

COLLECTING THE DROPS: A WATER SUSTAINABILITY PLANNER

Water Management Risk Assessment Questionnaire



General Information

1. List facility location: _____.
2. List internal stakeholders (*Dropdown list includes: environmental manager, maintenance personnel, plant manager, shift supervisors, production manager, utilities manager, public affairs, regulatory affairs, community liaison, other*)



Watershed Information

1. Enter the name of the watershed that the facility relies on for its water supply. This would be the watershed that the water is withdrawn from by the supplier or through private withdrawals from groundwater or surface water.

2. There are several ways that water is withdrawn from the watershed. Water is withdrawn from surface water (Rivers and Streams), from groundwater through production wells or through the collection and use of precipitation. Please enter the sources of water withdrawn from the watershed by the supplier or privately owned water supply system (surface water, ground water, precipitation)?

3. What is the average annual rainfall at your facility? Using your Internet browser, type in "average annual rainfall" for your facility location. Another link that has reference information is <http://www.worldclimate.com>

4. What is the available water per person per year (m³/person/year)? Review information related to your specific watershed by using the following links: http://multimedia.wri.org/watersheds_2003/; <http://waterdata.usgs.gov> Please compare the figure for your watershed to the following thresholds to define scarcity: *Assign Risk Value*
 - 1 = >10,000 to 20,000 cubic meters per person per year
 - 2 = >5,000 to 10,000 cubic meters per person per year
 - 3 = >2,000 to 5,000 cubic meters per person per year
 - 4 = 1,000 to 2,000 cubic meters per person per year
 - 5 = <1,000 cubic meters per person per year
5. Are the current withdrawals (for community-wide supply) from the watershed sustainable or are they overstressed? For example, has the ground water table in

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the region where your facility is located generally been decreasing or is ground water on the average being pumped at a rate that is greater than being replaced. Before assigning a value, consider the projected residential and industrial/commercial growth in your community. This information may be obtained through local regulatory agencies, watershed associations or the local supplier. *Assign Risk Value*

- 1= Minimal risk — watershed is sustainable for next 20 years based on projected growth
- 2= Low risk — watershed is sustainable for next 10 years based on projected growth
- 3= Medium risk — watershed is sustainable for next 5 years based on projected growth
- 4= Likely risk — watershed is sustainable for current use
- 5= High risk — watershed is not sustainable based on current use

6. Are there times during each year when the demand for water (by the population living in the region) exceeds the supply (leading to short-term water use restrictions such as residential irrigation restrictions)? Please consider the potential for restrictions on water usage due to droughts. This information may be obtained through local regulatory agencies, watershed associations, or local colleges and universities (<http://droughtreporter.unl.edu/>). *Assign Risk Value*

- 1= Minimal risk — no historic restrictions, no droughts experienced
- 2= Low risk — no historic restrictions, droughts experienced
- 3= Medium risk — historic restrictions experienced once over past 10 years
- 4= Likely risk — historic restrictions experienced 3 times over the past 10 years
- 5= High risk — historic restrictions experienced 5 times over past 10 years

7. Are community watershed protection and management programs in place to reduce the potential for contamination of the water supply? *Assign risk value*

- 1= Minimal risk — strong protection program and community awareness
- 2= Low risk — adequate protection program and community awareness
- 3= Medium risk — protection program in place and lack of community awareness
- 4= Likely risk — no protection program in place and community aware of need
- 5= High risk — no protection program in place and no community awareness

8. What is the potential for watershed withdrawal restrictions being posed for surface water or ground water by a governmental agency? *Assign Risk Value*

- 1= Minimal risk — not an issue in region based on governmental review
- 2= Low risk — the region has been reviewed, but not a priority
- 3= Medium risk — the region has been reviewed and issues have been raised
- 4= Likely risk — draft restrictions or allocations are being reviewed

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- 5= High risk – restrictions or allocations are required by regulatory agency*

