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Water Risks in the Mining Sector

Chile¹

As of August 2016

1. Overview

Chile has a long tradition of mining and has been ranked as the world's largest copper producer since the 1900's. In addition to copper, gold, silver and iron ore are also extensively mined. The main mining area in Chile is the Atacama Desert in the Antofagasta region of Chile.

Mine water allocations and discharge requirements: Surface and ground water rights are granted by the General Water Directorate (DGA), have the status of property rights and, as thus, are freely transferrable. However, the process to obtaining such water rights from the DGA can be long and cumbersome given the slow environmental permitting process that precedes a water rights allocation and the increasing public resistance to allocating Chile's limited water resources to mining. In fact, where a mining concessionaire's water rights application is contested by a community, the process of obtaining even limited fresh water rights from the DGA can take several years.²

Mines have therefore become increasingly water efficient in recent years, re-using high proportions of water, and are also increasingly looking to source water from the sea. In fact, Chile's state copper commission, Cochilco estimates that desalination will provide half the water demand of Chile's copper mining industry by 2026.³⁴ By late 2015 there were already nine mining-related desalination projects in operation, with a further 16 desalination projects worth US\$10 billion planned or under construction in Chile.⁵ Where available, mining companies can also buy water rights from other non-mine users.

Mine discharges are regulated in the environmental permits or RCAs that are interpreted by the SEA, and monitored by the SMA. The RCA "qualifies a project from an environmental perspective, either accepting it, qualifying its implementation to the fulfillment of certain conditions...or else rejecting it." In addition, restrictions on the quality of water mines can discharge are included in the minimum ecological flow requirement, set out by the DGA, or the minimum quantity of water mining operators should utilize to conserve water resources.

¹ This project was managed by CCSI Senior Legal Researcher, Sophie Thomashausen. Research was conducted by Sophie Thomashausen and Kristina Hamil. The authors are extremely grateful to the useful insights provided by José Ignacio Morán Orvalle.

² Interview with José Ignacio Morán.

³ Ibid.

⁴ Desalination and Water Reuse: "Chile's copper mines will turn to desalination for half their water," (November 24, 2015), available at: <http://www.desalination.biz/news/0/Chiles-copper-mines-will-turn-to-desalination-for-half-their-water/8246/>.

⁵ Ibid.



Please see the Annexures for a description of the relevant legislation and institutions regulating water use and discharge in Chile.

2. Regulation of water use in Chile

Water Quantity questions		
No	Question	Answer
1.	Which authority is responsible for water allocation?	The Directorate General of Water (Dirección General de Aguas or DGA) is responsible for the grant of surface or ground water rights.
2.	Water allocation process - How is water granted to a mining concessionaire/ permit holder? Is there a water licensing/ permitting process? A water market?	<p>The Water Code regulates how ground and surface water rights are granted and transferred regarding freshwater and underground water. Water rights granted under the Water Code confer property rights that can be freely transferred to other users and mortgaged.</p> <p>Given the difficulty of obtaining water rights from the DGA (see below), mining companies often buy additional water rights from other water users, including agriculture. For example, for the mining operations located in the mountains (often around 4,000m above sea level), water rights can be bought from downstream users in the value and pumped upwards to the mine.⁶</p> <p>With the extremely arid conditions and severe droughts afflicting the mining areas in Chile in recent decades, an increasing number of copper mining companies are also starting to use seawater to meet their water requirements and Chile's state copper commission, Cochilco estimates that desalination will provide half the water demand of Chile's copper mining industry by 2026.⁷</p>
3.	Scope of a water allocation permit/ license	
	(a) Requirements separate water permit – is a separate water permit required? What is the	Yes – surface and ground water rights must be applied for and are granted independently of a mining concession. Water rights can also be bought from downstream users to meet a mining operation's water requirements.

⁶ Interview with José Ignacio Morán.

⁷ Desalination and Water Reuse: "Chile's copper mines will turn to desalination for half their water," (November 24, 2015), available at: <http://www.desalination.biz/news/0/Chiles-copper-mines-will-turn-to-desalination-for-half-their-water/8246/>.



