Worldly Facility Environmental Toolkit - Table Of Contents

Worldly Facility Environmental Toolkit

This toolkit is designed to provide a quick reference guide for facility users when using the Higg FEM, Facility Data Manager, or Insights Hub.

What is the Higg FEM?

The Higg Facility Environmental Module (FEM) is a sustainability assessment tool that standardizes how facilities measure and evaluate their environmental

performance, year-over-year.

There are 7 categories, including Environmental Management System (EMS), Energy & GHG, Water, Wastewater, Air Emissions, Waste, and Chemical Management.

Each category has three levels:

1. **Level 1 -** Awareness and understanding of sources and systems
2. **Level 2 -** Setting baselines, targets, and tracking improvements
3. **Level 3 -** Leading aspirational practices

It takes about 4-6 weeks to complete the FEM, depending on quality and accessibility of data.

What is the Facility Data Manager?

The Facility Data Manager (FDM) is a monthly data collection tool, complimentary to the Higg FEM, where facilities can track their usage data in real time and set targets. FDM and Higg FEM integrate with each other to save time inputting data. Facility Data Manager captures up to 100% of level 1 quantitative questions in the Higg FEM.

What Is the Insights Hub?

Insights hub is an analytics tool facility users can use to analyze their Higg FEM performance and environmental data. Use Insights hub to understand where you can improve and how you compare to the industry. Access capacity building resources to inform your environmental strategy.

Higg FEM	Facility Data Manager	Insights Hub
Annual environmental assessment	**Monthly** environmental data collection and target setting	Environmental data **analysis** and capacity building

Key Resource links

Resource	Link	QR code
Worldly Training and Support Site	support.worldly.io	
How to Higg	howtohigg.cascale.org	
Worldly E-learning platform	learn.worldly.io	

Recorded webinars	https://support.worldly.io/hc/en-us/sections/34241642799643-Webinar-Recordings	

Applicability Questions

Applicability questions are introductory questions in Higg FEM and FDM that determine which subsequent questions within an impact area are relevant for a facility to answer based on the facility's own unique characteristics and operations. These refine the assessment to ensure facilities only answer relevant questions.

Key Internal Roles

These roles generally should have data related to the assessment or are responsible for key impact areas, titles and roles may differ or not exist at your specific organization.

Chemical Safety or Compliance Officer	The individual responsible for overseeing the site's chemical inventory list, SDS availability, training programs, chemical risk assessments, and MRSL/RSL compliance.
Environmental Manager	The individual responsible for tracking utility data, energy consumption, fuel usage, water use, treatment systems, and sludge management. They may also manage FEM reporting, perform risk assessments, coordinate ZDHC alignment, and identify environmental aspects and impacts.

Janitorial or Custodial Manager	The individual responsible for managing cleanliness of the facility, waste handling, disposal methods, confirming waste types and determining where waste ends up.
Health & Safety or EHS Manager	The individual responsible for permits, understanding local regulations and legal requirements, tracking logs, storage procedures, spill response planning, hazard signage, and emergency drills.
Maintenance or Engineering Team	The individual may have access to utility bills, meter logs, maintenance records, contingency plans, and equipment data.
Operations or Facility Manager	The individual involved in EMS strategy, tracking hazardous or equipment-related waste, managing on-site storage, identifying process details, and conducting annual management reviews.
Human Resources Manager	The individual that has access to employee data such as total number of employees, employee training records, etc.
Procurement/ Finance/ Accounts Payable Manager	The individual in charge of vendor invoices, water bills, and contracts such as for waste removal.
Supply Chain or Procurement Manager	The individual that manages procurement records, chemical suppliers, and traceability systems.
Third-Party Lab or Treatment Partner	The individual that tests reports and quality of utility data.

Role reference table:

You can use the table below to track key people at your organization responsible for data in different sections.