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Supply Reliability

1. What is the source of water to the facility (owned vs. purchased)? _____
2. If purchased, name of supplier: _____
3. What is supplier's current capacity as a percentage of available capacity? Review this question with the supplier or if your operation withdraws water privately determine your rated capacity versus overall use. _____
4. What is the facility total water usage per day and per year? (Use English or metric units) _____
5. What percentage of water is used by facility in comparison to total withdrawals from the watershed by supplier? _____
6. What percentage of water is used by facility in comparison to total withdrawals from the watershed by all in the region? (This information can typically be obtained from regulatory or local utility authorities) _____
7. If owned, provide water source details (number of wells and capacity) or if surface water, from where and how treated? _____
8. Is your facility a large water user in comparison to all users in the community?
Assign Risk Value
 - 1= Minimal risk — within 0 to 0.5 percent of total
 - 2= Low risk — within 0.6 to 1 percent of total
 - 3= Medium risk — within 2 to 5 percent of total
 - 4= Likely risk — within 6 to 10 percent of total
 - 5= High risk — within top 10 percent or more of total
9. Is there a seasonal variation in water usage? ____ Yes or No answer
10. Do seasonal usage characteristics coincide with low flow conditions and does this limit production? *Assign Risk Value*
 - 1= Minimal risk — no historical events and no events are anticipated
 - 2= Low risk — no historical events
 - 3= Medium risk — has over the past 10 years
 - 4= Likely risk — once over the past 5 years
 - 5= High risk — two or more times over the past 5 years
11. Does supplier treat water prior to delivery at point of use? ____ Yes or No answer
12. If yes, what treatment is applied to comply with drinking water standards?

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13. Is the treatment system adequate to address contamination of the water supply?
Assign Risk Value

- 1= Minimal risk — system is designed to treat contamination at much higher capacities
- 2= Low risk— system is designed to treat contamination and still supply more than current capacity required
- 3= Medium risk — system adequate for current capacity but may not meet future demands
- 4= Likely risk — system would be stressed if new contamination entered the watershed
- 5= High risk — system has historically been required to introduce additional treatment due to supply contamination

14. Is supplier's water treatment system capable of meeting facility water quality needs?
Assign Risk Value

- 1= Minimal risk — no problem meeting water quality, needs no historical events and no events are anticipated
- 2= Low risk — no problem meeting water quality, needs no historical events
- 3= Medium risk — has experienced water quality fluctuations, but has met needs
- 4= Likely risk — has experienced one water quality upset in the past
- 5= High risk — has experienced more than one water quality upset in the past

15. What is the likelihood of future restrictions or interruptions of the facility water supply? *Assign Risk Value*

- 1= Minimal risk — no historical events and no events are anticipated for next 20 years
- 2= Low risk — no historical events and no events are anticipated for next 10 years
- 3= Medium risk — one interruption over the past 10 years
- 4= Likely risk — one interruption over the past 5 years
- 5= High risk — more than one interruption over the past 5 years

16. What is the likelihood that the facility will need to seek alternative sources based on historic events? (Factors to consider include weather patterns such as drought, catastrophic events, infrastructure failure, contamination from spills, increased demands from higher priority users and changes as a result of regulation(s) public policy, judicial action or political conflict). *Assign Risk Value*

- 1= Minimal risk — not for the next ten years
- 2= Low risk — no historical events
- 3= Medium risk — one interruption over the past 10 years
- 4= Likely risk — one interruption over the past 5 years
- 5= High risk — more than one interruption over the past 5 years

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17. Are other water sources available? *Yes or No answer* _____
18. How long would it take to get other sources on line? _____
19. What changes would be needed to production processes or services to accommodate the new source? _____
20. How sensitive is the business to fluctuations in the availability of water for production purposes? *Assign Risk Value*
- 1= No sensitivity
 - 2= Low sensitivity
 - 3= Somewhat sensitive
 - 4= Sensitive
 - 5= Very sensitive
21. How significant are the business costs of meeting the company's water needs using alternative water sources or performing conservation measures to ensure current production capacities are met? *Assign Risk Value*
- 1= Not significant — no cost, water management changes can accommodate
 - 2= Low significance — low cost, employee conservation awareness program can accommodate
 - 3= Medium significance — costs are higher to make changes in process to reduce water use
 - 4= Significant — costs to achieve reductions or bring on new source are high and a return on investment would take 5 or more years to realize
 - 5= Very significant — costs to achieve reductions or bring on new source are very high and a return on investment would take 10 or more years to realize
22. What would the business impact be if water availability is reduced by 10%? *Assign Risk Value*
- 1= No impact
 - 2= Low impact
 - 3= Medium impact
 - 4= Strong impact
 - 5= Significant impact

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Efficiency

This section is provided to assist with the process of identifying if Good Management Practices (GMPs) have been applied at your facility and to assess how far along your facility has gone to improve water use efficiencies of the operations.

