Welcome to your CDP Water Security Questionnaire 2023

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

Incitec Pivot Limited (IPL) is a global diversified industrial chemicals company that supplies explosives, industrial chemicals, fertilisers and related services to the mining, infrastructure & construction, chemicals and agriculture industries. IPL has extensive operations throughout Australia, the United States, Canada, Mexico, Turkey and Indonesia, including over 30 manufacturing plants, scores of distribution centres and well-established channels to market. The Company employs over 5,000 staff worldwide, including almost 2,000 staff in Australia and over 2,500 staff in North America. IPL manufactures a range of fertiliser inputs and products including ammonium phosphates, ammonia, urea, sulphuric acid and superphosphates at five manufacturing sites across eastern Australia and is the only manufacturer of ammonium phosphates and urea in Australia.

Through the Incitec Pivot Fertilisers brand (IPF) IPL is Australia's largest supplier of fertilisers, dispatching approximately two million tonnes each year for use in the grain, cotton, pasture, dairy, sugar and horticulture industries. It operates through a comprehensive network of distributors who supply the product to Australian farmers. IPL has a long-term commitment to investment in soil nutrition research and its Nutrient Advantage laboratory is industry accredited. As a leading provider of nutrition advice to farmers and customers, IPL promotes the sustainable use and safe handling of its fertiliser products to customers and farmers.

Through the Dyno Nobel brand, IPL is the second largest supplier of explosives in Australia and is a market leader in North America. Dyno Nobel branded products include a complete range of commercial explosives including ammonium nitrate, bulk explosives, packaged emulsions and dynamite as well as a range of initiating systems. Services provided include expert technical consulting to customers such as mining companies and their suppliers, quarries and companies supporting the construction industry. In addition, IPL manufactures various industrial chemical products used in water treatment, process manufacturing and other industrial applications.

IPL recognises that building a sustainable future requires the sustainable management of the production of infrastructure, food, clothing, shelter and energy that people need every day. As a manufacturer and supplier of fertilisers, which are used to grow more food and fibre on existing land, and explosives products, which are used for mining, construction and quarrying, we recognise that our role in value creation relates directly to several UN Sustainability Goals, including 'Responsible Consumption and Production', 'Decent Work and Growth' and the production of food for a growing population ('Zero Hunger').

We also recognise the need to balance our economic performance with our environmental and social responsibilities. Those responsibilities include being a good corporate citizen and operating ethically. They include ensuring good governance in our day-to-day business activities and behaving with honesty and integrity in our interactions with communities, employees, customers, and the environment.

W-CH0.1a

(W-CH0.1a) Which activities in the chemical sector does your organization engage in?

Bulk inorganic chemicals

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	October 1, 2021	September 30, 2022

W0.3

(W0.3) Select the countries/areas in which you operate.

Australia
Canada
Mexico
Turkey
United States of America

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

AUD

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Small distribution and emulsion manufacturing sites across North America	Data is not presently available for water use at these sites, and it is expected that withdrawals are not material. For example, each emulsion manufacturing site in Australia currently uses less than 0.5% of IPLs total water withdrawal.
Offices and other administration buildings across North America that are distribution related and are not situated at manufacturing sites	Data is not presently available for water use at these sites, and amounts are not expected to be material, as offices and other administration buildings would use much less than an emulsion manufacturing site, and each emulsion manufacturing site in Australia currently uses less than 0.5% of IPLs total water withdrawal.
Operations in Chile	Data is not presently available for water use at these sites, and amounts are not expected to be material.

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, a Ticker symbol	ASX:IPL
Yes, another unique identifier, please specify IPL has an LEI that is quoted for all derivative trades and is consistent across transactions. (Each debt instrument on issue also has a ISIN but they differ per debt issue)	LEI: 254900UW2F3BKV6Z9V18
Yes, another unique identifier, please specify The American Depository Receipts (ADR) program sponsored by Bank of New York Mellon is traded on the New York Stock Exchange. The stock DR symbol is INCZY.	INCZY

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Not very important	IPL's manufacturing operations require high quality water for cooling systems and boilers (low calcium and silica), so have historically been built in areas where access to water is assured. IPL typically has access to regulated municipal water supply or abundant fresh surface water or groundwater as regulated by the local EPA. For example, our Louisiana, Missouri (LOMO) site is located on the Mississippi River, and our St Helens, Oregon site is located on the Columbia River. Cooling water also requires very low sediment levels, so even fresh surface (river) water is typically treated onsite prior to use. Where sites are not located near abundant freshwater supplies, long-term supply agreements are put in place. For example, our Moranbah, Australia site is supplied by Sunwater, who operates 19 dams and 1,951 kilometres of pipeline. Sunwater stores, captures and delivers around 40 per cent of the water used commercially in Queensland to more than 5,000 customers.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Neutral	IPL's Gibson Island site, located in Brisbane, Australia, was connected to a recycled water source in 2021. This has reduced baseline water stress on the local municipal water supply.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of operations	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – total volumes	76-99	Other, please specify Continuously at large manufacturing sites, monthly at smaller manufacturing sites, quarterly at small offices	99% of our total water withdrawal volumes are collected via on-site meters at major manufacturing facilities where surface water is extracted from rivers, municipal water invoices, river water meters, groundwater meters, on-site storm water treatment plant meters, and on-site water recycling treatment plant meters where rainfall is captured and treated before use.	IPL collects this data to enable our global water use to be understood, and water intensity factors to be calculated. For our company, 'sites' and/or 'facilities' refers to all of our sites and includes major manufacturing sites (which require large volumes of high-quality fresh water) minor manufacturing sites (which require less water) and distribution and office/admin sites, which require much less water.
Water withdrawals – volumes by source	76-99	Other, please specify Continuously at large manufacturing sites, monthly at smaller manufacturing sites, quarterly at small offices	99% of our total water withdrawal volumes are collected via municipal water invoices, river water meters, groundwater meters, on-site storm water treatment plant meters, and on-site water recycling treatment plant meters.	Because 99% of our total water withdrawal volumes are collected via municipal water invoices, river water meters, groundwater meters, on-site storm water treatment plant meters, and on-site water recycling treatment plant meters, water by source is also easy to monitor.
Water withdrawals quality	51-75	Monthly	EPA Standard Methods conducted by a certified laboratory.	Due to the high quality of water required for non-contact cooling purposes, our St. Helens, Cheyenne, and Waggaman ammonia manufacturing sites all test the surface and groundwater withdrawn for this use on a routine basis. For example, at our Cheyenne site, which

				uses groundwater, withdrawal quality is tested Monthly, Quarterly, Annually, and every three years by a certified laboratory using US EPA Standard Methods. These sites represent 71% of our total global water withdrawal and 30% of our nitrogen manufacturing sites.
Water discharges – total volumes	26-50	Continuously	Water discharge volumes are monitored continuously via internal site meters under EPA licencing at all sites that discharge water.	Water discharge volumes are collected via discharge meters at 100% of IPL sites which discharge. This is typically required, along with regular reporting, by regulators who have granted the associated licence to discharge. In Australia, all sites are 'non-discharge to the environment' sites (with the exception of two sites, in Gibson Island and Geelong, Australia, where storm water passes through treatment before being discharged to surface waters). At these 'non-discharge to the environment' sites, cooling water is recycled multiple times until it evaporates.
Water discharges – volumes by destination	26-50	Continuously	Water discharge volumes are monitored continuously via internal meter under EPA licencing at all sites that discharge water.	Water discharge volumes are collected via discharge meters at 100% of IPL sites which discharge. This is typically required, along with regular reporting, by regulators who have granted the associated licence to discharge. In Australia, all sites are 'non-discharge to the environment' sites (with the exception of two sites in Gibson Island and Geelong, Australia, where storm water is captured and treated before being discharged to surface waters). At several of our

				'non-discharge to the environment' sites, cooling water is recycled multiple times until it evaporates.
Water discharges – volumes by treatment method	26-50	Continuously	Water discharge volumes are monitored continuously via internal meters at each site which discharges.	Since each site has a different treatment method for discharges, we are able to measure volumes by site and therefore treatment method.
Water discharge quality – by standard effluent parameters	26-50	Quarterly	Certified laboratory using EPA Standard Methods.	Standard water discharge quality parameters are measured at our major US manufacturing sites which discharge to rivers, with each site following a slightly different regime, as demanded by the licence requirements at each site. Typical parameters include those below: COD (mg/L) BOD (mg/L) TSS (mg/L) NO3-N (mg/L) SO4 (mg/L/day) pH (SU). For example, at our Cheyenne site, discharge is tested quarterly by a certified laboratory using EPA Standard Methods, and the tests include the following: UREA (mg/L) TDS (mg/L) NH3-N (mg/L) NO3-N (mg/L) NO2-N (mg/L) pH (SU) TSS (mg/L) Conductivity (µmoh/cm)

Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	26-50	Other, please specify Monthly	Certified laboratory using EPA Standard Methods; NATA Accredited laboratory.	Additional water quality metrics are included at specific sites for which the risk of nutrients entering the water exists. N, P and K, in particular, are relevant for sites which manufacture ammonium nitrate explosives and fertilisers including urea, ammonium phosphates and single super phosphates. For example, at our Cheyenne, Wyoming ammonium nitrate manufacturing site, discharge is tested quarterly and is conducted by a certified laboratory using EPA Standard Methods, with the following parameters: UREA (mg/L) TDS (mg/L) NH3-N (mg/L) NO3-N (mg/L) NO2-N (mg/L) pH (SU) TSS (mg/L) Conductivity (µmoh/cm) At our Geelong SSP manufacturing site, discharge is monitored continuously for pH and turbidity via the on-site water treatment plant, with additional 'grab samples' tested by a NATA Accredited laboratory as required by EPA licencing.
Water discharge quality – temperature	1-25	Continuously	Temperature probe as per EPA Standard Methods, with PM internal program for temperature probe check/calibrations.	Temperature of water discharge is continuously monitored at several sites in the US, and monitored monthly at one additional site, to ensure it remains within licence specifications.

Water consumption – total volume	76-99	Other, please specify Continuously at large manufacturing sites, annually at smaller sites and at small offices	Municipal water invoices, river water meters, groundwater meters, on-site storm water treatment plant meters, and on-site water recycling treatment plant meters.	99% of our total water withdrawal volumes are collected via on-site meters at major manufacturing facilities where surface water is extracted from rivers, municipal water invoices, river water meters, groundwater meters, on-site storm water treatment plant meters, and on-site water recycling treatment plant meters where rainfall is captured and treated before use. Consumption is then calculated by subtracting discharge from withdrawal, which is metered at all sites that discharge.
Water recycled/reused	1-25	Continuously	On-site Water Treatment Plant meters.	Note: For sites where cooling water is recycled until evaporation, the recycled water is not metered. Only total water use is metered.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Other, please specify Continuously at large manufacturing sites, monthly at smaller manufacturing sites, quarterly at small offices	Municipal water invoices, river water meters, groundwater meters, depending on the site.	Amounts sent to WASH facilities are not metered separately, but as part of total withdrawal and are therefore included in total withdrawal as quantified from municipal water invoices, river water meters or groundwater meters, depending on the site. (No purchased recycled or recycled water from on-site water treatment plants is used for WASH services).

