Agricultural Stewardship Commitment
- Leading Harvest Commitment
- Stewardship report
- Roles and responsibilities documentation
- Stewardship training
- Safe Work Environment Policy
- MFS safety principles
- MFS annual training outline

Auditor Notes

- A commitment to the LH FMS is present in Manulife's Stewardship and Sustainable Investing reports.
- Manulife central office staff will informally speak to Farm Labor Contract (FLC) management staff on the LH FMS and how it relates to other standards they are adopting to help prepare them for LH FMS audits.
- For internal staff, there is a roles and responsibilities list that keeps records of the objectives and who is responsible for implementing the standard.
- New employees undergo a training on Manulife goals which includes LH FMS and why it matters.
- There is a lot of organically driven communication that is engrained in Manulife culture where it is brought up frequently in internal communications. New employees are educated on land stewardship and the importance of conforming to LH FMS during the onboarding process.
- There is an annual manager's meeting and regular sustainability training for all managers.
- Weekly tailgate meetings are held for on-farm employees to go over safety information and planning for the week.
- Manulife also holds stewardship trainings with sign in sheets for attendees.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 10: Employees and Farm Labor (Continued)

10.4 Compensation

Conformance Evidence

- Living wage tables

Auditor Notes

- Manulife completes a living wage survey every year to determine and research living wage in each area it direct operates and sets compensation accordingly.
- Human Resources conducts surveys for fair compensation levels determined on roles, location and responsibilities.

Result: In Conformance

10.5 Farm Labor

Conformance Evidence

- Farm Labor Contractor Audit Checklist
- Farm labor contractor audit results and responses

Auditor Notes

- Manulife's compliance team performs an annual audit where certain documents are analyzed to make sure the Farm Labor Contractors (FLCs) are in compliance with Manulife standards.
- FLC responses to surveys and audits are reviewed and recorded as part of FLC assessments.
- Documents such as training records, safety records and others are required to be submitted.
- Manulife does not have much influence on the labor that FLCs hire or labor management. Manulife has influence on FLCs when it comes to management of the sites, safety involved, and general management practices.
- Manulife managers are in communication with the FLC foreman on sites weekly, and visit the sites at minimum once a quarter, but this year is more due to weather issues affecting the sites.

Result: In conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 11: Legal and Regulatory Compliance

11.1 Legal Compliance

Conformance Evidence

- Safety meeting notes
- “Flash” Risk and Compliance Reports
- Discrimination Harassment and Violence Policy
- Standards of behavior and performance

Auditor Notes

- Manulife has a risk and compliance team that handles safety aspects of on-farm practices.
- Safety consultants are hired to inform Manulife on requirements they need to add based on new regulations.
- Manulife's water team is plugged in to water compliance, especially in California, where they meet and discuss topics such as water quality and quantity regulations and requirements.
- The State Department of Agriculture, Revenue, and other applicable fields are checked regularly and relied upon when state specific issues pop up.
- Portions of the harassment trainings provided annually relate to legal compliance.
- Safety trainings related to personal protective equipment (PPE) and handling chemicals are updated with new legal compliance issues.
- Constant communication is in place with the compliance team to discuss new or upcoming changes with staff in the appropriate areas.
- Monthly Risk and Compliance Reports are produced and issued.
- On-site there are OSHA posters in English and Spanish for employees to review and remind of safety procedures. Manulife has these postings in each state that they operate in with legal language to adhere to the state’s applicable laws.

Result: In Conformance

Objective 11: Legal and Regulatory Compliance (Continued)

11.2 Legal Compliance Policies

Conformance Evidence

- Social Responsibility Policy
- Discrimination Harassment and Violence Policy
- Global Hiring Policy
- US employment and health and safety notices
- Safe Work Environment Policy
- Standards of behavior and performance

Auditor Notes

- Manulife maintains a Social Responsibility Policy that employees must adhere to. The policy highlights the responsibility to provide a safe place to work, respect the rights of all employees, respect the rights of indigenous people and engage with local communities on social impacts related to farmland management.
- MIMTA policy requires that indigenous people are treated fairly and in a manner consistent with relevant international conventions.
- Manulife's Social Responsibility Policy explicitly states that Manulife and its employees shall comply with all applicable International, Federal, Provincial, State and Local laws regarding occupational health and safety and shall strive to operate in a manner consistent with relevant United Nations (UN) conventions that have been ratified by countries in which Manulife operates.