Section responsible	**Name**	**Title**
Site information and permits		
Environmental Management Systems (EMS)		
Energy and GHG		
Water use		
Wastewater		
Waste		
Air Emissions		
Chemical management		

Recommended Documents

Higg FEM and FDM data can be sourced from documents such as:

- Environmental Policy Documents
- Organizational chart to understand who data can be sourced from
- Agreements with vendors or contractors
- Lab test results, if applicable (BOD, COD, pH, TSS, etc.)
- Monitoring or on-site metering logs
- Equipment records showing preventative maintenance
- Photos of labeled waste bins, storage areas, or utility systems
- Training records (such as for waste or chemical handling, environmental awareness, etc.)

- Utility (electricity, water, etc.) bills, tracking spreadsheets, maps, process diagrams, descriptions of utility systems, or discharge permits

Note: This is **not** an exhaustive list, please refer to long form guidance documents such as the How to Higg Guide for a full list of acceptable documentation.

Environmental Impact Areas

EMS

An Environmental Management System (EMS) is used to identify, track, and manage the environmental impacts of your facility over time.

After answering the questions in this section, it will help:

- Ensure there are trained staff in charge of managing environmental activities who understand their role in achieving the facility's environmental goals
- Identify which environmental impacts are most important for how the facility runs
- Create a long-term plan for managing the environment that follows all environmental laws, rules, and standards
- Work with subcontractors and suppliers to improve their environmental practices

Guidance:

1. Develop a basic EMS framework
2. Set clear environmental objectives and goals
3. Conduct regular employee training and awareness programs
4. Audit and track progress to identify areas of improvement

Key contact(s)	

Energy Use and GHG

Energy use is the largest man-made source of air pollution/greenhouse-gas (GHG) emissions. The operational, environmental, and financial impacts of energy are key issues for facilities.

After answering the questions in this section, it will help:

- Identify and understand energy types used at your facility
- Understand, track, and report which facility operations/processes use the most energy
- Calculate Scope 1, 2, and 3 GHG emissions
- Evaluate, plan, and adopt solutions for better energy management

Guidance:

1. Track energy consumption data from meters or utility bills
2. Track vehicle energy usage (if applicable)
3. Identify energy hotspots
4. Implement energy-saving strategies

Key contact(s)	

<u>Energy Use in Your Facility</u>

Purchased Energy	Purchased electricity, purchased steam, purchased chilled water, purchased heating/district heating

Renewable Energy	Biodiesel, biogas, geothermal, hydro, mini or micro-hydro (onsite), purchased renewables, solar photovoltaic electricity (onsite), solar thermal (onsite), wind (onsite)
Non-Renewable Energy	Compressed natural gas (CNG), coal - commercial mix, coal water slurry, diesel, fabric waste, fuel oil - blended, liquid natural gas (LNG), liquid petroleum gas (LPG), natural gas, petrol/gasoline, propane
Biomass	Sustainably sourced with certification, without sustainably sourced certification

Domestic and Production Energy Use

Domestic Energy Use	Energy consumed in non-production related areas/buildings
Production Energy Use	Energy directly/indirectly consumed in production related activities/areas

Greenhouse Gas (GHG) Emissions in the Higg FEM

GHG emissions are categorized into 3 different scopes:

- **Scope 1**: Direct emissions from owned or controlled sources
- **Scope 2**: Indirect emissions from generating/consuming purchased energy
- **Scope 3**: All other indirect emissions that occur in a company's value chain

Water

Water use affects local ecosystems, community access, and the long-term sustainability of facility operations.

After answering the questions in this section, it will help:

- Track and report water sources, usage, and discharge at your facility
- Identify areas of high consumption and set water reduction targets
- Classify facilities by water usage and risk to determine FEM reporting scope
- Plan and implement solutions to reduce water use through improved practices
- Support sustainable water management and stewardship in the community

Guidance:

1. Track water consumption data from meters or utility bills
2. Identify water hotspots
3. Implement water-saving strategies

Key contact(s)	