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

	Volume (ML/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	48,467	Higher	Increase/ decrease in business activity	Higher	Increase/ decrease in business activity	In a year in which all sites operated to maximum production with no unscheduled outages, and in which no scheduled maintenance outages occurred, water withdrawal would be slightly higher.
Total discharges	29,648	Higher	Increase/decrease in business activity	Higher	Increase/decrease in business activity	In a year in which all sites operated to maximum production with no unscheduled outages, and in which no scheduled maintenance outages occurred, total water discharge of non-contact cooling water to surface waters would be slightly higher.
Total consumption	18,819	Higher	Increase/decrease in business activity	Higher	Increase/decrease in business activity	In a year in which all sites operated to maximum production with no unscheduled outages, and in which no scheduled maintenance outages occurred, total water discharge of non-contact cooling water to surface waters would be slightly higher.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	1-10	Lower	Investment in water-smart technology/process	Lower	Investment in water-smart technology/ process	WRI Aqueduct	The WRI Aqueduct Tool is used to assess IPL's water risk because it is the most comprehensive tool available for use and projects to 2030 and 2040. The Tool identifies 'Baseline Water Stress' as 'the ratio of total annual water withdrawals to total available annual renewable supply, accounting for upstream consumptive use. Higher values indicate more competition among users.' Using the current reporting year data analysis (as described in W1.2) and the geographic locations of our 22 global major and minor manufacturing sites, the tool identifies no IPL site as 'Extremely high >80%', and no sites as being located in areas identified as higher than 'Low-Medium' in regard to 'Baseline Water Depletion'. However, the tool does identify three sites as 'High 40-80%' in relation to water stress.' These three sites are all located in Australia at Geelong (Victoria), Helidon (Queensland) and Gibson Island (Brisbane, Queensland). These three sites

								withdrew 1,513 ML of water in 2022 (compared with 2,183 ML in 2021), which is 3.1% of IPL's total global withdrawal in 2022 (5.2% in 2021) which was calculated form data collected as described in W1.2. The total water withdrawal at these three sites was obtained from invoices. All of these sites draw water from the catchments in which they are located. (The decreases in 2022 are due to the recycled water initiative described in the following paragraph). Two of these three sites do not manufacture ammonia, and therefore do not require large volumes of water. However, the Gibson Island site in Brisbane uses large volumes of cooling water for ammonia manufacture. AU$4million was invested in a pipeline to connect this site to a recycled municipal water source towards the end of 2021, with 799.7 ML of recycled water replacing municipal water during the reporting period (this was 203.9 ML during 2021). This represented 4% of total global water use in 2022 and 22% of Australian municipal water use in 2022. It reduced Australian municipal water use by 11% against our 2020 baseline. The Geelong site uses recycled storm water via an onsite WTP, which provided 9 ML of recycled water for use in the reporting period.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	34,674	Higher	Increase/decrease in business activity	Surface water withdrawal increased by 20% against 2021. This was mostly due to increased production at our Waggaman Louisiana ammonia manufacturing facility, which uses high volumes of single pass non-contact cooling water.
Brackish surface water/Seawater	Relevant	3.07	About the same	Other, please specify Similar site activity and water use	Similar site activity and water use resulted in similar year on year use.
Groundwater – renewable	Relevant	9,054	Higher	Increase/decrease in business activity	Groundwater withdrawal was higher due to increased production at our Phosphate Hill and Cheyenne ammonia manufacturing sites.
Groundwater – non-renewable	Not relevant				IPL uses no non-renewable groundwater.
Produced/Entrained water	Not relevant				IPL uses no produced/entrained water
Third party sources	Relevant	4,736	Lower	Increase/decrease in business activity	This category includes purchased municipal water and purchased recycled water. The reduction in 2022 is mostly due to reduced production at our Gibson Island ammonia manufacturing site in the reporting year. This is the only large manufacturing site that uses municipal water in the cooling towers.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (ML/year)	Comparison with previous year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Relevant	29,348	Higher	Increase/decrease in business activity	16% more, which is mostly due to production at our Waggaman, Louisiana ammonia manufacturing site, which uses large volumes of river water for cooling, returning to full production following outages last year. ML discharged are sourced from direct measurement by meter. This amount includes discharge of some rainwater/snowmelt where runoff is collected and treated at several sites in North America, and therefore cannot be separately metered. This can affect year-on-year comparisons. Future trends in discharge to surface water are expected to be similar to this year. In 2022, 95.7% of our global discharge was clean, treated non-contact cooling water, which is returned to the rivers from which it was taken after treatment.
Brackish surface water/seawater	Not relevant				IPL does not discharge to brackish surface water/seawater.
Groundwater	Relevant	299.84	Higher	Increase/decrease in business activity	27% more. This was due to increased production at our Cheyenne Wyoming site. ML are sourced from direct measurement by meter. Future trends in discharge to ground water are expected to be very similar.

Third-party destinations	Relevant	0.24	About the same	Maximum potential volume reduction already achieved	This destination includes municipal wastewater plants, public or private utilities, which treat the water. There is no use of our discharge water at third party destinations (other than use of the treated water as a recycled water source, which may occur at some utilities).

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (ML/year)	Comparison of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your operations this volume applies to	Please explain
Tertiary treatment	Relevant	476.5	Much higher	Other, please specify Increased rainfall	11-20	70% more water was treated before release at sites using tertiary treatment. This was due to an increase in rainfall at the two sites described below. • Future volumes are expected to be lower, as the previous year and this year were both high rainfall years due to La Nina. • Due to the incorporation of sewage as a small part of total waste water, and under EPA licensing, the Gibson Island site in Brisbane, Australia uses a tertiary treatment WWTP then a natural wetland settling pond, where most water is evaporated. Due to high nutrients being collected into rainwater on this fertiliser site, rainfall is also captured and treated. Small releases to the river mouth are only made in times of high rainfall when storm water volumes result in the wetland settling pond reaching capacity. • Storm water released from our Geelong site is treated by a Reverse Osmosis WWTP to remove high nutrient levels before release. Most of the treated water is reused, but some is released under EPA licence conditions.

						• A small amount of groundwater extracted at our St Helens site is treated by a Reverse Osmosis WTP plant before being mixed with clean cooling water which is then returned to the river under EPA licence conditions. (• 80% of our sites are non-discharge to the environment sites.)
Secondary treatment	Not relevant					• Future volumes are expected to remain a zero with no discharged water being treated with secondary treatment as the highest level. Our sites which discharge use primary treatment, or secondary followed by tertiary. (• 80% of our sites are non-discharge to the environment sites.)
Primary treatment only	Relevant	27,793.2	Higher	Other, please specify Change in Rainfall	11-20	16% higher than last year, mostly due to greater precipitation/runoff, which is captured for treatment along with cooling water before discharge, and cannot, therefore, be separated. • Future volumes are expected to remain similar. • Primary treatment is used for the majority of our cooling water because the water is of a high quality when withdrawn and is used in as non-contact cooling water, meaning the quality is unaffected during use, with only heat exchange occurring. • At our Louisiana, Missouri facility, river water is filtered then returned to the Mississippi River under EPA licence conditions. • At our St Helens plant, the river water is put through an oil-water separator filter before being returned to the Columbia River under EPA licence conditions. • At our Cheyenne, Wyoming facility groundwater is sand filtered before deep well injection under EPA licence conditions. The quality of the groundwater on extraction is very high (drinking water standard). (• 80% of our sites are non-discharge to the environment sites.)

Discharge to the natural environment without treatment	Relevant	131	About the same	Other, please specify Similar operating conditions as last year	Less than 1%	Our Cheyenne, Wyoming site deep well injects small volumes of high nutrient wastewater under EPA licence.
Discharge to a third party without treatment	Relevant	1,247.4	About the same	Other, please specify Similar operating conditions as last year	Less than 1%	All discharge from our Waggaman, Louisiana site is sent to a neighbouring chemical plant (to which we also pipe captured CO2 for melamine manufacture). This water involves multiple waste streams and is therefore treated by a tertiary WWTP by the chemical company (on-site) before release to the Mississippi River under EPA licence conditions.
Other	Not relevant					100% of our discharge is reported above in other categories. 80% of our sites are 'zero discharge to the environment' sites.

W1.2k

(W1.2k) Provide details of your organization's emissions of nitrates, phosphates, pesticides, and other priority substances to water in the reporting year.

	Emissions to water in the reporting year (metric tonnes)	Category(ies) of substances included	List the specific substances included	Please explain
Row 1	1,004.74	• Nitrates • Phosphates • Priority substances listed under the EU Water Framework Directive	557.36 tonnes total nitrogen 447.26 tonnes phosphorus 0.1193 tonnes nickel 0.0025 tonnes lead 0.0000152 tonnes cadmium 0.00000117 tonnes mercury	As a manufacturer of nitrogen-based explosives and nitrogen and phosphorus -based fertilisers, controlling nutrients in water discharged from sites (including stormwater and cooling water) is a focus for us. Trace amounts of some priority substances listed under the EU Water Framework Directive are also monitored under licence at some sites. The total global amounts of these have been added to arrive at the figures reported here.

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	6,315,300,000	48,466.7	130,301.836106027	Note that the CDP Portal has calculated this figure as $AUD revenue per ML of water (rather than ML water per dollar revenue, which is 0.0000076745).

W-CH1.3

(W-CH1.3) Do you calculate water intensity for your activities in the chemical sector?

Yes

W-CH1.3a

(W-CH1.3a) For your top five products by production weight/volume, provide the following water intensity information associated with your activities in the chemical sector.

Product type

Bulk inorganic chemicals

Product name

Product manufactured for sale (metric tonnes)

Water intensity value (m3/denominator)

5.14

Numerator: water aspect

Freshwater consumption

Denominator

Other, please specify

metric tonnes manufactured for sale

Comparison with previous reporting year

Higher

Please explain

Intensity reported is 'net water use (m3)' per 'metric tonnes of product manufactured for sale' which has increased by 13%.

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances
Row 1	Yes

W1.4a

(W1.4a) What percentage of your company's revenue is associated with products containing substances classified as hazardous by a regulatory authority?