Result: In Conformance

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 12: Management Review and Continual Improvement

12.1 Farm Review and Continual Improvement

Conformance Evidence

- Significant stewardship projects
- MIMTA all employee training
- Sustainability goals and support
- Manulife Farmland Certification Summary
- Readiness Review Report
- Employment and Professional Skills Training Report excerpt
- Sustainable Agriculture Program annual management reviews
- MAS North American flash report
- Continual improvement process
- Management system description
- MAS management review

Auditor Notes

- Third-party managers hold internal employee reviews themselves on an annual basis, going over goals set from the prior year and tracking the goal progress.
- Manulife evaluates third-party groups in totality from measures such as financial performance, site upkeep, vine growth, cleanliness of the site, safety compliance and incidents. Safety is number one priority with Manulife.
- Manulife employees set goals at the start of the year with their manager. Mid-year, these goals are formally reviewed and analyzed. At the end of the year, the goals are reviewed in totality and the review directly ties into employee bonuses.
- Manulife explicitly states their steps for monitoring performance related to the LH FMS in their Continual Improvement Process Document.
- The process leans heavily on LH FMS audits and the findings that are generated after the audit is conducted.
- Work with local universities on growing fruit more efficiently (water) and conducting overhead cooling trials like overhead sprinklers, shade cloth, foggers, moisture probes.
- Cover crop trials such as cereal rye to leave out and break down over time. Over time, trees appear healthier.
- There are annual management reviews for direct operate sites.
- Internal findings are discussed based on the year and LH FMS audit findings. These are gathered into a report and sent to Manulife services who can see the performance of the sites and how they are doing in reaching goals set.
- Monthly board meetings are held at the leadership level to communicate goals and progress or issues that are arising.
- Quarterly, there are in person meetings within the teams to communicate the same goals and progress.
- Annually, each team meets with the board to formally go over each item from the quarterly meetings and go over them in a presentation format.

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Objective 12: Management Review and Continual Improvement (Continued)

12.1 Farm Review and Continual Improvement (Continued)

- Opportunities for Improvement (OFI's) are recorded internally and logged into a register that Manulife's central office looks at throughout the year, and formally in a management review meeting held annually.

Result: *In Conformance, Notable Practice*

12.2 Support for Sustainable Agriculture

Conformance Evidence

- Biochar site photos
- Committee tracking
- Stewardship Project Entry Form
- Stewardship project entry silicon trial
- New Project Proposal Forms

Auditor Notes

- Vino Farms participates in pesticide trials on Manulife sites, usually trialing materials that can be beneficial to the select sites.
- Ford Pro electric vehicle trials are being performed by one of the FLC's operating a site. The fleet is mostly comprised of pickup trucks.
- Rootstock trials are performed with the University of California system.
- Underground drip line irrigation trials in Paso Robles.

Result: *In Conformance*

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

KEY FINDINGS

Previous Non-Conformances: There were no previous non-conformances identified in previous audits.

Major Non-Conformances: No major non-conformance was identified during the audit.

Minor Non-Conformances: No minor non-conformance was identified during the audit.

Opportunities for Improvement (OFI): No opportunities for improvement were identified during the audit.

Notable Practices: Nine (9) notable practice was identified during the audit.