<u>Water Definitions</u>

Water Sources	Blue water such as surface, rainwater, groundwater, municipal, brackish surface, and condensation from external steam sources. Grey water such as reused, recycled, municipal, and

	both treated and untreated wastewater from internal or external sources.
Production Use	Water used directly in manufacturing processes
Domestic Use	Water used for non-production purposes such as sanitation, kitchens, or landscaping
High Water User	Facilities with high water use (defined as using equal to or greater than 35m3 per operating day)
Low Water User	Facilities with low water use (defined as using less than 35m3 per operating day)
High-Risk Site	A facility located in an area with water scarcity or other water-related risks, based on tools such as WWF Water Risk Filter or WRI Aqueduct
Low-Risk Site	Facility located in an area of low water risk (as defined by the WRI Aqueduct Tool or the WWF Water Risk Filter)
Water Reduction Target	A defined goal to reduce total or normalized water use over a set timeframe
The WRI Aqueduct Tool and the WWF	Tools to assess water scarcity risks. Facilities are asked to evaluate their water risk using these tools

Wastewater

Wastewater from facility operations can contain pollutants that harm the environment, pose health risks, and lead to regulatory or financial consequences if not properly managed.

After answering the questions in this section, it will help:

- Identify, track, and report all sources of wastewater, including domestic and industrial sources

- Confirm the type and location of wastewater treatment used at the facility
- Ensure compliance with local discharge permits and regulations by monitoring and managing sludge generation and disposal
- Align wastewater management practices with ZDHC Wastewater Guidelines
- Identify opportunities to reduce hazardous chemical use and increase wastewater reuse

Guidance:

1. Ensure proper treatment of domestic wastewater before discharging
2. Monitor wastewater quality to comply with local regulations
3. Track where the wastewater goes

Key contact(s)	

<u>Wastewater Definitions</u>

Domestic Wastewater Source	Source originating from domestic/sanitary usage (toilets, bathing, laundry, etc.)
Industrial Wastewater Source	Source that has been used for manufacturing processes and no longer meets the quality standard for beneficial use (production, lubrication, cooling, maintenance, cleaning of machines, etc.)
Stormwater Source	Source originating from precipitation (e.g., rainwater) that accumulates on and runs off roofs, hard standing surfaces, car parks, etc. (sometimes referred to as surface water run-off)
Onsite Treatment	Wastewater treatment systems located at the facility
Offsite Treatment	Wastewater sent to an external treatment facility

Zero Liquid Discharge (ZLD)	A treatment process that recovers and reuses all water, leaving no liquid waste. **Note:** This does not mean the facility does not produce any industrial wastewater.
Septic System	An underground system that treats domestic wastewater on site, typically for smaller facilities
Sludge	Solid byproduct from wastewater treatment that requires proper disposal
ZDHC	Cascale's partner organization which has developed a variety of wastewater related standards and resources for wastewater management and discharge

Air Emissions

Air emissions pollute the air, impacting the environment, human health and the climate.

After answering the questions in this section, it will help:

- Identify types of emissions and pollutants emitted from your facility.
- Follow all air pollution laws related to necessary permitting, testing, and reports.
- Track and report pollutants released during facility operations and production.
- Encourage the use of best available technologies to reduce air emissions.

Guidance:

1. Monitor air emissions quality to comply with local regulations
2. Implement best practices to minimize release of air emissions

Key contact(s)	

Air Emission Definitions

Point Source	Air flow which is actively controlled and directed by fan and exhaust ducting into the atmosphere from a single stationary fixed source such as stack or vent.
Fugitive Emissions Source	Air flow which is passively released into the outdoor environment and is not actively directed through a single exhaust point such as a stack or vent. Air conditioners that use refrigerants in an office environment are also considered fugitive emissions.
Mobile Emissions Source	Non-stationary sources of emission such as vehicles.
Emission from Facility Operations	Emissions from sources that support facility operations, are not the direct result of production processes, and are typically emitted through point source or mobile emissions sources.
Emissions from Production	Emissions from production are typically emitted through point sources or as fugitive emissions

Reportable Pollutants

Pollutants from Operations	Particulate matter, nitrogen oxides (NOx), Sulfur oxides (SOx), carbon monoxide (CO), Volatile Organic