Regulatory classification of hazardous substances	% of revenue associated with products containing substances in this list	Please explain
Annex XVII of EU REACH Regulation	Less than 10%	IPL has identified only one product which contains a substance of concern as listed on the REACH Substances of Very High Concern (SVHC) List and/or REACH Annex XVII: Restricted Substance List. IPL has developed alternatives to this product and has a strategy to increase sales of the newer products which do not contain this chemical.

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

	Engagement	Primary reason for no engagement	Please explain
Suppliers	No	Important but not an immediate business priority	Water use at several of our own facilities is a material issue, which we are addressing ahead of suppliers.
Other value chain partners (e.g., customers)	No	Important but not an immediate business priority	Water use at several of our own facilities is a material issue, which we are addressing ahead of suppliers.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

No

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Fines, enforcement orders, and/or other penalties	Comment
Row 1	Yes	Fines	During the 2022 financial year in Australia, two incidents (one at Mount Isa and one at Phosphate Hill) led to four Penalty Infringement Notices (PIN) being issued by the Queensland Department of Environment and Science. Along with a PIN received for an incident at Gibson Island which occurred in the 2021 financial year, the five PINs amounted to fines of AU$65,148. Three incidents involved losses of containment from pipe networks to ground or to surface water. Corrective actions have been implemented for these incidents including clearer inspection and maintenance regimes and defined responsibilities.

W2.2a

(W2.2a) Provide the total number and financial value of all water-related fines.

Row 1

Total number of fines

4

Total value of fines

65,148

% of total facilities/operations associated

5

Number of fines compared to previous reporting year

Much higher

Comment

During the 2022 financial year in Australia, two incidents (one at Mount Isa and one at Phosphate Hill) led to four Penalty Infringement Notices (PIN) being issued by the Queensland Department of Environment and Science. Along with a PIN received for an incident at Gibson Island which occurred in the 2021 financial year, the five PINs amounted to fines of AU$65,148. Three incidents involved losses of containment from pipe networks to ground or to surface water. Corrective actions have been implemented for these incidents including clearer inspection and maintenance regimes and defined responsibilities.

W2.2b

(W2.2b) Provide details for all significant fines, enforcement orders and/or other penalties for water-related regulatory violations in the reporting year, and your plans for resolving them.

Type of penalty

Fine

Financial impact

65,148

Country/Area & River basin

Australia
Other, please specify
Georgina Basin

Type of incident

Spillage leakage or discharge of potential water pollutant

Description of penalty, incident, regulatory violation, significance, and resolution

During the 2022 financial year in Australia, two incidents led to four Penalty Infringement Notices (PIN) being issued by the Queensland Department of Environment and Science. Along with a PIN received for an incident at Gibson Island which occurred in the 2021 financial year, the five PINs amounted to fines of AU$65,148. Three incidents involved losses of containment from pipe networks to ground or to surface water. Corrective actions have been implemented for these incidents including clearer inspection and maintenance regimes and defined responsibilities. At Gibson Island, the obligations and associated milestones under the two Environmental Protection Orders relating to stormwater release quality and groundwater contamination issued in 2021 have consistently been met during the year. These orders enforce commitments made by site operations to improve infrastructure, systems and materials handling to significantly reduce the risk of unacceptable releases to the environment.

W3. Procedures

W3.1

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified
Row 1	Yes, we identify and classify our potential water pollutants	IPL operates under a Global Health, Safety and Environment (HSEC) Management System. Potential water pollutants are identified at each location as part of the comprehensive risk management process governed by the IPL HSEC Management System. Once identified, potential water pollutants are classified and managed using the information on Safety Data Sheets (SDS). This information includes ecotoxicity, persistence and degradability and environmental fate (exposure). In certain jurisdictions, the Group holds licences for some of our operations and activities from the relevant environmental regulator. We measure our compliance with such licences and report statutory non-compliances as required. For example, in relation to water discharge, all USA manufacturing sites have individual permits which specify the contaminants and levels allowed for Drinking Water, NPDES Discharge to rivers; or Underground Injection. These individual discharge limitations are developed by the agencies using the Code of Federal Regulations (CFR), which contains limits according to business type and amount of production.

W3.1a

(W3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Water pollutant category

Nitrates

Description of water pollutant and potential impacts

Ecotoxicity: Ammonium nitrate is of low toxicity to aquatic life. Spills may cause algal blooms in static waters.
Persistence and degradability: When released into the soil, ammonium nitrate is not expected to evaporate significantly, but is expected to leach into groundwater. In damp soil the ammonium ion, NH4+, is adsorbed by the soil. When released into water, ammonium nitrate is expected to readily biodegrade; the nitrate ion, NO3-, is mobile in water. The nitrate ion is the
predominant form of plant nutrition. It follows the natural nitrification/denitrification cycle to give nitrogen.
Environmental fate (exposure): Low toxicity to aquatic life.
TLm 96 between 10 – 100 ppm.
No effects on growth or feeding activities were observed in largemouth bass and channel catfish exposed to concentrations of 400 mg NO3-/L.
Acute Toxicity to Fish: 48 hr LC50 (Cyprinus carpio): 1·15 - 1·72 mg un-ionised NH3/L; 95 – 102 mg total NH3/L;
96 hr LC50 (Chinook Salmon, rainbow trout, bluegill): 420 -1,360 mg NO3-/L;
TLm (Tadpoles): 910 mg NH3/L.
Chronic Toxicity to Fish 7 day LC50 (Fingerling rainbow trout): 1,065 mg/L.
Acute Toxicity to Aquatic Invertebrates EC50 (Daphnia magna): 555 mg/L; 124·9 mg total NH3/L.
Chronic Toxicity to Invertebrates Up to 7 days NOEC (Bullia digitalis): 300 mg/L.
Classification (Australia): CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA
GHS classifications: Serious Eye Damage / Eye Irritation: Category 2A

Value chain stage

Direct operations
Supply chain

Product use phase

Actions and procedures to minimize adverse impacts

Industrial and chemical accidents prevention, preparedness, and response
Provision of best practice instructions on product use
Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

Although of low toxicity to aquatic life, ammonium nitrate can cause algal bloom, and therefore potential eutrophication, in still waterways due to provision of nitrate ions, which are the predominant form of plant nutrition. Measures to prevent spillage, leaching and leakages include, but are not limited to:

• Dust suppression – wind breaks/covered/enclosed stockpiles, fabric filter/baghouses
• Wastewater treatment plants
• On site spill kits
• Procedures for transportation
• Supply of specialist knowledge in product use via our technical support teams and our Dyno Consult business. At many customer sites IPL employees handle the product as specialist
contractors during use.

Water pollutant category

Phosphates

Description of water pollutant and potential impacts

Urea contains nitrogen (outlined above). Ammonia based granulated fertilisers (ammonium phosphates) including diammonium phosphate and monoammonium phosphate fertilisers contain nitrogen (outlined above) and phosphorus, both of which can stimulate weed and algal growth if lost to static surface waterways. Algae affect water quality and taste. Depending on the concentration and species, ammonium may be toxic to fish. In the soil, ammonium is converted to nitrate. Nitrate is susceptible to leaching and may contaminate groundwater. High nitrate concentrations (above 10mg/L) may render water unsuitable for human and livestock consumption.
Classification (Australia): NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA.
No signal word, pictograms, hazard or precautionary statements have been allocated on the SDS.

Value chain stage

Direct operations
Supply chain
Product use phase

Actions and procedures to minimize adverse impacts

Industrial and chemical accidents prevention, preparedness, and response
Provision of best practice instructions on product use
Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

Although of low toxicity to aquatic life, ammonia based fertilisers, the nutrients (nitrates and phosphates) in ammonia based fertilisers can cause algal bloom, and therefore potential eutrophication, in still waterways. It is therefore necessary to prevent/immediately clean up any spills to prevent their entry into waterways. Measures to prevent spillage, leaching and leakages include, but are not limited to:
• Dust suppression – wind breaks/covered/enclosed stockpiles, fabric filter/baghouses
• Wastewater treatment plants
• Road sweepers and wheel washes to prevent any product leaving the site.
• IPL promotes the Fertcare principles and code of practice for responsible fertiliser use, a joint initiative between Fertilizer Australia Inc. and the Australian Fertiliser Services Association, to our customers.

Water pollutant category

Phosphates

Description of water pollutant and potential impacts

Single super phosphate (SSP) fertilisers (granulated) contain phosphorus. Phosphates are not toxic to people or animals unless they are present in very high levels. Although of low toxicity to aquatic life, single superphosphate fertilisers can cause algal bloom, and therefore potential eutrophication, in still waterways due to provision of phosphates, which are a form of plant nutrition.
Ecotoxicity: 48 hour LC50 (bluegill): 10 mg/L
Persistence/Degradability: Not expected to persist in the environment.

Classification (Australia): NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA.
No signal word, pictograms, hazard or precautionary statements have been allocated on the SDS.

Value chain stage

Direct operations
Product use phase

Actions and procedures to minimize adverse impacts

Industrial and chemical accidents prevention, preparedness, and response
Provision of best practice instructions on product use
Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

Although of low toxicity to aquatic life, single superphosphate fertilisers can cause algal bloom, and therefore potential eutrophication, in still waterways due to provision of phosphates, which are a form of plant nutrition. It is therefore necessary to prevent/immediately clean up any spills to prevent their entry into waterways. Measures to prevent spillage, leaching and leakages include, but are not limited to:
• Dust suppression – wind breaks/covered/enclosed stockpiles, fabric ilter/baghouses
• Wastewater treatment plants
• Road sweepers and wheel washes to prevent any product leaving the site.
• IPL promotes the Fertcare principles and code of practice for responsible fertiliser use, a joint initiative between Fertilizer Australia Inc. and the Australian Fertiliser Services Association, to our customers.

