



# Manulife Investment Management Timberland and Agriculture

Boston, Massachusetts

LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022





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Certification Audit     Re-Certification Audit     Surveillance Audit     Scope Extension

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

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### INTRODUCTION

This report summarizes the results of the second surveillance audit conducted on Manulife Investment Management Timberland and Agriculture's (MIMTA's) Directly Operated production agriculture properties. The audit was conducted by Matt Armstrong, lead auditor for Averum. Mr. Armstrong has had experience with Leading Harvest throughout its development, is an AA1000AS provider, and has expertise in production agriculture on multiple crop types in North American regions. Mr. Armstrong was assisted by field Auditor Andrew Zetterberg. 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 western region of the United States. Mr. Armstrong and Mr. Rusten 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

Manulife Investment Management Timberland and Agriculture's (MIMTA's) conformance to the Leading Harvest Farmland Management Standard (LH FMS) was certified in 2020. In 2022, Averum was engaged by MIMTA to perform surveillance audits of sustainability performance on 77,593 acres of direct managed agricultural operations and determine the maintenance of their conformance to the principles, objectives, performance measures, and indicators of the LH FMS. LH FMS objectives 1 through 12 were covered during site visits on properties in California and Wisconsin. There was no substitution or modification of LH FMS performance measures.

### COMPANY INFORMATION

Manulife Investment Management Agriculture Services (MAS) is the property management subsidiary of MIMTA, a global agriculture investment manager. MAS is responsible for the day-to-day farmland management services for MIMTA's direct operated properties in California, Washington, and Wisconsin. MIMTA's California properties are split into three "sub-regions"; North, Central, and South, spanning from north of Sacramento to south of Bakersfield. Due to the abundance of property in California, one of the three sub-regions will always be included in MIMTA's annual sample. Washington and Wisconsin selections alternate depending on any unique criteria in the given year.

MIMTA's direct operated (DO) properties span a wide variety of terrain, from the rain shadow east of the Cascades in Washington, throughout the central valley of California, to the wetlands and bogs of central Wisconsin. The audit was conducted in Central California (Madera 23 Ranches 1-3, Green Valley and Keyes Road) and Wisconsin (Adams 13, Adams Waushara, Vilas Trout River, Vilas 51 and Price Cranberry Lake) regions. Washington properties were visited in 2021 during certifications audits and no nonconformances were noted. Additionally, personnel overseeing safety and 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 consists of almond, pistachio, walnut, apple, grapes (table and wine), and cranberry varieties.

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

---

### AUDIT PLAN

Site visits were coordinated with MIMTA staff to manage logistics and increase efficiency. An audit plan was developed and is maintained on file by Averum. An online portal was established for MIMTA coordinators to upload evidence and documentation securely for auditor review. Evidence was continuously uploaded throughout the audit. An opening meeting was held at 11 am on April 29, 2022, via conference call. Following the meeting, a document review of the provided evidence was conducted by Averum. Field sites on the California properties were examined on May 17<sup>th</sup> and 18<sup>th</sup>, 2022. Field sites on Wisconsin properties were examined on May 3<sup>rd</sup> and 4<sup>th</sup>, 2022. A closing meeting was held at 2 pm on June 10<sup>th</sup>, 2022.

#### Opening Meeting: Conference Call

April 29, 2022; 11:00 am

**Attendees:** (MIMTA) Holly Evers, Samantha Lopes, Jason Ochoa, Miguel Aguilar-More, Natasha Wise, Gregory Spacek, Karl Pippenger, Michael Bretl, Jon Jr Skubal, Jeremiah Mabie, Travis Baughman, Casey Hubbs, David Bergvall, Kevin Wright, Lindsey Webb

(Audit Team) Matt Armstrong, Andrew Zetterberg

**Topics:**

- Introductions of participants and their roles: Holly Evers
- Introduce audit team: Matt Armstrong
- Status of findings of the previous audits: Matt Armstrong
- Audit plan: Matt Armstrong
- Work safety and emergency procedures: Holly Evers
- Expectations of MIMTA staff: Matt Armstrong
- Method of reporting: Matt Armstrong

#### Closing Meeting: Teleconference

June 10, 2022; 2:00 pm

**Attendees:**

(MIMTA) Holly Evers, Kevin Wright, Lucas Avila, Miguel Aguilar-Mora, Samantha Lopes, Jose Alvarado, Inderjit Samran, Salvador Cancilla, David Evers, Natasha Wise, Brian Kernohan, David Bergvall, Brent McGowan, Cayden Pricolo

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

**Topics:**

- Opening remarks: Holly Evers
- 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: 5
- Reporting timing and expectations: Matt Armstrong

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

### MULTI-SITE REQUIREMENTS

MIMTA, through MAS, maintains operations consisting of a central office in Turlock, CA and five regions, with multiple sites within each region. MIMTA qualifies for multi-site sampling because sites within the management system are centrally controlled and directed by regional managers, with regular monitoring activities. Additionally, MIMTA has dedicated resources overseeing risk and compliance across the organization monitoring on an on-going basis. Regional managers are responsible for developing action plans regarding Leading Harvest conformance and report them to the Sustainability Coordinator and central office. MIMTA'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 Leading Harvest Farmland Management Standard. In accordance with IAF-MD methodology, all sites were randomly selected with consideration to previous year's audits and coordinated to ensure representative coverage of the complexity of the portfolio, variance in sizes of properties, environmental issues, geographical dispersion, and logistical feasibility. Additionally, due to the COVID-19 pandemic, site visits were planned and coordinated to ensure the highest level of safety for both MIMTA staff and auditors.