	Compounds (VOCs), Total Organic Compounds (TOC), Hazardous or toxic air pollutants (HAP/TAP)
Pollutants from Production Processes	Particulate matter, nitrogen oxides (NOx), Sulfur oxides (SOx), carbon monoxide (CO), Volatile Organic Compounds (VOCs), Total Organic Compounds (TOC), Hazardous or toxic air pollutants (HAP/TAP), ammonia (NH_3), ozone (O_3), ozone depleting substances (ODS), carbon disulfide (CS_2), hydrogen sulfide (H_2S)

Note: Refer to the following definitions for Volatile Organic Compounds and Hazardous or Toxic Air Pollutants

Volatile Organic Compounds (VOCs)	Organic chemical compounds that under normal conditions are gaseous or can vaporise and enter the atmosphere
Hazardous or Toxic Air Pollutants (HAPs or TAPs)	Compounds that are known or suspected to cause significant harmful impacts to human health or the environment

Waste

Waste from facility operations can harm the environment, create regulatory risks, and result in lost resources if not managed responsibly. Proper waste management supports environmental goals and the circular economy.

After answering the questions in this section, it will help:

- Identify, measure, and report all waste, including non-hazardous and hazardous types.
- Ensure onsite waste storage and handling meet legal standards.
- Understand how waste is disposed of after leaving the facility.
- Prioritize reduce/reuse/recycle and avoid landfill or incineration without energy recovery.
- Plan improvements to reduce waste and increase diversion to recycling or reuse.

Guidance:

1. Set up a waste segregation system to separate recyclables
2. Partner with recycling companies to process recyclables
3. Implement waste-reduction strategies

Key contact(s)	

<u>Waste Definitions</u>

Non-Hazardous Waste	Waste materials not posing immediate risks to health or the environment, such as textiles, paper, and food waste
Hazardous Waste	Waste containing harmful substances, such as chemicals, e-waste, and batteries, requires special handling
Excluded Waste	Waste not to be reported in the FEM. Types of waste are not generated from a “business as usual” situation such as medical waste, major construction and demolition projects waste, and waste from natural disasters such as flood, fire, tornado, hurricane
Preferred Waste Disposal Method	(Material recovery) Reuse, recycle, downcycle,

Options	
Less Preferred Waste Disposal Method Options	(Energy Recovery or Non-valorized Disposal) Incineration with energy recovery for Non-Recyclables only, Energy Recovery – Residual Management (e.g., Physical / Chemical / Biological Treatment), Onsite incineration without energy recovery for Non-Recyclables, Offsite incineration without energy recovery for Non-Recyclables, Non-valorized disposal – Other Treatment, and Non-valorized disposal – Responsibly Managed Landfills
Least Preferred Waste Disposal Method Options	Energy Recovery (e.g., Incineration with energy recovery for Recyclables), Landfill/Dumping with No Control Measures, Onsite Incineration without energy recovery for Recyclables, and Offsite incineration without energy recovery for Recyclables

Chemical Management

Facility chemical use must be managed in order to protect the environment and human health.

After answering the questions in this section, it will help:

- Set up an effective system to track and manage chemicals, with clear rules and goals for continuous improvements.
- Make sure employees, suppliers, and contractors are properly trained and qualified to safely handle and manage chemicals.
- Follow industry best practices to improve chemical safety, promote responsible purchasing, reduce hazardous chemicals, and support innovation.

Guidance:

1. Ensure proper storage and handling of chemicals to prevent chemical spills
2. Train employees on safe chemical use and emergency procedures

Key contact(s)	

Chemical Use at your Facility

Chemicals used in Production	Chemicals used in processes to make a product
Chemicals used in Operations or Maintenance/Tooling/Equipment	Chemicals not used in production processes and used to operate the facility

Zero Discharge of Hazardous Chemicals (ZDHC) Partnership and Resources

- The ZDHC group has developed a variety of resources for chemical management.
- Visit www.roadmaptozero.com for more information on ZDHC initiatives and resources.