Water pollutant category

Inorganic pollutants

Description of water pollutant and potential impacts

Anhydrous ammonia is very toxic to aquatic organisms. In low concentrations in water and soil, ammonia acts as a fertiliser to promote plant growth. Free ammonia concentrations of 2·5 mg per litre at pH 7·4 to 8·5 are considered harmful to marine life. In water ammonia (NH_3) is considered to be the primary toxic form while the more prevalent ammonium hydroxide (NH_4OH) form is much less harmful.
Increases in pH above 7·5 will lead to an increased level of non-ionised ammonia (NH_3). Ammonia is readily oxidized to nitrite which is also toxic to

marine life.
In water, ammonia volatilizes to the atmosphere, is transformed to other nitrogenous compounds, or may be bound to materials in the water.
Environmental fate (exposure): 48 hr LC50 (daphnia magna): 24 mg/L;48 hr LC50, S (daphnia magna) :189 mg/L;24 hr LC50 (rainbow trout): fertilised egg:> 3·58 mg/L;
alevins (0-50 days old): 3·58 mg/L; fry (85 days old): 0·068 mg/L; adults: 0·097 mg/L.
Classification: Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.
This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.
Classification of the chemical: Flammable Gases - Category 2
Gases under pressure - Liquefied Gas
Acute Inhalation Toxicity - Category 3
Skin Corrosion - Sub-category 1B
Eye Damage - Category 1
Specific target organ toxicity (single exposure) - Category 3
Acute Aquatic Toxicity - Category 1

Value chain stage

Direct operations
Supply chain
Product use phase

Actions and procedures to minimize adverse impacts

Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience
Industrial and chemical accidents prevention, preparedness, and response
Provision of best practice instructions on product use
Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements
Other, please specify
Alarms on storage tanks to detect vapour leaks

Please explain

One volume of liquid anhydrous ammonia released from a container at 15 ºC will dissipate into approximately 850 volumes of gaseous ammonia. However, liquid anhydrous ammonia may take considerable time to evaporate due to its latent heat of evaporation. The hazardous nature of

anhydrous ammonia requires emergency and spill procedures to be effective to avoid both
human and environmental exposure.
• HSE management system is in place with clear principles and policies communicated to employees,
• HSE risk management strategies are employed at all times and across all sites. Incidents are reported and investigated, and learnings are shared throughout the Group.
• Management undertakes risk identification and mitigation strategies across all sites.
• IPL undertakes business continuity planning and incident preparedness across all sites.
• The Group has strict processes around the stewardship, movement and safe handling of dangerous goods and other chemicals.
• Supply of Safety Data Sheets, which comply with GHS Classification and Labelling of Chemicals and meet the requirements of the Australian Dangerous Goods Code and Safe Work Australia criteria.
• Purpose-built gas detectors are permanently located near the perimeters of sites that have anhydrous ammonia storage tanks, ensuring that any potential leaks can be responded to. The detectors set off an alarm to response teams at any time of the day or night if gas is detected.

Water pollutant category

Inorganic pollutants

Description of water pollutant and potential impacts

Nitric acid (aqueous HNO3 solution). Nitric acid (HNO3) is highly soluble in water to form an aqueous HNO3 solution, a strong acid. Nitric acid is slightly toxic to aquatic organisms based on
ecotoxicity testing. Nitric acid may decrease the pH of aquatic systems to less than pH 5 which may be toxic to aquatic species. The bioconcentration potential of nitric acid is low and its
potential for mobility in soil is very high. Nitric acid will not biodegrade readily in the environment, but will ionize in water and be readily neutralized by the natural buffering capacity (alkalinity) present in the soil and surface water. The nitrate ion will ultimately become an inorganic nutrient for plant species.
Classification: Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.
This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.
Classification of the chemical: Corrosive to Metals - Category 1

Skin Corrosion - Sub-category 1A
Eye Damage - Category 1

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Industrial and chemical accidents prevention, preparedness, and response
Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

Nitric acid is manufactured and used to make ammonium nitrate under strictly controlled conditions in the on-site manufacture of ammonium nitrate. Spills must be prevented due to
the corrosive nature of the substance. Spills to waterways have the potential to lower the pH of the water, affecting aquatic life.
The hazardous nature of nitric acid requires emergency and spill procedures to be effective to avoid both human and environmental exposure.
Controls include:
• HSE management system is in place with clear principles and policies communicated to employees, including appropriate Personal Protective Equipment.
• HSE risk management strategies are employed at all times and across all sites. Incidents are reported and investigated, and learnings are shared throughout the Group.
• Management undertakes risk identification and mitigation strategies across all sites.
• IPL undertakes business continuity planning and incident preparedness across all sites.
• Wet scrubbers are used to control fume from storage tanks.

Water pollutant category

Inorganic pollutants

Description of water pollutant and potential impacts

Sulphuric acid (aqueous H2SO4 solution). Sulphuric acid is miscible with water and its dilution will increase the velocity of downward movement in the soil where it may dissolve the
soil material. Sulphuric acid is harmful to aquatic life in very low concentrations. It has moderate acute (short-term) toxicity on aquatic life and has moderate chronic (long-term) toxicity to aquatic life. Small quantities of sulfuric acid will be neutralised by the natural alkalinity in aquatic systems however, larger quantities may lower the pH for extended periods of time.
Classification (Australia: CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA
GHS classification(s): Skin Corrosion/Irritation: Category 1A

Value chain stage

Direct operations
Supply chain

Actions and procedures to minimize adverse impacts

Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience
Industrial and chemical accidents prevention, preparedness, and response
Requirement for suppliers to comply with regulatory requirements
Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

Sulphuric acid is used under strictly controlled conditions in the on-site manufacture of ammonium phosphate fertilisers. Spills must be prevented due to the corrosive nature of the substance. Spills to waterways have the potential to lower the pH of the water, affecting aquatic life.
The hazardous nature of sulphuric acid requires emergency and spill procedures to be effective to avoid both human and environmental exposure. Controls include:
• HSE management system is in place with clear principles and policies communicated to employees, including appropriate Personal Protective Equipment.
• HSE risk management strategies are employed at all times and across all sites. Incidents are reported and investigated, and learnings are shared throughout the Group.
• Management undertakes risk identification and mitigation strategies across all sites.
• IPL undertakes business continuity planning and incident preparedness across all sites.
• Wet scrubbers are used to control fume from storage tanks.

Water pollutant category

Inorganic pollutants

Description of water pollutant and potential impacts

Sodium hypochlorite (Cooling water treatment). Acute aquatic toxicity (Category 1). Very toxic to aquatic life. LC50 (fish) - 0.07-5.9 mg/l –48h.
Classification (Australia); CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA.
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS. HAZARDOUS CHEMICAL.
Classification of the chemical:
Skin Corrosion - Sub-category 1B
Eye Damage - Category 1
Acute Aquatic Toxicity - Category 1
GHS Classification: Corrosive to metals (Category 1).
Skin corrosion (Sub-category 1C).
Eye damage (Category 1).

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Industrial and chemical accidents prevention, preparedness, and response

Please explain

Used as an onsite cooling water treatment, sodium hypochlorite is very toxic to aquatic life. The corrosive nature of sodium hypochlorite requires handling procedures to be effective to avoid human or environmental exposure.
• HSE management system is in place with clear principles and policies communicated to employees, including appropriate Personal Protective Equipment.
• HSE risk management strategies are employed at all times and across all sites. Incidents are reported and investigated, and learnings are shared throughout the Group.
• Management undertakes risk identification and mitigation strategies across all sites.
• IPL undertakes business continuity planning and incident preparedness across all sites.

Water pollutant category

Inorganic pollutants

Description of water pollutant and potential impacts

Sodium hydroxide (Cooling water treatment). Toxic for aquatic organisms. Harmful effect due to pH shift.
Classification (Australia): CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA.
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS. HAZARDOUS CHEMICAL.
Corrosive to Metals - Category 1
Skin Corrosion - Sub-category 1A
Eye Damage - Category 1
GHS classification: Corrosive to Metals: Category 1
Skin Corrosion/Irritation: Category 1A

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Industrial and chemical accidents prevention, preparedness, and response

Please explain

Used as an onsite cooling water treatment, sodium hypochlorite is very toxic to aquatic life. The corrosive nature of sodium hypochlorite requires handling procedures to be effective to avoid human and environmental exposure.
• HSE management system is in place with clear principles and policies communicated to employees, including appropriate Personal Protective Equipment.
• HSE risk management strategies are employed at all times and across all sites. Incidents are reported and investigated, and learnings are shared throughout the Group.
• Management undertakes risk identification and mitigation strategies across all sites.
• IPL undertakes business continuity planning and incident preparedness across all sites.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Value chain stage

Direct operations

Product use phase

Coverage

Partial

Risk assessment procedure

Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Enterprise risk management

Tools and methods used

Enterprise Risk Management

Other, please specify

Future climate-related scenario analysis: 1.5oC, 2oC, Inevitable Policy Response and 3oC+ scenarios

Contextual issues considered

Water availability at a basin/catchment level
Water quality at a basin/catchment level
Stakeholder conflicts concerning water resources at a basin/catchment level
Water regulatory frameworks
Other, please specify
Water impacts on customer markets (agriculture and mining)

Stakeholders considered

Customers
Employees
Local communities
Regulators
Water utilities at a local level

Comment

IPL has a formalised process in place to identify risks in the supply chain, including water supply. As per the Company's Group Risk Policy, the oversight and management of material
business risk is managed within a comprehensive risk management process, overseen by the Board Audit and Risk Management Committee. IPL has also developed a detailed contingency planning process within its businesses. The process systematically identifies short term product supply exposure in relation to IPL's operations, including water, and determines the next best alternative supply point or the risk mitigation measures that might need to be taken to mitigate shortages in supply. As part of this process, the WRI Water Aqueduct Tool is completed annually and is reviewed by the Chief Risk Officer. It includes 23 of IPL's manufacturing sites, including those which are users of large volumes of high-quality cooling water.

As of 2018, IPL also began using future climate-related scenario analyses in its risk assessment processes, which include climate change-related water risks. The Charter of the IPL ARMC mandates that these scenarios be updated every three years. In 2021, IPL used 1.5oC, 2oC, 3oC+ and Inevitable Policy Response Scenarios. Newly identified and emerging risks are assessed against the IPL Risk matrix and integrated into IPL's risk management process, as described above, where they are included in annual risk reviews. The scenarios are compiled by an expert third party specifically for IPL using RCPs and SSPs, and each describe how physical climate change would impact on areas including changing rainfall patterns (which will impact on water availability for IPL's manufacturing facilities) and on IPL's farming and mining customers. As per IPL’s risk

management process, identified risks are then assessed against the IPL Risk matrix, a matrix of varying likelihoods and consequences that is used to determine its overall Risk Rating, then ranked in order of importance to determine whether a risk is above or below IPL's Risk Threshold. All risks are integrated into IPL's risk management process (described in paragraph 1 above) through each risk being assigned to a risk owner in the appropriate business unit, and through controls (including monitoring) being assigned to risk control owners. This ensures that risks are reviewed annually, at a minimum, as part of IPL's Annual Risk Review process.