Region	Crop	Properties Examined During Engagement
West (North)		
West (Central)	Almonds, Pistachios	Madera 23 Ranches 1-3, Green Valley, and Keyes Road <ul style="list-style-type: none"><li>- 9 of 28 properties</li><li>- 32% of regional properties</li><li>- 3.7% of total DO properties</li></ul>
West (South)		
Pacific Northwest		
Midwest	Cranberries	Adams 13, Adams Waushara, Vilas Trout River, Vilas 51 and Price Cranberry Lake <ul style="list-style-type: none"><li>- 7 of 27 properties</li><li>- 25.9% of regional properties</li><li>- 2.8% of total DO properties</li></ul>

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

---

### AUDIT RESULTS

Overall, MIMTA's agricultural operations continue to demonstrate conformance 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, as well as more detailed sets of data from single sites. Field visits were performed on sixteen operating sites, nine primarily producing almonds and pistachios, and seven primarily producing cranberries. Central and local management representatives were present and interviewed to illustrate MIMTA policy creation and 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. Stewardship coordinators were available as guides throughout the entire engagement, providing logistic support and honoring evidence requests wherever needed.

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

---

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

### OBJECTIVE 1: SUSTAINABLE AGRICULTURE

#### Performance Measure (PM) 1.1 Sustainable Agricultural Stewardship

##### Conformance Evidence:

- Ag Stewardship Commitment
- Stewardship Policies
- Stewardship Principles
- Community Engagement Procedure
- Social Responsibility Policy
- SRI Toolkit
- Farm maps
- American Society of Agronomy Sustainability Specialist Certificates
- Critical External Factors Forms
- Re-Development Process
- Summaries of conservation practices
- Verbal overviews of how environmental, social, and environmental synergies are managed in balance with profitability
- Verbal descriptions of activities to avoid conversion of prime farmland

*Auditor Notes: MIMTA operates a mature agricultural management line of business. Commitment to, awareness of, and attention to sustainable ag practices are present throughout the organization. Properties are in conformance with the Global GAP (Good Agricultural Practices) standard where applicable. Company stewardship and sustainability mission statements are posted publicly in main areas of shops. Conversations with managers reflect that decisions are made considering environmental, social, and economic balances. MIMTA does not convert and prime farmland to non-ag use. Conversion to solar farms, etc. would be on non-prime categorized land. Parcels are made contiguous wherever possible.*

**Result: In Conformance, Notable Practice (See Key Findings)**

### OBJECTIVE 1: SUSTAINABLE AGRICULTURE (Continued)

#### Performance Measure (PM) 1.2 Critical External Factors

##### Conformance Evidence:

- Critical External Factors form
- Verbal overview of the process for identifying and addressing critical external factors, key risks, and opportunities

*Auditor Notes: Issues that require increased awareness of management vary from region to region. The most reported material management issues are water security, increasing efficiency, and adapting to changing conditions on sites. In addition to due diligence practices, MIMTA has systems and policies in place to support regional and farm managers in negotiating issues as they arise. Yield records are reviewed and aligned with planned yields. Critical external factor forms are sent to VPs to review for their areas to make sure nothing is overlooked. Forms are written down to communicate during an audit. Form will be updated every two years unless something permanent comes up between iterations.*

**Result: In Conformance**

### OBJECTIVE 2: Soil Health and Conservation

#### Performance Measure (PM) 2.1 Soil Health

##### Conformance Evidence:

- Soil sample test results
- Nutrient Management Plans
- Fertilization records,
- Planning documents
- Product use records
- Amendment and leaching schedule
- Fertility plan
- Irrigation and nitrogen management worksheets
- Sampling and testing procedure
- Soil productivity policy
- Yield records
- Fertilizer detail reports
- Tissue tests
- Chipped residue (whole orchard recycling)
- Residue in rows and on roads

*Auditor Notes: New sand is applied on top of vines annually to facilitate and encourage new growth on cranberry vines. Soil probes are used at different depths to measure soil moisture levels in California to help water efficiently and keep trees healthy. Properties test soil health and leaf tissues and maintain nutrition plans that hold soil productivity and health as the primary concerns. Tests are geographically varied and are performed on a myriad of crops. Nutrition plans are informed and modified through testing and professional crop consultant analysis. Crop consultant recommendations are reviewed for lack of care or attention. Consultant recommendations and product use reports are prepared by qualified third parties and stored for review post-season. Variable applications are used on farmland based on prior year uses, historical data, and new challenges in the current year. Any diversions from the nutrient management plan are recorded.*

*Crop residues are reincorporated to the tree rows as an erosion deterrent and to mitigate dust. Some residue from organic matter is repurposed into animal feed. All crop residue is recycled in some way, either as feed, dust control, or erosion control.*