1. What priority is given to reducing water usage at your facility? *High, Medium or Low* _____
2. What level of effort has been expended to assess the operation to identify areas where equipment efficiencies could be improved such as cooling towers or boiler/steam systems as an example? *Assign Risk Value*
 - 1= Minimal risk — employee awareness program exists, assessments performed, opportunities to improve equipment water use efficiencies identified and projects implemented
 - 2= Low risk — employee awareness program exists, assessments performed, opportunities to improve equipment water use efficiencies identified and projects planned
 - 3= Medium risk — employee awareness program exists, assessments performed, opportunities to improve equipment water use efficiencies not yet identified
 - 4= Likely risk — employee awareness program exists, assessments performed
 - 5= High risk — employee awareness program exists, but no assessments have been performed
3. Do you expect that water conservation or water restrictions will be required by regulation or permit condition that may require the operation to reduce overall water usage? *Assign Risk Value*
 - 1= Minimal risk — water supply is plentiful based on projected needs over the next 20 years
 - 2= Low risk — water supply is plentiful based on projected needs over the next 10 years
 - 3= Medium risk — water supply is adequate for current need
 - 4= Likely risk — water supply has been limited or restricted in the past
 - 5= High risk — water supply is not adequate for current needs

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4. What level of effort best describes the application of GMPs at the facility to improve overall equipment water use efficiency? *Assign Risk Value.*
- 1= Minimal risk — facility has applied several GMPs that are well documented
 - 2= Low risk — facility has applied GMPs that have been shared
 - 3= Medium risk — facility is in the process of evaluating efficiency
 - 4= Likely risk — facility has not assessed efficiencies
 - 5= High risk — facility has not assessed efficiencies and community is required to reduce water usage
5. What level of effort has been expended to assess the resulting water quality once used at the point of use compared to point of use process water quality requirements for the purpose of defining potential water recycle/reuse opportunities that could be applied to reduce water use? *Assign Risk Value*
- 1= Minimal risk — assessments performed, opportunities to recycle/reuse water identified and projects implemented
 - 2= Low risk — assessments performed, opportunities to recycle/reuse water identified
 - 3= Medium risk — assessments performed, identification of opportunities to recycle/reuse water is planned
 - 4= Likely risk — few assessments performed
 - 5= High risk — no assessments performed
6. Are there opportunities in any of the areas where a GMP can be applied, where water use could be reduced or recycled and reused in areas with less demanding water quality criteria? _____ *Yes or No answer*
Please refer to the Case Examples in Module 3 that might apply to the facility user's operation. Generate list of opportunities.



Supply Economics

1. What water rate structure method does the supplier use? *(Dropdown list includes: Marginal, Uniform, Increasing Block, Decreasing Block, Peak Load Pricing, Seasonal Pricing, Excess Use Charge)*
- (Definitions included in Module 3)
2. What is the total cost of water (cost/1000 gal or cost/1000 cubic meters)? If privately owned, please factor cost of energy used to deliver supply, cost of makeup water treatment, permits and operation and maintenance costs?
-
3. Is water usage metered, and if so, where and how? _____
Space for answer.

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4. What level of effort has your facility expended to assess the cost of water per unit production? *Assign Risk Value*
- 1= Minimal risk — assessments performed, cost of water per unit production falls in line with similar operations at other inter-company plants
 - 2= Low risk — assessments performed, projects identified and implantation planned to bring cost of water per unit production in line with similar operations
 - 3= Medium risk — assessments performed, identification of opportunities to recycle/reuse water is planned
 - 4= Likely risk — few assessments performed
 - 5= High risk — no assessments performed
5. What percentage increase in total water costs would jeopardize overall plant competitiveness? *Assign Risk Value*
- 1= Minimal risk — 50% or greater
 - 2= Low risk — 40%
 - 3= Medium risk — 30%
 - 4= Likely risk — 20%
 - 5= High risk — 10% or less
6. Are there facility expansion plans, and if so, what is the estimated impact on water usage? _____
7. Are there any factors that could increase water rates or the rate structure method the supplier uses to recover costs due to projected plans for infrastructure improvement/replacement or requirements to install additional treatment due to water supply contamination? *Assign Risk Value*
- 1= Minimal risk — none anticipated for the next 20 years
 - 2= Low risk — none anticipated for the next 10 years
 - 3= Medium risk — none anticipated for the next 5 years
 - 4= Likely risk — plans in place for improvements by supplier rates will increase
 - 5= High risk — improvements by supplier are being constructed and rates have and will continue to recover investment
8. Are any known rate increases planned? Please choose the following that best represents the local rates circumstance. *Assign Risk Value*
- 1= Minimal risk — no rate increases are planned for the next 10 years
 - 2= Low risk — no rate increases are planned for the next 5 years
 - 3= Medium risk — less than 5% per year
 - 4= Likely risk — within 5% and 7% in any one year
 - 5= High risk — greater than 8% in any one year or unknown