W3.3b

(W3.3b) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	Ammonia production requires large quantities of high-quality water for cooling purposes. Therefore, our primary exposure to water risks is operational. The second most important risk is water availability for agricultural customers, as this impacts on sales/revenues. For these reasons, our risk assessments have focused on these two areas. Supplier risk is not included at this stage due to an initial risk mapping indicating that water dependencies, and therefore water risks, are not as material in that section of our value chain. That is, partial coverage selection is based on materiality of water risk.	Water availability and quality at a basin/catchment level, and stakeholder conflicts regarding water are considered currently and into the future to assess short, medium and long-term water risks associated with our manufacturing operations. For example, one large ammonia manufacturing site in Brisbane, Australia which uses large volumes of high-quality water for cooling purposes, was identified by the WRI Aqueduct Tool assessment as being located in a catchment currently experiencing high (40-80%) baseline water stress and this is projected to double by 2030. which may give rise to stakeholder conflicts regarding	As noted previously in this question, agricultural customers are considered because they rely on rainfall to grow the crops which use our fertilisers. Employees are considered because flooding at certain sites has restricted their access to the sites and has potential impacts on their personal safety. Local communities within the catchments where our major water using operations are located are considered in our assessment of baseline water stress and predicted baseline water stress to 2030 and 2040 in order to include their needs in relation to water quantity and	As per the Company's Group Risk Policy, the oversight and management of material business risk is managed within a comprehensive risk management process, overseen by the Board Audit and Risk Management Committee. All risks are integrated into IPL's risk management process through each risk being assigned to a risk owner in the appropriate business unit, and through controls (including monitoring) being assigned to risk control owners. This ensures that risks are reviewed annually, at a minimum, as part of IPL's Annual Risk Review process. IPL has also developed a detailed

	Enterprise risk assessment tools are used for their ability to increase awareness of business risks across our entire organization, providing confidence in strategic objectives, improving compliance with regulatory and internal mandates and enhancing operational efficiency through more consistent applications of processes and controls. Future climate related scenarios (as per TCFD) and the WRI Aqueduct Tool are used to assess the longer-term and emerging water risks associated with climate change and to assess baseline water stress by catchment for our operations. Risks are classified using the IPL internal Risk Matrix to determine its overall Risk Rating, then ranked in order of importance to determine whether a risk is above or below IPL's Risk Threshold. A risk with an impact of A$20 million or more on EBIT is considered to be financially material.	water availability. Water regulatory frameworks are included in the risk assessment because these can change with changing water availability and can impact both access to water and water costs. These assessments have allowed us to secure access to a recycled water source for this site, which reduces the likelihood of future water restrictions and stakeholder conflicts. Customer markets are assessed for water risks because agricultural customers rely on rainfall to grow the crops which use our fertilisers. This will allow the business to prepare for an increase in the incidence of flooding and/or drought in certain growing regions by increasing sales to other regions ahead of such impacts.	quality, as water is a shared resource. This also assists in identifying sites at which stakeholder conflicts and regulatory impacts may arise. Regulators are included in order to maintain good relations with water regulatory bodies and to include their concerns in water availability and quality into the future. Water utilities at a local level are considered in order to assess emerging risks associated with access to water for our operations and customers into the future. For example, water for our ammonia manufacturing site in Cheyenne, Wyoming is drawn from an underground aquifer which is recharged each year by precipitation, including snowmelt. We engage with key stakeholders including the Wyoming State Engineer's Office (SEO) which manages stakeholder access to the aquifer and maintains databases for ground water levels, along with the Ground Water Division of the US Geological Survey.	contingency planning process within its businesses. The process systematically identifies short term product supply exposure in relation to IPL's operations, including water, and determines the next best alternative supply point or the risk mitigation measures that might need to be taken to mitigate shortages in supply. Where medium to long-term water risks are identified, they are not only assigned to local site managers and their teams for catchment level management, but are also assigned to the Chief Strategy and Sustainability Officer for inclusion in considerations regarding business strategy. This is particularly important for customer and market related water risks which may impacts on sales revenues.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, both in direct operations and the rest of our value chain

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

IPL defines a 'material' financial impact as a AU$20 million impact or greater on EBIT. In addition to this financial threshold, IPL considers risks and management strategies based on an assessment of likelihood, with lower consequence risks that have a higher likelihood of occurring receiving an elevated level of management attention. IPL's risk management process also reviews the appropriateness of controls and management strategies for climate related risks with impacts of less than AU$20 million on EBIT.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% Company-wide facilities this represents	Comment
Row 1	2	1-25	Throughout this report, 'facility' means a particular IPL site with fixed buildings and manufacturing plants at a specific address. Two facilities in Australia are exposed to water related risks with the potential to have a substantive financial or strategic impact on our business. These are explained in more detail below in W4.1c.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

Australia
Eyre Lake

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

% company's total global revenue that could be affected

1-10

Comment

Our Phosphate Hill ammonium phosphate fertiliser manufacturing site is located in remote northern Australia (near a natural phosphate deposit) where scenario analyses describe hotter, wetter weather conditions and an increase in the incidence & magnitude of flooding events due to climate change. While the site itself is not located in the flood zone, a single third party operated rail line is used for supply in, and product transport out, of site. In 2016, flood waters caused a derailment of sulphuric acid supply to the site, resulting in an AU$10 million impact on EBIT. In 2019, a one-in-one-hundred-year flooding event damaged third-party rail infrastructure, interrupting rail services to the site for 3 months (early Feb to early May 2019). This rail outage required a change from rail to road transport of product for the three months. Production was also halted once product storage was at capacity, and several plant trips were experienced during restarting. This resulted in a period of almost three months in which production was interrupted. The total EBIT impact of the event was AU$115m. Learnings and contingency plans which have been developed as a result of this event have reduced the potential financial impact of future similar events. Product storage capacity at the site has been increased and lessons learned during the event have informed contingency planning for future events. As a result, the expected financial impact of a similar future event at this site (based on 2019 commodities prices and other financial aspects) is expected to be ~AU$30m.

The facility is not expected to be at risk of water shortages or quality issues due to supply via extraction from an aquifer which is recharged annually in the wet season.

Country/Area & River basin

Australia

Other, please specify

North-east Australia

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

% company's total global revenue that could be affected

1-10

Comment

Water is a key raw material for manufacturing at some sites, with the majority used for cooling purposes. Under IPL's 1.5oC, 2oC, 3oC+ and IPR climate change scenarios, it is predicted that average annual rainfall will be reduced, and longer periods of prolonged drought will be created, especially in south-eastern Australia. While this may be offset somewhat by increased 1 in 20-year flooding events at some locations, and up to 15% more rainfall than historical averages in each single rain event, water restrictions may become more frequent in some areas. These impacts could occur in the short-term (1-3 years), with very low dam levels being recorded near some sites currently and in the recent past.

The Gibson Island manufacturing facility is identified by the WRI Aqueduct Tool as being located in a catchment currently subject to high (40-80%) baseline water stress and high 'Physical risk - Quantity' due to a relatively large local population and high inter-annual variability in rainfall. The Tool also predicts that baseline water stress in the catchment will double by 2030 due to climate change affecting rainfall and a growing population. Any interruption to production longer than three weeks due to water shortages would have a material impact on EBIT.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

Australia

Other, please specify

North-east Australia Basin

Type of risk & Primary risk driver

Acute physical

Flood (coastal, fluvial, pluvial, groundwater)

Primary potential impact

Supply chain disruption

Company-specific description

IPL's Phosphate Hill ammonium phosphate fertiliser manufacturing facility is located in remote northern Australia (near a natural phosphate deposit) where IPL's 1.5oC, 2oC, 3oC+ and IPR climate scenarios describe hotter, wetter weather conditions and an increase in the incidence & magnitude of flooding events due to climate change. While the site itself is not located in the flood zone, a single third party operated rail line is used for supply in, and product transport out, of site.

In 2016, flood waters caused a derailment of sulphuric acid supply to the site, resulting in an AU$10 million impact on EBIT. In 2019, a one-in-one-hundred-year flooding event damaged third-party rail infrastructure, interrupting rail services to the site for 3 months (early Feb to early May 2019). This rail outage required a change from rail to road transport of product for the three months. Production was also halted once product storage was at capacity, and several plant trips were experienced during restarting. This resulted in a period of almost three months in which production was interrupted. The total EBIT impact of the event was AU$115m.

Timeframe

1-3 years

Magnitude of potential impact

Medium

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

115,000,000

Explanation of financial impact

The AU$115m impact reported is the actual impact of the 2019 one-in-one-hundred-year flooding event before the development of comprehensive contingency plans and CAPEX spend to increase site storage. The following breakdown is provided:
AU$95m implied lost sales margin
+ $13m loss from manufacturing plant inefficiencies (sulphur, gas, electricity, sulphuric acid, take or pay agreements)
+ $2m to set up temporary alternative rail loading facility beyond flood damaged zone
+ $3m road freight to alternative rail loading facility
+ $2m other one off costs
= $115m.
(Note: No costs were incurred by IPL in repairing the damaged rail infrastructure because the rail line is owned and operated by a third-party. No IPL operations were damaged by the flood).

Learnings and contingency plans which have been developed as a result of this event have reduced the potential financial impact of future similar events. Product storage capacity at the site has been increased and lessons learned during the event have informed contingency planning for future events. As a result, the expected financial impact of a similar future event at this site (using 2019 commodities prices and other 2019 financial aspects) is expected to be ~AU$30m.

Primary response to risk

Develop flood emergency plans

Description of response

Following the one-in-one-hundred-year flooding event at Phosphate Hill in 2019, a detailed review of contingency plans for rail interruptions at the site was completed. As a result, additional on-site and contingency storage was built to enable production to continue in the even that rail transport out of the facility as interrupted for an extended period in the future. Process changes were also made, including the hire of a dry truck unloading chute/conveyor and telehandler for the wet season. A number of other process changes were implemented which will allow IPL to better prepare for, manage and mitigate the risks associated with future rail interruptions, both minor and major. In association with the risk review, an internal audit was conducted by KPMG which identified further minor improvements to contingency plans and resulted in an overall rating of 'satisfactory'.

Other mitigation responses for physical impacts include:
• Geographic and customer market diversification to reduce the financial impact of single point risks
• Due to its location in a hurricane zone, the Waggaman Louisiana plant was built to comply with wind codes set out by the International Building Code Design Standard IBC 20 and Minimum Design Loads for Buildings and Other Structures ASCE 7-05. The design was signed off by a Louisiana based certified Professional Engineer with experience in design standards for the region, where the impacts of future hurricanes must be considered.
• Safety and evacuation plans are in place for all personnel and sites.
• IPL has developed technology solutions to increase the shelf life of products since this assessment in 2018.
• The Group endeavours to include force majeure clauses in agreements where relevant.
• Insurance policies are in place across the Group.
• The location of the Moranbah facility close to high quality metallurgical coal producers would provide IPL with a strategic advantage over its competitors in the event of supply chain disruption due to extreme weather events.
• Domestic co-location of critical products and diversification away from single source suppliers, already being managed, will assist in managing supply chain interruption.
• Monitoring of weather by Site Managers in high risk locations

Cost of response

3,820,000

Explanation of cost of response

The cost of response figure reported above has been calculated as follows:
AU$3.6m installation of increased product storage (to avoid plant shutdowns in the event that rail transport must be transferred to road, which is slower)
+ $220,000 to hire a dry truck unloading chute/conveyor and telehandler for the wet season each year in case it is required.