**Result: In Conformance**

### OBJECTIVE 2: Soil Health and Conservation (Continued)

#### Performance Measure (PM) 2.2 Soil Conservation

##### Conformance Evidence:

- Application records
- Applicator calibration guide
- Sediment and erosion control procedure and plan
- Visual confirmation of practices

*Auditor Notes: MIMTA strives for efficient production to enhance sustainability efforts as well as reduce operating costs. Soil characteristics are constantly monitored, and rows are checked daily. Plots and rows are not abandoned due to lowered production. Organic material is added at the beginning of growing season and with new plantings. Cover and grasses are in place where feasible to secure and enhance soil health while ensuring harvest disruptions are minimized. Biological waste and biomass are reincorporated into soils wherever possible. Properties are rested to recharge soils between redevelopments. Minimal concern regarding erosion on California properties due to mitigation procedures and plan controls. MIMTA works with engineers to develop plans that prevent erosion on operated sites.*

**Result: In Conformance**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

### OBJECTIVE 3: Protection of Water Resources

#### Performance Measure (PM) 3.1 Water Use

##### Conformance Evidence:

- Verbal descriptions of processes for avoiding available groundwater depletion beyond recharge capacity
- Verbal description of participation in regional water use conservation programs
- Verbal descriptions of programs to conserve water and manage pests, salinization, and other impacts
- Verbal description of application of regional BMPs
- Visual confirmation of practices
- Demonstration of technological advancements in field
- Water use and management policy
- Well maps and meter readings
- Status tracking of groundwater
- SGMA (CA) planning
- Irrigation records
- Soil moisture reports
- Wind reports

*Auditor Notes: Strategies vary depending on critical issues in the region. In areas where water removal is the critical issue, all water used is surface water and thoughtfully designed ditching as well as pitched lake edges are used. Additionally, the centers of bogs are pitched to move water. In areas prone to drought, properties are irrigated via wells that are owned by MIMTA, eliminating reliance on the county for water access. WiseCon irrigation programs are used to monitor water usage and help automate the flow of water to trees. Water recharge practices are in place instead of using water credits. MIMTA participates in the Farm Recharge program.*

*Water usage is measured by flowmeters. Water quality is tested three times per year at the inflow point on sites that have them. On sites with wells, water quality is tested annually. Water is also tested three times before harvest to minimize risks of E. coli contamination. Short irrigation sets are used. There is a water recycling system in place that reuses water to clean filters, eliminating the risk of wasting water. Pressure regulators on lines save water or provide extra water when it is needed. Fields are scouted on a daily basis for irrigation issues or breakage in the pipes.*

**Result: In Conformance, Notable Practice (See Key Findings)**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

---

### OBJECTIVE 3: Protection of Water Resources

#### Performance Measure (PM) 3.2 Water Quality

##### Conformance Evidence:

- Verbal description of application of regional BMPs to protect groundwater from agricultural inputs
- Verbal description of application of regional BMPs to protect wetlands and resources from runoff
- Visual confirmations of practices
- Structures to control and direct waterflow
- Water recapture points
- Water use and quality management policy
- Water management reports
- Nitrogen management plans
- Water analysis reports
- Pest reports

*Auditor Notes: Riparian areas are respected and protected through a variety of practices, including generous buffers. Wetland areas are noted in the acquisition process. Fertilizer injection pumps are installed throughout the properties and are actively managed. No evidence of run off, soil erosion, or over-application of nutrients was observed on sites. The cranberry fields are scouted daily on all properties visited. Soil moisture testing is performed, as is tissue testing to detect how much water is needed on sites. Water quality tests are performed on the wells annually, as well as three times leading up to harvest for E. coli presence.*

*Pruning methods have been improved and led to increased production and yields. Discoveries made in production increases could provide new strategies for "off year" planning.*

**Result: In Conformance**

### OBJECTIVE 4: Protection of Crops

#### Performance Measure (PM) 4.1 Integrated Pest Management

##### Conformance Evidence:

- Verbal descriptions of pest monitoring efforts and practices
- Descriptions of threshold application amounts to prevent crop loss
- Verbal descriptions of processes to achieve crop protection
- Verbal descriptions of pest management routines to avoid crop protection resistance and pest buildup
- Verbal description of lowest risk product selection process
- Visual confirmations of practices
- Agricultural Chemical Use Policy
- Integrated Pest Management (IPM) Policy and Procedures
- Monthly usage reports
- PCA reports
- Ranch inspections
- Pre-harvest inspections
- Chemical recommendations
- Applicator licenses
- Biotechnology policy
- Scouting reports

*Auditor Notes: Pest Control Advisors (PCAs) are local, independent, and make recommendations on pest management. Additionally, non-chemical control mechanisms (pheromones, predators, sand application, etc.) are in place where possible, and new methods of non-chemical controls are tested on sites. Farm Labor Contractors (FLC) and PCAs come to the farm sites on a weekly basis to observe weed pressure and any pests on trees and make recommendations based on findings.*

**Result: In Conformance**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

---

### OBJECTIVE 4: Protection of Crops (Continued)

#### Performance Measure (PM) 4.2 Crop Protection Management

##### Conformance Evidence:

- Verbal description of crop protectant storage, application, and responses to regulatory requirements
- Visual conformation of practices
- Agricultural Chemical Use Policy
- Pesticide training records
- Pesticide safety training
- Worker Protection Standard (WPS) postings
- Qualified Application Licenses (QAL) on file
- Ranch inspections
- Personal Illness Injury Prevention Plan (PIPP) trainings