1. 1.1.1 Farmland Stewardship Commitment
 - a. Manulife maintains a written Commitment to Sustainable Agricultural Stewardship, containing five stewardship principals and twelve stewardship policies. The policies closely align with the Leading Harvest Farmland Management Standard (LH FMS) objectives and set the standard for conforming commitment statements.
2. 1.1.2 Farmland Stewardship
 - a. Critical Factors are considered additional to default risks requiring control in the Due Diligence / SRI tool kit. Status of risks and opportunities in agriculture and the importance of sustainably managed agriculture are communicated across the entire company in all employee meetings in an open and transparent manner.
3. 3.1.2 Regional Water Conservation
 - a. MIMTA Senior Management maintains a notable presence with California Water Leaders and Collaborative Action Programs where the investment management community tends to be underrepresented.
4. 7.1.1 Threatened and Endangered Species
5. 7.1.2 t-Risk Species
 - a. MIMTA maintains best in class processes and documentation in place for biological assessments and status communication to staff and tenants.

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

6. 7.2.3 Cropland for Wildlife Habitat

- a. Multiple examples of partnering on wildlife habitat projects have been observed, recorded, and documented. Two examples include a site in Washington starting a project with a local high school to help local pollinator habitat. Another local high school built wood boxes for the pollinator habitat on another Washington site (25 bee boxes and 25 bat boxes). Combining community outreach and partnership with conservation efforts is notable in its creativity and inclusion of multiple stakeholders.

7. 9.2.1 Community Engagement

- a. MIMTA maintains a community outreach log recording investments, donations, and assistance provided to myriad community facing efforts. The extent of community outreach is notable in its scale and support.

8. 12.1.1 Performance Review

- a. Performance reviews include a review of employee set goals against a number of metrics. Bonus compensation is in part based upon performance to goals. There are metrics related to safety, sustainability, goal setting and project performance that are included in the calculation of the bonus score. The practice is deemed notable due to employees having a personal stake in the sustainability and LH FMS performance of MIMTA.

9. 12.1.4 Annual Review and Improvement

- a. The continual improvement process employed by MIMTA directly addresses and explicitly refers to findings and objectives from the LH FMS. MIMTA has set a high standard for program users in demonstrating that the Objectives and Performance Measures of the LH FMS are thoroughly integrated into their culture and standard operating procedures.

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The Leading Harvest logo cannot be used on product labels. The use of the Averum logo is not allowed without expressed permission from Averum.

Review of Previous Audit Cycle: 2023 marks a recertification year for MIMTA and initiates a new certification cycle. MIMTA has demonstrated their conformance, been certified, and has remained in good standing with the LH FMS continuously since their initial certification in 2020. MIMTA successfully completed surveillance audits in 2021 and 2022.

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

CONCLUSIONS

Results of the audit indicate that Manulife has implemented a management system that meets the requirements of, and is in conformance with, the Leading Harvest Farmland Management Standard 2020. Manulife's enrolled acreage is recommended for certification to the Leading Harvest Farmland Management Standard 2020.

MANULIFE INVESTMENT MANAGEMENT TIMBERLAND AND AGRICULTURE

LH FMS AUDIT SUMMARY REPORT: DIRECT OPERATED PROPERTIES

June 22, 2023

Summary of Audit Findings					
Program User	Manulife Investment Management Timberland and Agriculture				
Audit Dates	April 21, 2023 – June 22, 2023				
Non-Conformances Raised (NCR):	<table border="1"> <thead> <tr> <th>Major</th> <th>Minor</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	Major	Minor	0	0
Major	Minor				
0	0				
Follow-Up Visit Needed?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <i>Date(s)</i>				
Follow-Up Visit Remarks					
N/A					
Team Leader Recommendations					
Corrective Action Plan(s) Accepted	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> 2023/06/22				
Proceed to/Continue Certification	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> 2023/06/22				
All NCR Closed	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> 2023/06/22				
Standard(s) Audited Against					
Leading Harvest Farmland Management Standard 2020 (Objectives 1 through 12)					
Audit Team Leader	Audit Team Members				
Matt Armstrong	Andrew Zetterberg Linnea Rash Kyle Rusten				
Scope of Audit					
Management of production farmland on direct operated properties.					
Accreditations	Approval by Leading Harvest to provide certification audits				
Number of Certificates	1				
Certificate Number	AVERUM-LHFMS-2023-0007				
Proposed Date for Next Audit Event	TBD				
Audit Report Distribution	Attn: Natasha Wise, NLWise@manulife.com				