		<p>process for obtaining the permit</p>	<p><i>Allocation of surface and ground water rights by the DGA:</i> An application for a water right by filed at the DGA office in the province in which the water intake point is located and must include the following information:⁸</p> <ul style="list-style-type: none"> - Details regarding the riverbed’s location and accompanying characteristics in respect of which water rights are being requested, and the type and location of the water source (surface, underground). - Contact information for the mining concessionaire. - The quantity of water to be withdrawn, expressed in cubic meters over time (for groundwater, the aggregate annual amount must also be stated). - The points of extraction. - The proposed methods/ technique of extraction. - The type of water rights being requested.⁹ - For groundwater rights applications, information regarding the existence and availability of water in the relevant aquifer must also be submitted. <p>Once an application has been filed, it must be published in the Official Gazette, a Santiago-based newspaper and, in some cases, also in a local newspaper on the 1st and 15th of the month in the 30-day period following the application filing date.¹⁰ In addition, it must be communicated on the radio three times during that same period. Affected parties then have 30 days from the date of publication/ notification to contest the water rights application. A hearing is then arranged in which both the opponents and the applicant will have the opportunity to be heard.</p> <p>Following the proceedings, the DGA has 30 days to request clarifications, order inspections, or request further information or reports from the mining applicant. Following receipt of the additional information or the lapse of the 30-day period, the DGA then has up to 4 months to issue a technical report and to resolve to either grant or reject the water rights application.</p> <p><i>Water rights are granted by the DGA by way of an executive order contained in an administrative resolution that is required to clearly stated the volume per unit of time, being the maximum volume of</i></p>
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⁸ Art. 140 of the Water Code. See also: Moran: “Key Issues in Chilean Water Legislation.”.

⁹ Rights can be consumptive, or non-consumptive, which means that water withdrawn must be replaced.

¹⁰ José Ignacio Morán: “Legal Report: Key Issues in Chile’s Water Legislation.”



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			<p>water that a user is permitted to extract (Arts. 20 and 141 of the Water Code).</p> <p>However, once granted, the regional environmental authority reviewing the EIA in respect of a mining project has the right to adjust the water allocation and further restrict the amount of fresh water available to the mining operation.</p> <p>Affected communities to the water rights also have 30 days following the grant of water rights to appeal the decision before the relevant court of appeals, which can further delay the process by months/ years. Where this occurs, mining activities cannot proceed ¹¹</p> <p>Water allocation by auction: If in a term of six months counted from the date of the 1st application for a water right, a third party requests a water right in the same area, the DGA may resolve to grant the water right through a judicial action procedure.</p> <p>Dewatered water: No separate permit is required for water that is discovered in the performance of mining activities within the limits of a mining concession.</p> <p>Water market: The transfer of any water rights is conducted by execution of a public deed, which must be recorded in the Water Property Registry of the corresponding Land Registrar. Any transfer of a water right must also be recorded in the Water Public Cadastre of the DGA, for purposes of maintaining an administrative public record regarding these rights.</p>
		<p>(b) Time required to obtain permits – how long does it generally take?</p>	<p>According to the time periods set out in law, the granting of a water right should take around 7-8 months; however, in practice the process can take up to three years as mentioned above.¹²</p>
		<p>(c) Duration of water permit</p>	<p>Under the 1981 Water Code, water rights are granted in perpetuity and do not include a "use it or lose it" condition.¹³</p> <p>This "water right of the miner" to use water which a mining concessionaire discovers in the boundaries of its concession during the</p>

¹¹ Interview with José Ignacio Morán.

¹² Interview Ignacio Moran Ovalle.

¹³ Donoso, Guillermo, "The Evolution of Water Markets in Chile" in Water Trading and Global Water Scarcity: International perspectives, (2011, RFF. Press.), pp. 111-129.



			course of its mining activities expires with the expiry of a mining concession.
		(d) process for permit renewal	N/A
4.	How does the process of securing a water allocation relate to the general mining permit approval process?		A mining concessionaire cannot begin operations without sufficient water rights required for its operations.
5.	Tariffs for water use Do mines have to pay for water usage? If yes, who sets the tariffs?		Water rights are granted for free by an administrative act issued by the DGA. Therefore, it is not necessary for mines (nor for any water right holder) to pay for water usage. ¹⁴ To the contrary, water rights holders must pay a fee if they do not use their water rights. Indeed, every January the Water Agency publishes a list with the amount that, those who are not using their water rights are required to pay to the Public Treasury.
6.	Requirements for recycling water		In recent years, mining companies have come under intense pressure to minimize their water footprint and it is estimated that recycled water now accounts for around 72.5 per cent of water consumed in mining operations. ¹⁵
7.	What rights, if any, does the relevant Authority have to change the amount of water allotted to a mine? Is the mining company allowed compensation for such changes?		The DGA has little authority to change the quantity of water allocated to a mine to accommodate other users. The DGA can only intervene in very exceptional circumstances and for limited periods of time (for example, in cases of extreme drought, the DGA can interfere in water distribution for a non-renewable period of six months). In addition, the DGA cannot interfere in water rights transactions between individuals. However, if the DGA determines that a mining concessionaire is not using its water rights, and also does not pay the “lack of use fee” for the specified period, the DGA can request the Treasury to initiate a judicial process against the mining concessionaire to auction the water rights to another user.