*Auditor Notes: Mixing truck stations have been improved in the years since first implemented. Staff is licensed for chemical application. All chemical containers are stored according to Environmental Health and Safety guidelines and depleted containers are washed and recycled. Labor on sites is trained in safe material handling and procedures.*

**Result: In Conformance**

### OBJECTIVE 5: Energy Use, Air Quality, and Climate Change

#### Performance Measure (PM) 5.1 Agricultural Energy Use and Conservation

##### Conformance Evidence:

- Verbal description of energy conservation technology and practices
- Verbal description of renewable energy on sites and considerations on renewable energy use
- Visual confirmations of practices
- Energy Efficiency and Air Quality Policy
- Climate-smart Fact Sheet
- Pump tests
- Climate-smart ag tailgate training
- VAS New Project Practices
- VAS Leading Harvest Renewable Energy information
- Solar Project flowchart

*Auditor Notes: Smaller, more efficient equipment is used when larger equipment is unnecessary. Pump stations have been upgraded to "soft start" variable frequency drives, and some are triggered by tensiometers to run only when needed. Solar is being installed in both California and Wisconsin. Water pumps are electrically powered. Trainings are held on vehicle safety and efficient operation.*

**Result: In Conformance**

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

**Performance Measure (PM) 5.2 Air Quality**

Conformance Evidence:

- Verbal descriptions of low emission technology upgrades and maintenance with lower emissions as a stated goal
- Verbal descriptions of dust control practices
- Visual confirmations of practices
- Energy Efficiency and Air Quality Policy
- Documented dust control policies
- GHG Emissions Verification Report

*Auditor Notes: Equipment is current, with Tier 4 engines, Diesel Exhaust Fluid (DEF) systems, and ReGen filters. Equipment engines are maintained as recommended by manufacturers by qualified mechanics. Maintenance shops keep maintenance, service, and usage logs. Employees are trained for three days on equipment use without exception. Equipment passes are reduced through trained operators and GPS/autopilot systems. Dust is managed in a variety of ways: water trucks, sanding, residue and wood chipping, grass on roads, and running equipment on the inside of rows to keep soil on the property. Cover crops are grown on new plantings in the second-year trees are established.*

**Result: In Conformance**

**Performance Measure (PM) 5.3 Climate Smart Agriculture**

Conformance Evidence:

- Verbal description of application of regional BMPs to minimize greenhouse gas emissions (GHG)
- Verbal description of Climate-Smart BMPs
- Discussion with employees regarding potential impacts and risks of climate change to agriculture in regions
- Visual confirmation of practices
- Energy Efficiency and Air Quality Policy
- Climate-smart Fact Sheet
- Climate-smart tailgate training
- GHG Emissions Verification Report

*Auditor Notes: Equipment maintenance logs are kept on record. GPS used in tractors for route efficiency. Cover and grasses are allowed where possible. Changes to weather patterns have made the ability to stay informed about upcoming weather a critical issue. Weather stations, thermal core images, and fly over scans are used to manage applications and practices. GHG emission verifications have already taken place with no material differences noted.*

**Result: In Conformance, Notable Practice (See Key Findings)**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

### OBJECTIVE 6: Waste and Material Management

#### Performance Measure (PM) 6.1 Management of Waste and Other Materials

##### Conformance Evidence:

- Verbal descriptions of universal, hazardous, and sold waste handling and disposal practices
- Verbal description of repurpose and recycling practices
- Verbal description of management, use, and storage of agricultural chemicals, gases, fluids and fuels
- Visual confirmation of practices
- Hazardous Materials and Waste Management Policy
- Waste Management Procedure
- California Environmental Reporting System (CERS)
- Used oil treatment
- Universal waste management training certifications
- Universal waste tailgate trainings
- Used materials records

*Auditor Notes: Chemical containers, metal, plastics, and office waste are all recycled when possible. Waste and recycling storage is clean, organized, and in conformance with environmental health and safety guidelines. Engine oil is saved and recycled or sent to be "scrubbed" and reused by others. Properties are in conformance with the Global GAP (Good Agricultural Practices) standard where applicable.*

**Result: In Conformance**

#### Performance Measure (PM) 6.2 Food and Agricultural Product Waste Resource Recovery

##### Conformance Evidence:

- Verbal description of efforts to prevent losses of food crops during harvest and storage
- Verbal description of practices to reuse, repurpose, and recycle product, crop residue, and agriculture waste
- Visual confirmation of practices
- Waste management procedure document

*Auditor Notes: Weather is the primary consideration effecting potential crop losses. Sites are heavily monitored, and procedures are in place for minimizing the risk of weather damage to crops. No harvested crop is left on sites. IPMs are in place and scouting continues weekly to prevent pest damage. Plantings that have been pulled or retired, as well as post-harvest plant materials, are shredded and reincorporated into soil on regional properties. Operators in Wisconsin create compost on leftover organic matter.*

**Result: In Conformance**

**OBJECTIVE 7: Conservation of Biodiversity**

**Performance Measure (PM) 7.1 Species Protection**

Conformance Evidence:

- Verbal descriptions of threatened, endangered, and at-risk species assessments to determine presence
- Verbal description of practices when at-risk species are identified on site
- Visual confirmation of bulletins and posters
- At-risk species management policy
- Biodiversity policy
- Due Diligence Procedures
- Tailgate trainings on element of occurrences and threatened and endangered species lists

*Auditor Notes: MIMTA operates and supports biodiversity programs on properties. In each region, information regarding threatened and endangered species and species of concern is collected by a staff biologist and shared with management, along with information regarding any protected or native habitat. Employees are trained on how to handle situations and encounters with animals and areas to avoid in the neighboring land. An animal encounter report is also available, which is updated whenever an animal encounter occurs on the farm. Management staff has prepared informational posters and distributed them to all shop locations. MIMTA engages in Project Wingspan to provide milkweed for monarchs.*

**Result: In Conformance, Notable Practice (See Key Findings)**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

---

### OBJECTIVE 7: Conservation of Biodiversity (Continued)

#### Performance Measure (PM) 7.2 Wildlife Habitat Conservation

##### Conformance Evidence:

- Verbal descriptions of efforts to assess native habitats and natural communities
- Verbal descriptions of practices for managing native habitats and natural communities
- Verbal descriptions of programs and practices for managing Ecologically Important Sites
- Verbal description of application of regional BMPs on cropland to create wildlife habitats
- Visual confirmation of practices
- Biodiversity Policy
- Native habitat sites maps
- Biodiversity plans
- Due Diligence Procedures
- Pollinator habitat logs

*Auditor Notes: Research is conducted when a farm is purchased and employees are notified of any protected, endangered, or threatened species, along with any protected or native habitats. Employees are trained on how to handle situations and encounters with animals and areas to avoid in the neighboring land. Beneficial and non-invasive wildlife is allowed access to properties. Riparian areas are protected, pollinator habitats are established, and mutually beneficial predatory species are encouraged on properties. Wind rows are planted instead of fencing, planted as pollinator habitat. Bee friendly certification is included in future plans, through the pollinator alliance.*

**Result: In Conformance**

### OBJECTIVE 7: Conservation of Biodiversity (Continued)

#### Performance Measure (PM) 7.3 Avoided Conversion

##### Conformance Evidence:

- Verbal description of practices and decision making to avoid land use conversion and fragmentation of Natural Communities and Ecologically Important Sites
- Identified sites on maps and GIS layers
- Verbal description of due diligence processes to avoid purchasing farmland converted from natural forest
- Visual conformation of practices
- MIMTA Zero-Deforestation Policy
- Biodiversity policy
- Biodiversity plans
- Due Diligence Procedure

*Auditor Notes: MIMTA policy states land use and due diligence process determines highest and best use for properties. When purchasing investment property, MIMTA's due diligence procedures identify ecologically important sites. Relationships are managed with Army Corps of Engineers to maintain delineation between properties and protected sites to avoid unnecessary, erroneous, or illegal land conversion.*

**Result: In Conformance**

#### Performance Measure (PM) 7.4 Crop Diversity

##### Conformance Evidence:

- Verbal descriptions of varieties of crop species and companion crops
- Verbal description of crop species alternatives and changes
- Visual confirmations of practices
- Agricultural Biotechnology policy
- Biodiversity policy
- Native Habitat sites map

*Auditor Notes: Crop species are varied and based on specific criteria, including benefits to biodiversity plans. Working groups are established to determine ideal variety mixes of crop species.*

**Result: In Conformance**

# Manulife Investment Management Timberland and Agriculture

LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

---

## OBJECTIVE 8: Protection of Special Sites

### Performance Measure (PM) 8.1 Site Protection

#### *Conformance Evidence:*

- Verbal description of procedures to access information from natural heritage data or use of experts that identify special sites
- Due Diligence Procedure
- Riparian site management policy
- Water sample lab analysis
- Special sites map
- SRI toolkit

*Auditor Notes: Protected sites requiring special consideration are identified during due diligence with the assistance of third-party engineers, local consultants, and the Army Corps of Engineers. When potential archeological sites are identified, regional management will contact local indigenous populations to ensure it is handled appropriately and respectfully. There is an indigenous community identified neighboring one of the farms in this year's sample; the land was surveyed when purchased and there are clear distinctions identifying boundaries. Relations are healthy with the community.*

**Result: In Conformance**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

---

### OBJECTIVE 9: Local Communities

#### Performance Measure (PM) 9.1 Economic Well-Being

##### Conformance Evidence:

- Confirmation of tax payments
- Confirmation of local employment and talent procurement
- Confirmation of local suppliers and vendors

*Auditor Notes: MIMTA management maintains preferred vendor lists and bid with local companies wherever possible. There have been no price or budgeting issues reported and farm managers prefer to buy local. Labor is locally sourced, and their wages are higher than the local average, using prevailing wage as a starting point. Manulife hires seasonal and full-time employees under direct operations. They try to hire from the local indigenous community as well. The supplies bought for farming are all from local suppliers.*

**Result: In Conformance**

#### Performance Measure (PM) 9.2 Community Relations

##### Conformance Evidence:

- Verbal descriptions of community engagement activities with local communities
- Social Responsibility policy
- Community outreach activities log
- Acts of kindness contributions
- Stewardship partner lists
- Photos from community events
- Community involvement documents