Country/Area & River basin

Australia
Other, please specify
North-east Australia

Type of risk & Primary risk driver

Acute physical
Drought

Primary potential impact

Disruption to sales

Company-specific description

IPL's Gibson Island ammonia manufacturing facility is located in Brisbane, Queensland and uses high volumes of high-quality cooling water in the ammonia plant. (Plans to convert the facility from using natural gas for hydrogen feedstock, to electrolysis of water using renewable energy for hydrogen feedstock will also mean a sustainable water source is required for this site in the future). The WRI Aqueduct Water Tool identifies the site as being located in a catchment currently subject to high (40-80%) baseline water stress and high 'Physical risk - Quantity' due to a relatively large local population and high inter-annual variability in rainfall. The Tool also predicts that baseline water stress in the catchment will double by 2030 due to climate change affecting rainfall and a growing population. An interruption to manufacturing due to water shortages of longer than three weeks would have a material impact through disruption to sales.

Timeframe

4-6 years

Magnitude of potential impact

Low

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

7,000,000

Explanation of financial impact

This figure is the impact on EBIT which would result from a three-week outage at the Gibson Island ammonia manufacturing site due to water shortages, based on 2021 production processes and commodities prices.

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

During 2020, IPL worked with Seqwater, the Queensland Government Bulk Water Supply Authority, and Urban Utilities, who operate a water recycling plant located near the Gibson Island site, to enable the purchase of recycled water. During 2021, a pipeline was completed to bring around 6,000 kL per day of recycled water to the site. This has ensured an uninterrupted supply in the event that municipal water supplies become restricted. It also results in 6,000 kL per day being left in the municipal water supply dams for community use.

Cost of response

4,000,000

Explanation of cost of response

The 'cost of response' provided is the total project cost to lay the pipeline from the recycled water plant to the Gibson Island plant and connect it to site.

W4.2a

(W4.2a) Provide details of risks identified within your value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

Australia

Other, please specify

All basins in the eastern and southern states of Australia

Stage of value chain

Use phase

Type of risk & Primary risk driver

Acute physical

Other, please specify

Drought, flooding and extreme weather events

Primary potential impact

Reduced demand for products and services

Company-specific description

Impacts on Product Demand:

IPL provides products and services to end markets, individual customers and suppliers that may be impacted by changes to weather patterns, including rainfall, resulting from climate change. Acute impacts such as changes to the number and/or intensity of storms, hurricanes and other extreme weather events, as well as chronic changes, such as increased, longer or more severe droughts, may impact IPL’s end markets, primarily mining and agriculture.

Timeframe

1-3 years

Magnitude of potential impact

Medium-high

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure - minimum (currency)

20,000,000

Potential financial impact figure - maximum (currency)

40,000,000

Explanation of financial impact

This figure is based upon reported annual impacts on EBIT associated with previous drought and flooding events impacting on IPL's customer markets. The range was arrived at using the past actual reported impacts: IPL announced an AUD$19.8 million impact due to drought in the 2018 IPL Financial Year. In 2019, IPL announced a further AUD$33.6m decrease in earnings (against 2018 FY earnings) due to prevailing drought conditions in Northern Victoria, New South Wales and Southern Queensland, which adversely impacted fertilisers sales volumes and mix.

Primary response to risk

Direct operations

Develop new products and/or markets

Description of response

Following a strategic review of IPL's fertilisers business (IPF) undertaken in 2020, our long-term strategy is to grow IPF from a leading fertiliser company, manufacturing and distributing a range of domestic fertilisers, to a sustainable soil health company providing sustainable plant nutrition solutions to improve soil health. Our strategy will be leveraged through our expansive distribution footprint to drive new growth products and services towards soil health, including precision application of nutrients to reduce environmental impacts, such as GHG, and increase yields.

CASE STUDY - DEVELOPING FERTILISERS FOR A WARMING CLIMATE: In 2021, IPL continued the testing of silicon fertilisers which have been shown to increase stress resistance in crops & replace silicon lost from soils through certain crops. Results to date indicate that crop tolerance of abiotic stresses, such as heat stress, can be increased.
Additional mitigation measure include the following:
• The S&OP process incorporates forecasting which enables upcoming seasonal scenario planning and some supply flexibility. Forecasts are based on typical weather conditions and are reviewed on an ongoing basis as the seasons progress to help align supply to changing demand.
• Geographic and market diversity (fertiliser): IPL's Australian fertilisers business operates in all Australian States other than Western Australia. In addition to geographical diversity, there is also diversity across crops – IPL supplies fertilisers for a wide range of agricultural applications – and customers serviced. For example, in 2018 distribution earnings were adversely impacted by sales mix due to drought conditions (in NSW and Southern Queensland) dampening nitrogen demand for winter crop application in these regions. The impact of dry weather was somewhat mitigated by higher global Urea prices, higher sales volumes in non-drought affected regions and higher distribution margins, demonstrating the advantage of geographical, market and product diversity.
• Geographic and market diversity (explosives): The explosives business operates across North America and Asia Pacific, and in Europe, and is primarily aligned to customers with tier 1 assets, being those with the most efficient operations and best resources. Also, there is diversity in customer base, with products and services supplied for iron ore, base and precious metals, quarry and construction, and thermal and MET coal customers.

Cost of response

40

Explanation of cost of response

The 'cost of 'response' reported here is the annual R&D investment into the development of fertilisers for a warming climate, as described above. Zero is included for the other mitigating actions, reported here because the S&OP process and our geographic diversity requires no additional investment.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Products and services

Primary water-related opportunity

Sales of new products/services

Company-specific description & strategy to realize opportunity

The long term strategy of our fertiliser business, IPF, is to grow from a leading fertiliser company, manufacturing and distributing a range of domestic fertilisers, to a sustainable soil health company which provides sustainable plant nutrition solutions to improve soil health. Our strategy will be leveraged through our expansive distribution footprint to drive new growth products and services towards soil health, including precision application of nutrients to reduce environmental impacts, such as GHG, and increase yields.

DEVELOPING FERTILISERS FOR A WARMING CLIMATE: In 2020, IPL continued the testing of silicon fertilisers which have been shown to increase stress resistance in crops & replace silicon lost from soils through certain crops. Results to date indicate that crop tolerance of abiotic stresses, such as heat stress, can be increased.
During the reporting period, IPL was also involved in the following research projects:
• Continued work on a joint research project with the University of Melbourne into new fertiliser technologies for sustained food security.
• Completion of our Australia-China Joint Research Centre of Healthy Soils for Sustainable Food Production & Environmental Quality research.
• A new partnership with the University of Adelaide & CSIRO to develop novel urea coatings for use in arid cropping zones where a particular nutrient deficiency is common.

INVESTING IN BIO-FERTILISERS: In 2022, IPL announced a $38 million investment in Australian Bio Fert (ABF) with the intention to support the construction of Australia's first large-scale plant to develop and deliver a new category of sustainable fertilisers for Australian farmers. The new plant, to be built near Lethbridge in Victoria, will be capable of producing up to 75,000 tonnes of granular bio-fertilisers per year. Organic waste

materials sourced predominantly from the poultry industry will be heat treated to produce a dry, friable product which is free of harmful pathogens. Increasing the organic fraction of the soil has been shown to increase moisture holding capacity of all textures of soil (Rawls, W.J. & Pachepsky, Yakov & Ritchie, J.C. & Sobecki, T.M. & Bloodworth, H.. (2003). Effect of soil carbon on soil water retention. Geoderma. 116. 61-76. 10.1016/S0016-7061(03)00094-6.)

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Low-medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

20,400,000

Explanation of financial impact

The estimated impact figure has been calculated using the average revenues per annum from other novel/new fertiliser products released within the last 5-10 years, which were 2018: AU$21.4m, 2019: AU$20.7m and 2020: AU$19.0m.
(21.4m + 20.7m + 19.0m)/3 = AU$20.4m
The estimated impact from developing bio-ferts has not been included at this time.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Phosphate Hill

Country/Area & River basin

Australia

Other, please specify

Georgina Basin, Northeast Australia

Latitude

-21.8814

Longitude

139.9756

Located in area with water stress

No

Total water withdrawals at this facility (megalitres/year)

6,099.79

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

6,099.79

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megalitres/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megalitres/year)

6,099.79

Comparison of total consumption with previous reporting year

Higher

Please explain

• The Phosphate Hill site used 21.6% more water than the previous reporting period. This was due to increased production, as the facility had a maintenance shutdown in the last reporting year (2021).
• The tool used to assess the facility catchment for baseline water stress is the WRI Aqueduct Water Tool, which is completed annually.
• The change of +22% in withdrawal since the last reporting period has been classified as 'Higher'.
• Groundwater volumes extracted are directly measured by meters and uploaded to the PRS (Production Reporting System)
• Groundwater is the only water source for the remotely located facility. This is why all other sources are reported as 'zero'.
• The site is a non-discharge site. Cooling water, which makes up the vast majority of water use, is recycled in the cooling towers until it is evaporated. Evaporation ponds are used for other waste-water.
• No discharge is ground water injected or soaked away.
• Due to the remote location of the facility, sewage is treated at an on-site sewage treatment plant with an evaporation pond. The facility is not connected to municipal waste-water treatment facilities due to its remote location next to a natural phosphate deposit.

Facility reference number

Facility 2

Facility name (optional)

Gibson Island

Country/Area & River basin

Australia
Other, please specify

Northeast Australia

Latitude

-27.442

Longitude

153.118

Located in area with water stress

Yes

Total water withdrawals at this facility (megalitres/year)

1,538.19

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

92.97

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

144.23

Total water discharges at this facility (megalitres/year)

463.6

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

463.6

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megalitres/year)

1,074.6

Comparison of total consumption with previous reporting year

Lower

Please explain

• The Gibson Island facility withdrew 32.3% less water than the previous reporting period. This is due to an increase in the use of recycled water following connection of the site to a recycled water plant late in the reporting period., and an increase in the on-site recycling of water via RO treatment plant.
• The change of -32.3% in withdrawal since the last reporting period has been classified as 'Lower'.
• The facility is identified by the WRI Aqueduct Tool as being located in a catchment currently subject to high (40-80%) baseline water stress and high 'Physical risk - Quantity' due to a relatively large local population and high inter-annual variability in rainfall. The Tool, which is used annually, also predicts that baseline water stress in the catchment will double by 2030 due to climate change affecting rainfall and a growing population.
• Volumes of municipal water purchased, and municipal recycled water purchased, are taken from invoices.