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9. What would the business impact be if the price of water doubled? *Assign Risk Value*

- 1= Minimal risk — no effect
- 2= Low risk — little effect, still competitive
- 3= Medium risk — some effect, increased cost of production
- 4= Likely risk — significant effect, significant production cost increase
- 5= High risk — additional costs have motivated potential relocation



Compliance

This section is provided to assist with the process of reviewing the impacts that the facility operations have on the local/regional water supplies beginning with receiving of raw materials, through the manufacturing process and final product distribution and the regulatory drivers for reduction.

1. Are there any present or potential regulatory restrictions that can be identified in the future that may restrict the water withdrawals of your supplier or your privately owned wells (current or future withdrawal allocations, aquifer limitations)? *Assign Risk Value*

- 1= Minimal risk — none anticipated for next 10 years
- 2= Low risk — none anticipated for next 5 years
- 3= Medium risk — currently in review by regulatory agency
- 4= Likely risk — proposed allocations or restrictions by regulatory agency
- 5= High risk — restrictions or allocations already in place

2. What best describes your facilities level of effort in assessing the reduction of the operations impacts on water quality? *Assign Risk Value*

- 1= Minimal risk — have performed assessments and installed best available technology to reduce impacts
 - 2= Low risk — have performed assessments and in the process of installing best available technology to reduce impacts
 - 3= Medium risk — have performed assessments and reviewing alternatives
 - 4= Likely risk — planning to perform assessments
 - 5= High risk — no plans to perform assessments
- (Link to water treatment matrix)

3. Is pre-treatment required prior to discharge? _____

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4. If so, which statement best describes your operations compliance with applicable discharge requirements? *Assign Risk Value*
- 1= Minimal risk — consistently meets discharge requirements, additional capacity built in for the potential of expansion and could meet more stringent discharge requirements if required
 - 2= Low risk — consistently meets discharge requirements, some additional capacity built in for the potential of expansion
 - 3= Medium risk — consistently meets discharge requirements, however, the system runs close to capacity
 - 4= Likely risk — have exceeded discharge requirements once over the past two years
 - 5= High risk — have exceeded discharge requirements more than once over the past two years
5. Are there ecologically sensitive areas locally, and if so, have any effects been documented that required water use restrictions or motivated more stringent discharge regulations? *Assign Risk Value*
- 1= Minimal risk — no ecologically sensitive areas, not an issue
 - 2= Low risk — ecologically sensitive areas exist, but no historical effects documented
 - 3= Medium risk — ecologically sensitive areas exist, no assessment performed to determine if they have been effected
 - 4= Likely risk — ecologically sensitive areas exist, historical effects documented, water use restrictions or more stringent discharge criteria proposed
 - 5= High risk — ecologically sensitive areas exist, historical effects documented, water use restrictions or more stringent discharge criteria required
6. Are plans in place that address and reduce the likelihood of potential impacts such as Stormwater Pollution Prevention Plans (SWPPP) or Spill Prevention, Containment and Countermeasure Plans (SPCC)? Assess your facility's water management program specifically related to reducing or eliminating potential impacts. *Assign Risk Value*
- 1= Minimal risk — all plans in place and all appropriate plant personnel trained
 - 2= Low risk — all plans in place and all some plant personnel trained
 - 3= Medium risk — all plans in place, but plant personnel require training
 - 4= Likely risk — some plans are missing and training is required
 - 5= High risk — plans require development and training must be initiated

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7. Are there future wastewater discharge restrictions that will require additional treatment that the facility will need to employ? *Assign Risk Value (Please contact appropriate regulatory agency to define current and future planned water quality activities in the region you reside)*
- 1= Minimal risk — none anticipated for next 20 years
 - 2= Low risk — none anticipated for next 10
 - 3= Medium risk — none anticipated for next 5 years
 - 4= Likely risk — more stringent discharge requirements proposed to be implemented over next 3 years
 - 5= High risk — more stringent discharge requirements proposed to be implemented over within the year
8. What would be the cost to the business of reducing the water impact by 10%? *Assign Risk Value Link to water treatment matrix.*
- 1= Minimal risk — no cost implications
 - 2= Low risk — costs may increase over next 5 years
 - 3= Medium risk — costs will reduce product competitiveness
 - 4= Likely risk — costs will require changes to meet standards and significantly decrease competitiveness
 - 5= High risk — cost will drive business to potentially relocate
9. Are contingency plans in place for reducing water quality impacts? *Assign Risk Value*
- 1= Minimal risk — contingency plans in place and staff is trained
 - 2= Low risk — contingency plans in place, staff is trained, requires additional improvement
 - 3= Medium risk — contingency plans in place, additional training required
 - 4= Likely risk — not all contingency plans in place, training required
 - 5= High risk — no contingency plans have been developed