*Auditor Notes: Logs are prepared by regional managers, displaying public outreach, volunteer efforts, donations, and programs with public institutions. Managers work with neighbors to coordinate efforts along fence lines. MIMTA managers work with neighbors to execute easements and avoid conflicts. Farm managers engage in or plan community clean up days and volunteerism.*

*MIMTA has engaged in programs to advance research and education in sustainable agriculture and efficient management practices. Stewardship partner programs detail financial and non-financial contributions that have been approved and supported by central management. Employees attend local workshops and host pollinator workshops. Stewardship coordinators have presented on sustainable agriculture to local high schools, as well as providing materials for wood shop classes to build owl and bat boxes for use on properties. Managers are in leadership positions on local ag boards and councils.*

**Result: In Conformance**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

### OBJECTIVE 9: Local Communities (Continued)

#### Performance Measure (PM) 9.3 Local Communities and Indigenous Peoples

##### Conformance Evidence:

- Social Responsibility policy
- Verbal description of due diligence procedures regarding Indigenous Peoples tenure rights
- Verbal descriptions of contact methods available to the local communities and Indigenous Peoples,
- Visual confirmations of contact information on signage and in public
- Due Diligence Procedure

*Auditor Notes: MIMTA addresses the rights of indigenous populations and community outreach in their social responsibility policy. Area managers provide regional management's contact information to members of the public when requested. Office contact information is posted at entry points to properties. Burn permits are coordinated with local indigenous communities.*

**Result: In Conformance**

#### Performance Measure (PM) 9.4 Public Health

##### Conformance Evidence:

- Verbal descriptions of health and safety regional BMPs
- Confirmations of health and safety BMPs
- Social Responsibility policy
- Safety tailgate trainings
- Safety themed events
- Public health trainings
- Inspections of native plant rows

*Auditor Notes: Safety is a top priority in MIMTA's culture. Labor has access to safety information and safety data sheets (SDS) information at any time for any product being applied. Managers inform neighbors of planned spraying and signage is placed in public entry and exit points. Area managers provide regional management's contact information to members of the public when requested.*

*MIMTA does not purchase production land near schools, or spray near roads with bus routes. Supervisors are on site during all spray activities, and plantings are distanced back from roads on new developments. Water trucks provide dust mitigation. Equipment maintenance and upgrades provide improvements on emissions. Tree barriers are established next to organic neighbors. Fencing is being replaced on sites with native plant wind rows.*

**Result: In Conformance**

### OBJECTIVE 10: Employees and Farm Labor

#### Performance Measure (PM) 10.1 Safe and Respectful Working Environment

##### Conformance Evidence:

- Verbal descriptions of hiring, interviewing, and onboarding practices
- Descriptions of health and safety regional BMPs
- Safety and worker rights postings
- Equal Opportunity Employment (EOE) Policy
- Diversity, Equity, and Inclusion (DEI) Strategy
- Standards of Behavior and Performance
- Safety Principles
- Safety Manuals
- Safe Work Environment Policy
- Anti-Harassment Policy
- Domestic Legal Matters Policy
- Equal Opportunity Policy
- Workplace Violence Policy
- Social Responsibility Policy
- Wildfire Smoke Policy
- Wildfire Smoke tailgate training
- Diversity and Inclusion Trainings and Materials

*Auditor Notes: EOE status is well established. Safety is a top priority throughout MIMTA's entire operation. Safety compliance is managed on site and by the compliance manager. Safety calls are held every Friday with regional managers and FLCs hold trainings addressing safety issues every Monday. All employees are encouraged to report any safety concerns. Interventions on concerns are immediate and effective. Staff responsible for spray activities are appropriately licensed. Appropriate safety gear is provided for all staff.*

*Anti-discrimination, anti-sexual harassment, and DEI trainings and information are provided to staff company wide. Harassment and similar behaviors are considered unsafe behaviors in MIMTA's code of conduct. Labor has multiple avenues to report and remedy complaints and concerns, from direct supervisors to central office personnel.*

**Result: In Conformance**

**OBJECTIVE 10: Employees and Farm Labor (Continued)**

**Performance Measure (PM) 10.2 Occupational Training**

Conformance Evidence:

- Verbal descriptions of health and safety regional BMPs
- Safety Principles
- Safety Manuals
- Safety Principles
- Training agendas
- Managers Meeting agendas
- Weekly Safety Meeting Attendance Sheet
- Safety Compliance Matrix

*Auditor Notes: MIMTA management is required to complete 40 trainings per year, many times more than state requirements. Training schedules and attendance are documented on paper and stored electronically. SDS information is supplied to staff before any application, and multiple licensed qualified applicators (QAL) are on staff. Annual meetings are held with vendors, universities, and pest contractors to discuss emerging issues.*

**Result: In Conformance**

**Performance Measure (PM) 10.3 Supporting Capacity for Sustainability**

Conformance Evidence:

- CEO Commitment Letter
- Leading Harvest announcement
- Leading Harvest related emails
- Public postings of audit results and reports
- Trainings records