- The 92.97 ML reported as 'surface water' is storm water captured onsite and treated in a Reverse Osmosis water treatment plant for on-site use.
- Discharge is measured by a meter for reporting under a licence to discharge. It excludes sewage sent offset for testament and disposal.
- No discharge is ground water injected or soaked away.

W5.1a

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

% verified

Not verified

Please explain

Water withdrawals – volume by source

% verified

Not verified

Please explain

Water withdrawals – quality by standard water quality parameters

% verified

Not verified

Please explain

Water discharges – total volumes

% verified

Not verified

Please explain

Water discharges – volume by destination

% verified

Not verified

Please explain

Water discharges – volume by final treatment level

% verified

Not verified

Please explain

Water discharges – quality by standard water quality parameters

% verified

Not verified

Please explain

Water consumption – total volume

% verified - Not verified

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

No

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual or committee	Responsibilities for water-related issues
Board-level committee	IPL's Board of Directors is responsible for charting the direction, policies, strategies and financial objectives of the Company. The Board serves the interests of IPL and its shareholders, as well as other stakeholders such as employees, customers and the community, in a manner designed to create and continue to build sustainable value. IPL's Board operates in accordance with its charter and has reserved certain powers for itself. The Board has established four standing Committees to assist the Board with effectively discharging its responsibilities: » Audit and Risk Management Committee; » Nominations Committee; » Remuneration Committee; and » Health, Safety, Environment and Community (HSEC) Committee. • The HSEC Committee has responsibility for water-related issues. • The Audit and Risk Management Committee has responsibility for water-related risks, including those arising from climate change.

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Sporadic - as important matters arise	Overseeing major capital expenditures Reviewing and guiding risk management policies Reviewing and guiding strategy Other, please specify Assessing risks identified using future climate-related scenarios	• Responsibility for water policies, strategy and information is delegated to the CEO and her Executive Team. The President Global Manufacturing & HSE is the ET member with responsibility for the management of water use and discharge at manufacturing operations, including where these relate to environmental licensing. Operations staff manage water information and report annually through the environmental team to the Sustainability Manager, who completes water reporting in the Sustainability Report, which is approved by the Board before publishing. • The Board oversees major capital expenditures such as new facilities. Water resource considerations for these are factored into location planning for new operations which are managed by The President Global Manufacturing & HSE. The manufacture of ammonia requires access to large quantities of good quality fresh-water for cooling. IPL manages water risks by ensuring that new ammonia manufacturing facilities are located close to abundant sources of freshwater. For example, our most recently built ammonia plant was built in Waggaman, Louisiana in 2016, on a brownfield site on the West Bank of the Mississippi River in Louisiana. • Responsibility for overseeing water-related risks, including those relating to climate change. The Board reviews and guides risk management policies. IPL has a formalised process in place to identify risks in the supply chain, including water supply. As per the Company's Group Risk Policy, the oversight and management of material business risk is managed within a comprehensive risk management process, overseen by the Board Audit and Risk Management Committee of the Board. As of 2018, IPL began using future climate-related scenario analyses in its risk assessment processes, as recommended the G20 Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) report. The Charter of the IPL Audit and Risk

			Management Committee (ARMC) of the Board mandates that these future climate-related scenarios be updated every three years. In 2018, IPL used 2oC and 4oC scenarios. In 2021, these were updated to 1.5oC, 2oC and 3oC+ and Inevitable Policy Response scenarios. Previous risks and their estimated financial impacts were reassessed against these updated scenarios. Newly identified and emerging risks are assessed against the IPL Risk matrix and integrated into IPL's risk management process, as described above, where they are included in annual risk reviews. The scenarios are compiled by an expert third party specifically for IPL using RCPs and SSPs. Identified risks related to water included water availability and pricing, rainfall changes which may impact IPL's farming and mining customers, risks related to water management at IPL sites and disruptions to supply chains at two sites related to flooding. The strategies to manage these risks are reviewed by the ARMC committee of the Board.

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues
Row 1	Yes	A summary of IPL directors' skills and experience as at 25 November 2021 is set out in the table on page 6 of the 2022 IPL Corporate Government Statement, which is available for download on our website. There are two criteria used to assess the competence of Board members on water related issues. The first is 'Industry Experience: Chemical Manufacturing', specifically 'a senior executive role or substantial Board experience in the chemical manufacturing sector'. Two directors are ranked as 'Highly Skilled' and one is ranked as 'Skilled' with the remainder as 'Knowledgeable'. The secondary criteria used is 'Environment and Sustainability,' that is 'Experience in managing and driving environmental compliance and social responsibility, including in relation to sustainability and climate change' in which two directors are 'Highly Skilled' and four directors are 'Skilled' with the remainder ranked as 'Knowledgeable.'

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Other C-Suite Officer, please specify

The Presidents of each of IPL's Business units are the ET members with responsibility for the management of water use and discharge at manufacturing operations, including where these relate to environmental licensing.

Water-related responsibilities of this position

Assessing future trends in water demand
Assessing water-related risks and opportunities
Managing water-related risks and opportunities
Managing major capital and/or operational expenditures related to low water impact products or services (including R&D)

Frequency of reporting to the board on water-related issues

As important matters arise

Please explain

The Presidents of each of IPL's Business units are members of the Executive Team who report directly to the CEO. During 2022, they reported quarterly to the Health, Safety, Environment and Community (HSEC) Committee of the Board in relation to HSEC issues and typically report to the full Board and ARMC annually on strategy and risk. Since water is a key input for manufacturing sites, and availability and quality must be considered at a local basin level, the Presidents delegate water management to local site managers, with material water issues reported up to Presidents where material risks are identified.

Name of the position(s) and/or committee(s)

Chief Risk Officer (CRO)

Water-related responsibilities of this position

Assessing future trends in water demand
Assessing water-related risks and opportunities
Managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

As important matters arise

Please explain

The Chief Risk Officer reports to the CFO, who is a member of the Executive Team which reports directly to the CEO. The Chief Risk Officer reports quarterly to the Audit and Risk Management Committee, which is a sub-committee of the IPL Board.

Name of the position(s) and/or committee(s)

Other C-Suite Officer, please specify
Chief Strategy and Sustainability Officer

Water-related responsibilities of this position

Managing public policy engagement that may impact water security
Integrating water-related issues into business strategy

Frequency of reporting to the board on water-related issues

As important matters arise

Please explain

The Chief Strategy and Sustainability Officer (CSSO) reports directly to the CEO and oversees the integration of water related issues into business strategy. The Corporate Sustainability Manager and Corporate Affairs Manager report directly to the CSSO, ensuring coordination of future climate-related-scenario-based water risk assessment and public policy positions are aligned.

Name of the position(s) and/or committee(s)

Environment/Sustainability manager

Water-related responsibilities of this position

Conducting water-related scenario analysis

Frequency of reporting to the board on water-related issues

As important matters arise

Please explain

The Corporate Sustainability Manager is a climate change scientist and completes the assessment of water related risks annually using the WRI Aqueduct Water Tool and every three years using updated future climate related scenarios.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	No, and we do not plan to introduce them in the next two years	

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

No

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes (you may attach the report - this is optional)

IPL_2022_Annual Report.pdf

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	• Water availability issues have been incorporated into our long term business planning. For example, a major manufacturing site at Gibson Island in Brisbane, which uses large volumes of high quality water for cooling purposes, was identified by our WRI Aqueduct Tool as being located in a catchment currently experiencing high (40-80%) water stress and this is projected to double by 2030. For this reason, the site was connected to a recycled water source in 2021. This will ensure water supply to the site is not affected by water restrictions in the future, which would impact on production, and therefore revenues. • Flood mitigation planning has also been incorporated into our long term business planning. For example, our Phosphate Hill facility is located in a region described by IPL's 1.5oC, 2oC, 3oC+ and IPR climate-related scenarios as likely to experience an increased incidence and magnitude of flooding events due to climate change. In 2016, flood waters caused a derailment of sulphuric acid supply to the site, resulting in an AU$10 million impact on EBIT. In 2019, a one-in-one hundred-year flooding event damaged third-party rail infrastructure, interrupting rail services to the site for 3 months resulting in a total EBIT impact of AU$115m. Contingency plans have been developed and product storage capacity at the site has been increased to manage the impact of future events.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	• Water availability issues have been incorporated into our long term business strategy. For example, a major manufacturing site at Gibson Island in Brisbane, which uses large volumes of high quality water for cooling purposes, was identified by our WRI Aqueduct Tool as being located in a catchment currently experiencing high (40-80%) water stress and this is projected to double by 2030. For this reason, the site is being connected to a recycled water source in 2021. This will ensure water supply to the site is not affected by water restrictions in the future, which would impact on production, and

			therefore revenues. • Flood mitigation planning has also been incorporated into our long-term business strategy. For example, our Phosphate Hill facility is located in a region described by IPL's 1.5oC, 2oC, 3oC+ and IPR scenario as likely to experience an increased incidence & magnitude of flooding events due to climate change. In 2016, flood waters caused a derailment of sulphuric acid supply to the site, resulting in an AU$10 million impact on EBIT. In 2019, a one-in-one-hundred-year flooding event damaged third-party rail infrastructure, interrupting rail services to the site for 3 months resulting in a total EBIT impact of AU$115m. Contingency plans have been developed and product storage capacity at the site has been increased to manage the impact of future events.
Financial planning	Yes, water-related issues are integrated	5-10	• Water availability issues have been incorporated into our financial planning. For example, AU$4m dollars CAPEX was invested in a pipeline to connect the Gibson Island manufacturing facility to a recycled water source in 2021. This will ensure water supply to the site is not affected by water restrictions in the future, which would impact on production, and therefore revenues. This is due to the facility being identified by the WRI Aqueduct Tool as being located in a catchment currently experiencing high (40-80%) water stress, with this being projected to double by 2030. • Flood mitigation has also been incorporated into our financial planning. For example, our Phosphate Hill facility is located in a region described by IPL's 1.5oC, 2oC, 3oC+ and IPR scenarios as likely to experience an increased incidence & magnitude of flooding events due to climate change. Contingency plans have been developed and product storage capacity at the site has been increased to manage the impact of future events. AU$3.6m CAPEX was invested in the installation of increased product storage (to avoid plant shutdowns in the event that rail transport must be transferred to road, which is slower, during floods) and $220,000 OPEX is allocated to hire a dry truck unloading chute/conveyor and telehandler annually during the wet season.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

Anticipated forward trend for CAPEX (+/- % change)

Water-related OPEX (+/- % change)

Anticipated forward trend for OPEX (+/- % change)

Please explain

We are unable to report total water-related Capex at this time.