Social Competitive Considerations

The facility user is encouraged to evaluate the social, environmental, political and economic forces that exist in the region being assessed. For instance, the business risks will be much greater in undeveloped countries where government structures are volatile and where socio—economic circumstances require significant assistance. Risks are much less prevalent in developed countries where formal governments exist, financial means are in place and public health programs and requirements are strong.

Identify the issues that affect your particular watershed such as adequacy of water supply, treatment due to contamination and regulatory allocations due to supply constraints. This section guides the user through a set of social considerations that may apply to the facility's specific case. This section requests information that helps identify the local conditions regarding the water supply sensitivities, regulatory trends and the internal and external stakeholders that should be engaged to develop a dialogue and

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educate the community relative to the actions required to manage a sustainable supply of water for all.

The following provides a list of questions that assess the facility user's needs regarding engagement of stakeholders and generating a consistent dialogue with the community or region:

1. What is the current condition of the local/regional water supply with regard to total withdrawals compared to resources? Are total withdrawals for all needs of the community sustainable based on current use? *Assign Risk Value*
 - 1= Minimal risk — resources are adequate for the next 20 years including projected growth
 - 2= Low risk — resources are adequate for the next 10 years including projected growth
 - 3= Medium risk — resources are adequate for the next 5 years including projected growth
 - 4= Likely risk — resources are adequate for current demand, but will fall short for projected growth
 - 5= High risk — resources are not meeting current need

2. Are there ecologically sensitive areas locally and if so have any effects been documented that required water use restrictions or motivated more stringent discharge regulations that impact the entire community? *Assign Risk Value*
 - 1= Minimal risk — no ecologically sensitive areas, not an issue
 - 2= Low risk — ecologically sensitive areas exist but no historical effects documented
 - 3= Medium risk — ecologically sensitive areas exist, no assessment performed to determine if they have been effected
 - 4= Likely risk — ecologically sensitive areas exist, historical effects documented, water use restrictions or more stringent discharge criteria proposed
 - 5= High risk — ecologically sensitive areas exist, historical effects documented, water use restrictions or more stringent discharge criteria required

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3. What level of land use management plans have been put into place and have local zoning committees considered how development impacts the overall water supply (i.e., sustainable yields, quality, ecosystem effects and infrastructure requirements)? *Assign Risk Value*
- 1= Minimal risk — strong land use planning program exists, criteria exists to manage development in a environmentally sound manner
 - 2= Low risk — strong land use planning program exists, criteria is being developed to manage development in a environmentally sound manner
 - 3 = Medium risk — land use planning program exists, no criteria exists to manage development in a environmentally sound manner
 - 4= Likely risk — land use planning program exists, no criteria exists to manage development in a environmentally sound manner
 - 5 = High risk — land use planning program is being developed, no criteria exists to manage development in a environmentally sound manner
4. Assess current and projected future development plans of the community. Will future development require infrastructure improvements or replacement? *Assign Risk Value*
- 1= Minimal risk — infrastructure adequate for all future development plans in 20 years
 - 2= Low risk — infrastructure adequate for all future development plans in 10 years
 - 3= Medium risk — infrastructure adequate for all future development plans in 5 years
 - 4= Likely risk — infrastructure improvements or replacement plans in place
 - 5= High risk — infrastructure improvements or replacement plans in place, no financing plan
5. Who are the primary internal and external stakeholders that you should consider developing an open dialogue with? *(Dropdown list includes: Corporate environmental manager, operations vice president, plant manager, plant engineering manager, plant environmental manager, production supervisor, shift supervisor, plant employees, regulatory agency staff, political officials, community water and wastewater director, watershed association staff, residents, NGOs (special interest groups), local and state politicians, basin managers, other)*
6. Whose interest or approval is needed to secure organizational commitment to pursuing a water management strategy? *(Dropdown list of typical internal stakeholders includes: Corporate environmental manager, operations vice president, plant manager, plant engineering manager, plant environmental manager, sustainability director, other)*
7. Whose involvement is likely needed to implement key aspects of an organizational water strategy? *(Dropdown list of typical internal stakeholders includes: Corporate environmental manager, operations vice president, plant manager, plant engineering manager, plant environmental manager, production supervisor, shift supervisor, plant employees, other)*

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8. Has the facility implemented a water management program? If so, what benefits have been realized as a result of the program (Water use reduction, reduction or elimination of impacts etc.)? User is encouraged to document improvements.