*Auditor Notes: The President/CEO of MIMTA issued a letter to the public stating MIMTA's commitment to conforming to sustainable operations, and the Chief Sustainability Officer of MIMTA issued a letter specifically committing to the LH FMS. Roles and responsibilities to conform to the objectives of the LH FMS are communicated and understood throughout the organization through an internal evidence summary and audit preparedness document. MIMTA is a founding member of Leading Harvest and the first certified program user, and the program is a central tenant to their ESG strategy.*

**Result: In Conformance**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

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### OBJECTIVE 10: Employees and Farm Labor (Continued)

#### Performance Measure (PM) 10.4 Compensation

Conformance Evidence:

- Verbal description of wage setting procedures
- 2020 Salary Ranges in 4 US Regions
- "Understanding Your Pay" document
- US Salary Range Regions
- Salary surveys

*Auditor Notes: Compensation is set at an appropriately competitive level in all regions.*

**Result: In Conformance**

#### Performance Measure (PM) 10.5 Farm Labor

Conformance Evidence:

- Verbal description of Farm Labor Contractor (FLC) monitoring program
- FLC Audit Policy and FLC Audit Updates
- NA Property Management
- FLC audit checklist

*Auditor Notes: FLCs are audited by MIMTA for compliance with labor laws. Equal opportunity and nondiscriminatory language is included in contracts with FLCs. FLCs must certify that they uphold nondiscriminatory practices. MIMTA management works with FLCs to make sure they have a way to report grievances outside of their direct supervisor. FLCs are required to maintain documentation on hiring, onboarding, and compliance policies. Regional managers communicate and negotiate compensation and labor needs with FLCs annually. Labor through FLCs is compensated at a competitive wage, with wages based on prevailing wage as a starting point in negotiations with FLCs.*

**Result: In Conformance**

### OBJECTIVE 11: Legal and Regulatory Compliance

#### Performance Measure (PM) 11.1 Legal Compliance

##### Conformance Evidence:

- Verbal descriptions of methods by which employees have access to legal information
- Interviews with managers and risk management regarding legal compliance
- Employment rights legal postings for employees and FLC labor
- NMP Training Certificate
- Pesticide Applicator certificates
- Contractor Audit Spreadsheets
- Wildfire Smoke Policy
- Wildfire Smoke tailgate training
- Certified Crop Advisor (CCA) Certificates
- Pesticide application posting requirements
- Water usage reports
- Emergency action plan
- Tissue test data
- Global Risk Register

*Auditor Notes: Compliance information is posted and accessible for all employees. SDS materials are kept in appropriate locations. Pesticide safety information is posted appropriately. Labor laws are posted in each shop. Illness and Injury Prevention Plan (IIPP), SRI toolkit, and HR policy are all provided to employees.*

*MIMTA's centralized compliance team manages compliance obligations, ensures proper information is disbursed and available throughout the organization. Employee portals provide information regarding legal compliance. Water coalition sends summary of water quality to review individual impacts. Home building inspections are conducted on sites with residences.*

**Result: In Conformance**

**OBJECTIVE 11: Legal and Regulatory Compliance (Continued)**

**Performance Measure (PM) 11.2 Legal Compliance Policies**

Conformance Evidence:

- DEI Strategy
- Safe Work Environment Policy
- Anti-Harassment Policy
- Domestic Legal Matters Policy
- Equal Opportunity Policy
- Workplace Violence Policy
- Social Responsibility Policy
- Lease language

*Auditor Notes: Compliance with legal and regulatory action is demonstrated through dedicated senior staff positions engaging in continuous monitoring and oversight. Policy language is effective. Lease language specifically addresses tenant rights to “quiet enjoyment” as determined by US and local law.*

**Result: In Conformance**

### OBJECTIVE 12: Management Review and Continual Improvement

#### Performance Measure (PM) 12.1 Farm Review and Continual Improvement

##### Conformance Evidence:

- Verbal descriptions of performance review systems
- Action Registers
- Continual Improvement Process
- Management Reviews and internal readiness review reports
- MAS management review
- Management reports
- Redevelopment Process
- Stewardship projects
- Exceptional practices benchmarking
- Yield reports
- Monthly facility inspection
- Sustainability Summary documents
- Management meeting agendas

*Auditor Notes: The internal control system assessed in previous certification and surveillance audits was revisited. MIMTA's control environment was determined to be well designed and effectively implemented. Monitoring is continuous on sites. An action register is maintained that is explicitly tied to the LH FMS, with corrective action plans descriptions (when needed), assignments to personnel, and timelines estimated. Regular and annual manager meetings with all regional managers are held to review performance and address emerging management issues. Property inspection report procedures include scheduling, topics for monitoring, and issues that have been deemed significant. Managers perform regularly scheduled inspections on sites and ongoing operations.*

*MIMTA is enhancing their performance monitoring process by beginning to use internal audits, called readiness reviews internally. Documented monitoring includes all properties being reviewed, with varieties that are not reaching quotas being replanted. Weekly profit and loss reviews are conducted with managers. Annual reviews include Leading Harvest audits, reviewed compliance commitments, and other sustainability projects with the stated objective of enhancing MIMTA's ESG performance.*

*An innovative water recycling system was observed on sample sites in California.*