W7.3

(W7.3) Does your organization use scenario analysis to inform its business strategy?

	Use of scenario analysis	Comment
Row 1	Yes	The WRI Aqueduct Tool is used annually to estimate Physical Risk (Quantity), Baseline Water Stress, Inter-annual Variability, Seasonal Variability, Flood Occurrence Risk, Drought Severity Risk, Groundwater Risk, Upstream Storage Risk and 'Water Stress- projected change from baseline to 2030 and 2040 for each manufacturing site, and is reviewed by the Chief Risk Officer. For example, our Gibson

		Island ammonia manufacturing site in Brisbane, Queensland, is identified by the WRI Aqueduct tool as being located in a catchment currently experiencing high baseline water stress which is expected to double by 2030. This site was connected to a recycled water source in 2021. IPL's 1.5oC, 2oC, 3oC+ & IPR climate scenarios are based on RCP and IEA SDS and draw on IPCC AR5; the Monsoonal North Cluster Report, Climate Change in Australia; Coastal Master Plan: C2-4: Tropical Storm Intensity and Frequency, Baton Rouge, Louisiana; the Climate Futures Tool (CSIRO); and the Climate Explorer Tool (NOAA).

W7.3a

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Climate-related	• The RCP 8.5 scenario was used in IPL's 3oC+ Scenario to assess physical risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit. • The RCP 8.5 scenario was also used in IPL's 3oC+ Scenario to assess physical risks which may impact on our 12 major manufacturing facilities, and on their suppliers, logistics and customer demand at the facility level. • The RCP 6.0 scenario was used in IPL's Inevitable Policy Response	1. Impacts on Operations (including supply chain): Some of IPL's manufacturing plants are located in areas that are susceptible to changes in precipitation, resulting in drought and flooding. An increase in the severity and/or frequency of flooding as a result of climate change may cause more frequent disruption to IPL's operations directly or as a result of supply chain disruption, which includes transportation of raw materials and finished product via road, rail and water. Impacts such as these may increase in the short term (1-3 years). Under this scenario, insurance premiums would be expected to increase along with a possibility that some events may be	1. Flood mitigation planning has been incorporated into our supply chain & seasonal operations planning. For example, our Phosphate Hill facility is located in a region described by IPL's 1.5oC, 2oC, 3oC+ and IPR scenarios as likely to experience an increased incidence & magnitude of flooding events due to climate change. Contingency plans include a AU$3.6m CAPEX investment in a new storage tank to avoid plant shutdowns associated with flooding of the rail line which interrupts production once the tanks are full, & $220,000 OPEX is allocated annually for equipment to switch from rail to road out loading of product,

		scenario to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit. The RCP 4.5 scenario was used in IPL's 2oC scenario to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit. • The RCP 2.6 scenario was used in IPL's 1.5oC scenario to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit. • The IEA SDS scenario was used in IPL's 1.5oC, 2oC and Inevitable Policy response scenarios to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit.	excluded from cover. Interruptions to logistics from extreme weather events could also result in financial loss if product cannot be stored effectively and degrades. For example, our Phosphate Hill site is remotely located in north-west Queensland and is serviced by a single rail line in and out of the site, which has experienced an increased incidence of wet season flooding, which is predicted to increase in the 1.5oC, 2oC, 3oC+ and IPR scenarios. 2. Impacts on Product Demand: IPL provides products and services to end markets, individual customers and suppliers that may be impacted by changes to precipitation resulting from climate change. Changes to the number and/or intensity/length of droughts, floods and short-term intense rain events would impact IPL's end markets, particularly agriculture.	should it be required during the wet season. 2. Climate change considerations relating to water are built into our core fertiliser business strategy. We recognise the importance of developing and delivering products which enable our customers to manage water related climate impacts. E.g., our IPF long-term strategy is to grow from a leading fertiliser company, manufacturing & distributing a range of domestic fertilisers, to a sustainable soil health company providing sustainable plant nutrition solutions to improve soil health, including soil water holding capacity. Our investment in Australian bio-ferts & continued testing of new products e.g., silica base fertilisers for use during drought, will provide solution for our farming customers, particularly in southern Australia where annual precipitation is expected to decrease and become more variable.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, and we do not anticipate doing so within the next two years

Please explain

IPL does not currently use a price on water because we operate all of our manufacturing sites in countries identified by the WRI Aqueduct Tool as having more than 97.5% of the population served with improved water and sanitation. These countries are Australia, Canada, and the USA. For this reason, access to water is managed as per supply chain management, and other environmental issues relating to water, including discharge, are managed under the relevant EPA legislation and licencing.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	No, and we do not plan to address this within the next two years	Other, please specify More research is required before such a claim could be verified.	We are investing in developing a new class of bio-fertilisers. Organic material has been shown to increase the water holding capacity of soils. However, the products are still under development and we have not conducted trials to verify a direct relationship between these products and soil moisture content. They can not therefore be classified as having a direct impact on water retention.

W8. Targets

W8.1

(W8.1) Do you have any water-related targets?

Yes

W8.1a

(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	No, and we do not plan to within the next two years	We do not have targets related to water pollution as all of our discharge sites are located in countries in which EPA licencing and strong record of good water management practices mean that discharges are already of a high quality and are regularly monitored. These operations are located in Australia, Canada, and the USA and issues relating to water, including discharge, are managed under the relevant EPA legislation and licencing.
Water withdrawals	Yes	25% reduction in total Australian municipal water withdrawal by 2023 against a 2020 baseline.
Water, Sanitation, and Hygiene (WASH) services	No, and we do not plan to within the next two years	IPL does not currently have a target for WASH services because we already provide these to 100% of our sites and employees. We operate primarily in countries identified by the WRI Aqueduct Tool as having more than 97.5% of the population served with improved water and sanitation. These countries are Australia, Canada, Europe and the USA.
Other	No, and we do not plan to within the next two years	IPL does not currently have other water targets because we operate primarily in countries identified by the WRI Aqueduct Tool as having more than 97.5% of the population served with improved water and sanitation. These countries are Australia, Canada, Europe and the USA and issues relating to water, including discharge, are managed under the relevant EPA legislation and licencing.

W8.1b

(W8.1b) Provide details of your water-related targets and the progress made.

Target reference number

Target 1

Category of target

Water withdrawals

Target coverage

Country/area/region

Quantitative metric

Reduction in total water withdrawals

Year target was set

2021

Base year

2020

Base year figure

4,118.84

Target year

2023

Target year figure

3,089.13

Reporting year figure

3,670.46

% of target achieved relative to base year

43.5442988803

Target status in reporting year

Underway

Please explain

With the connection of the Gibson Island recycled water pipeline in 2021, 18% of Australian purchased municipal water in 2022 was purchased recycled water. This reduced Australian municipal water use in 2022 by 11% against 2020.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

No, we do not currently verify any other water information reported in our CDP disclosure

W10. Plastics

W10.1

(W10.1) Have you mapped where in your value chain plastics are used and/or produced?

	Plastics mapping	Please explain
Row 1	Not mapped – and we do not plan to within the next two years	As a producer of inorganic chemicals, primarily explosives and fertilisers, we do not anticipate a material exposure to value chain plastics use and/or production.

W10.2

(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?

	Impact assessment	Please explain
Row 1	Not assessed – and we do not plan to within the next two years	As a producer of inorganic chemicals, primarily explosives and fertilisers, we do not anticipate a material exposure regarding the potential environmental and human health impacts of our use and/or production of plastics.

W10.3

(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.

	Risk exposure	Please explain
Row 1	Not assessed – and we do not plan to within the next two years	As a producer of inorganic chemicals, primarily explosives and fertilisers, we do not anticipate a material exposure to plastics-related risks with the potential to have a substantive financial or strategic impact on our business.

W10.4

(W10.4) Do you have plastics-related targets, and if so what type?

	Targets in place	Please explain
Row 1	No – but we plan to within the next two years	As a producer of inorganic chemicals, primarily explosives and fertilisers, we do not anticipate a material exposure to plastics-related risks with the potential to have a substantive financial or strategic impact on our business. While most of our product is delivered in bulk containers, a small proportion of our fertilisers and explosives are delivered in one tonne WPP plastic bulk bags. For this reason, we partner with a third party to collect our fertiliser bags from customers for recycling and are considering a target to increase recycling of our AN explosives one tonne bags.

W10.5

(W10.5) Indicate whether your organization engages in the following activities.

Activity applies:		Comment
Production of plastic polymers	No	
Production of durable plastic components	No	
Production / commercialization of durable plastic goods (including mixed materials)	No	
Production / commercialization of plastic packaging	No	
Production of goods packaged in plastics	Yes	As a producer of inorganic chemicals, primarily explosives and fertilisers, we do not anticipate a material exposure to plastics-related risks with the potential to have a substantive financial or strategic impact on our business. However, while most of our product is delivered in bulk containers, a small proportion of our fertilisers and explosives are delivered in one tonne WPP plastic bulk bags. For this reason, we partner with a third party to collect our fertiliser bags from customers for recycling, and are considering a target to increase recycling of our AN explosives one tonne bags.
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	

W10.8

(W10.8) Provide the total weight of plastic packaging sold and/or used, and indicate the raw material content.

	Total weight of plastic packaging sold / used during the reporting year (Metric tonnes)	Raw material content percentages available to report	% virgin fossil-based content	Please explain
Plastic packaging used		% virgin fossil-based content	100	We assume 100% non-recycled content for our packaging. We will investigate this further in 2023.

W10.8a

(W10.8a) Indicate the circularity potential of the plastic packaging you sold and/or used.

	Percentages available to report for circularity potential	% of plastic packaging that is technically recyclable	Please explain
Plastic packaging used	% technically recyclable	100	We assume 100% of our packaging is technically recyclable, as in 2015 we supported a trial fertiliser bag recycling program (Sugarcane Fertiliser Bag Recovery Trial), partnering with packaging suppliers, recycling companies, councils and government departments. The successful trial resulted in the development of the Farm Waste Recovery program, which transitioned into the Big Bag Recovery program in 2021 – an Australian Government accredited product stewardship scheme – to recycle and recover our fertiliser bags. While 85% of IPF's products are delivered in bulk and require no packaging, our 1t and 25kg bags are made from WWP. We encourage customers to return them to us, or drop them at the nearest Big Bag Recovery collection point. Participation in the program allowed Big Bag Recovery to recover 305 t of waste farm plastic from our customers in 2022. Recycling this packaging waste also avoided an estimated 448 tCO2e in GHG and preserved valuable landfill space.

W11. Sign off

W-FI

(W-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Chief Strategy and Sustainability Officer	Other C-Suite Officer

Submit your response

In which language are you submitting your response?

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options		Public

Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Please confirm below