9. Is the facility prepared to share examples of how its water management program has reduced usage or reduced impacts? *Assign Risk Value*

- 1= Minimal risk — facility works closely with the community and has many examples to share
- 2= Low risk — facility works closely with the community and has a few examples to share
- 3= Medium risk — facility has engaged external stakeholders and is in the process of performing conservation projects
- 4= Likely risk — facility has not engaged the community and has engaged in assessing opportunities
- 5= High risk — facility has not engaged the community and has not engaged in assessing opportunities

10. Has the facility sponsored environmental awareness programs? _____ Yes or No

11. Whose interest or approval is needed to secure public or political commitment to pursuing a water supply management program? (*Dropdown list of typical stakeholders includes: Corporate environmental manager, operations vice president, plant manager, plant engineering manager, plant environmental manager, production supervisor, shift supervisor, plant employees, regulatory agency staff, political officials, community water and wastewater director, watershed association staff, residents, other*)

12. Are there watershed organizations that your company should join and participate with? If so, please name. _____

13. Is there current pressure by the community or experienced through the media that may impact your operation? *Assign Risk Value*

- 1= Minimal risk — no and none anticipated for next 10 years
- 2= Low risk — no and none anticipated for next 5 years
- 3= Medium risk — no, however public awareness is driving discussion and concern
- 4= Likely risk — yes, however, facility is planning a community outreach program
- 5= High risk — yes, however, no community outreach is planned

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14. Are community interests and expectations likely to change in the future regarding the business impacts to a shared water resource such as a local river or aquifer?
Assign Risk Value

- 1= Minimal risk — no, facility impacts have been minimized
- 2= Low risk — no facility impacts are within regulatory criteria
- 3= Medium risk — yes, however water management program is well documented
- 4= Likely risk — yes, facility in the process of performing conservation projects that will be well received by the community
- 5= High risk — yes, the facility needs to improve its environmental management program

15. Are shareholder resolutions or other shareholder pressures likely to create motivation to reduce water impacts in the future? *Assign Risk Value*

- 1= Minimal risk — no, facility's environmental performance is well documented including metrics and a robust environmental management system exists and is adhered to
- 2= Low risk — no, facility's environmental performance is well documented and an environmental management system exists and followed
- 3= Medium risk — yes, facility's environmental performance is documented and an environmental management system is being implemented
- 4= Likely risk — yes, facility's environmental performance is somewhat documented and the operation requires environmental management improvements
- 5= High risk — yes, facility's environmental performance is somewhat documented and the operation requires environmental management improvements

16. Is the water supply suitable for human consumption and recreation? *Assign Risk Value*

- 1= Minimal risk — yes, and no changes to this status is expected for the next 10 years
- 2= Low risk — yes, and no changes to this status is expected for the next 5 years
- 3= Medium risk — yes, however current land development may impact the water supply
- 4= Likely risk — no, treatment is required and restrictions are being considered for recreational uses
- 5= High risk — no, treatment is required and restrictions are in place that restrict recreational use

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17. Are there local or regional public health concerns related to water impacts produced along the company's operation? *Assign Risk Value*

- 1= Minimal risk — no and none anticipated since impacts have been minimized or eliminated, and internal employee training and external community outreach programs have been performed
- 2= Low risk — no and none anticipated since impacts have been reduced and internal employee training and external community outreach programs have been initiated
- 3= Medium risk — no since impacts have been reduced and development of internal employee training and external community outreach programs are scheduled
- 4= Likely risk — yes, impacts have been publicized, facility is in process of developing internal employee training and external community outreach programs
- 5= High risk — yes, impacts have been publicized and no plans to perform internal training, reduce the impacts are planned

18. Are changing politics at the local, national or international level likely to affect public and government expectations about certain water impacts? *Assign Risk Value*

- 1= Minimal risk — not anticipated
- 2= Low risk — not likely
- 3= Medium risk — potential
- 4= Likely risk — likely
- 5= High risk — is anticipated