**Result: In Conformance**

# Manulife Investment Management Timberland and Agriculture

LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

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## OBJECTIVE 12: Management Review and Continual Improvement (Continued)

### Performance Measure (PM) 12.2 Support for Sustainable Agriculture

#### Conformance Evidence:

- Verbal description of participation in agricultural research with universities and growers' associations
- Test plots for new varieties, practices, and trials
- Action register
- Stewardship project lists

*Auditor Notes: Area managers engage with land grant universities and research groups. Additionally, multiple examples were observed of public outreach and education regarding sustainable agriculture. Advances in the field of sustainable agriculture are directly attributable to research conducted on MIMTA properties. Advances in pruning techniques have led to improved production on sites that were expected to be in low production years. Alternative chemical product tests are underway to stay ahead of potential bans and shortages.*

**Result: In Conformance**

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

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### KEY FINDINGS

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

**Major Non-Conformances:** No major non-conformances were identified during the examination.

**Minor Non-Conformances:** No minor non-conformances were identified during the examination.

**Opportunities for Improvement (OFI):** Zero (0) opportunities for improvement were issued during the audit.

#### **Notable Practices:**

1. Indicator 1.1.1 Farmland Stewardship Commitment: The team in Wisconsin posts the Hancock Mission Statement (previous to Manulife rebranding, “to create value through the sustainable management of natural resource investments”) on a large banner on the way out of public and common areas. In many ways, the team in WI demonstrates that they live the company’s mission in their everyday work.
2. Indicator 3.1.2 Regional Water Conservation: Advanced water recycling stations were observed in Central California, which prevent the waste of hundreds of gallons of water per site. While the audit team has seen similar systems in other locations, none have been as thoroughly implemented and well managed.
3. Indicator 5.3.1 Greenhouse Gas Emissions: GHG Emission verifications have already taken place with no material deficiencies noted. GHG Verifications are expected in the future, but MIMTA remains ahead of potential requirements in this area.
4. Indicator 7.1.1 Threatened and Endangered Species &
5. Indicator 7.1.2 At-Risk Species: Special status species are clearly identified and illustrated at all meeting areas and offices. This program, and the biodiversity research that supports it, continues to demonstrate a high level of commitment and risk mitigation.

**Leading Harvest Logo Usage:** Program users in good standing who are enrolled in the Leading Harvest Farmland Management Program 2020 for all or a portion of their operations may use the Leading Harvest logo. Any express or implied claim that a program user is in conformance with the Leading Harvest Farmland Management Standard 2020 must be substantiated by a current, valid certification by a certification body recognized by Leading Harvest.

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

**Review of Previous Audit Cycle:** In 2021, MIMTA engaged Averum to perform their initial surveillance audit to support their current certification. MIMTA successfully demonstrated conformance to the LH FMS standard, with no nonconformances found, one (1) opportunity for improvement, and five (5) notable practices noted. Opportunities for improvement from the previous cycle were followed up on during this surveillance audit interviews, site visits, and documentation reviews.

# **Manulife Investment Management Timberland and Agriculture**

LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

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## **CONCLUSIONS**

Results of the audit indicate that Manulife Investment Management Timberland and Agriculture has implemented a management system that continues to meet the requirements of and has maintained conformance with the Leading Harvest Farmland Management Standard 2020.

Manulife Investment Management Timberland and Agriculture's certification to the Leading Harvest Farmland Management Standard 2020 on direct operated properties is recommended to remain in good standing.

# Manulife Investment Management Timberland and Agriculture

## LH FMS SURVEILLANCE AUDIT: SUMMARY REPORT

June 10, 2022

Summary of Audit Findings	
<b>Program User</b>	Manulife Investment Management Timberland and Agriculture
<b>Audit Dates</b>	April 29, 2022 (HQ – Remote) to June 10, 2022 (HQ – Remote) May 3, 2022 (WI) to May 4, 2022 (WI) May 17, 2022 (CA) to May 18, 2022 (CA)
<b>Non-Conformances Raised (NCR):</b>	<i>Major</i> <span style="margin-left: 150px;"><i>Minor</i></span>
	0 <span style="margin-left: 150px;">0</span>
<b>Follow-Up Visit Needed?</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <b>Date(s)</b>
<b>Follow-Up Visit Remarks</b>	N/A
Team Leader Recommendations	
<b>Corrective Action Plan(s) Accepted</b>	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> <b>Date</b>
<b>Proceed to/Continue Certification</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> <b>Date</b> 06.10.2022
<b>All NCR Closed</b>	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> <b>Date</b>
Standard(s) Audited Against	
Leading Harvest Farmland Management Standard 2020 (Objectives 1 through 13)	
<b>Audit Team Leader</b>	<b>Audit Team Members</b>
Matt Armstrong	Andrew Zetterberg Kyle Rusten
Scope of Audit	
Management of production farmland on tenant operated properties.	
<b>Accreditations</b>	Approval by Leading Harvest to provide certification audits
<b>Number of Certificates</b>	1
<b>Certificate Number</b>	2020-0001
<b>Proposed Date for Next Audit Event</b>	TBD, 2023
<b>Audit Report Distribution</b>	Natasha Wise (NLWise@manulife.com), Certifications Management Holly Evers (HEvers@manulife.com), Program Coordinator