¹⁴ Interview with Jose Ignacio Moran Ovalle.

¹⁵ Juan Andres Abarca: “Sea water use in Chile’s mines grows by a third,” *BNAmericas.com*, (June 16, 2016), <http://www.bnamericas.com/en/news/mining/seawater-use-in-chiles-mines-grows-by-a-third>.



3. Regulation of water quality and waste water discharge in mining in Chile

Water Quality questions		
No	Topic	Answer
1.	<p>Requirements for a permit for mine waste discharge</p> <p>Does a mine have to apply for a permit to discharge waste/ waste water into surrounding water courses? If so, what permits are required? What is the permitting process?</p>	<p>Copper mining operations in Chile are subject to the SEIA and are required to conduct an environmental impact study (EIA). Upon approval of the EIA, the authority issues a resolution rejecting or approving the project (RCA). The project is then authorized to acquire all the other specific permits and authorizations, including in relation to water.</p> <p>The environmental authority has 60 business days (extendable up to 90 business days) to issue a decision regarding a DIA, and 120 business days (which may be extended up to 180 business days under qualified circumstances) to issue a decision regarding an EIA. In practice it can take considerably longer.</p>
2.	<p>Other licensing/permitting processes that cover water quality/discharge</p>	-
3.	<p>Nexus with environmental impact assessments/ statements</p> <p>What is the process for obtaining an environmental impact assessment? At which stage of the mining process must it be obtained? To what extent are water issues covered in it?</p>	<p>The relevant environmental qualification resolution (Resolución de Calificación Ambiental) (RCA), must be obtained before a water right can be applied for (see below).</p>
4.	<p>Are there regulations regarding the storage of tailings/ waste water by mines? ¹⁶</p>	<p>Yes - Decree No 248/2007 establishes procedures for the approval of tailings dams projects and requirements for their design, construction, operation and closure.</p>

¹⁶ Tailing are crushed rock particles that are transported hydraulically in a slurry form to a tailing impoundment or storage facility. The tailing solids are a mixture of sand, silt, and clay size particles. Tailings are sent to a tailing impoundment for disposition.



5.	Acid mine drainage regulations	<p>There is no specific regulations regarding acid mine drainage. However, the effects of acid mine drainage are dealt with in both the EIA required for a mining project and the closure plan:</p> <ul style="list-style-type: none"> - The EIA required to be completed prior to the commencement of mining activities requires all possible impacts, including those related to acid mine drainage, to be considered (Law 19,300). - The Law of Closure of Mines and Mining Facilities and its accompanying regulation requires that all mining operations must have a closure plan approved by the Mining Service, before starting its mining operations. The closure plan is an engineering project which establishes a set of measures and actions to mitigate the effects arising from the development of the extractive industry, and ensure the physical and chemical stability of the facilities.
6.	Recycling requirements – Are there any requirements/ incentives for mines to recycle water/ minimize water discharge?	<p>Yes – the difficulty in obtaining fresh water rights from the DGA, arid conditions in mining areas and continuing drought-conditions, including increasing social conflict in relation to water issues has resulted in mining companies maximizing water re-use and recycling in recent years. In addition, pending legislation requiring mines to source all their water requirements from the sea has further incentivized mines to minimize their water footprint.</p>
7.	Any specific regulation of waste for copper and/or gold mining?	No.

4. Monitoring requirements

General questions		
No	Question	Answer
1.	Who monitors a mining operation’s water quality to ensure compliance with legislation? And how often does such monitoring occur?	The Superintendence of the Environment (Superintendencia del Medio Ambiente or SMA).



2.	Are there any reporting requirements?	Yes – Mining concessionaires are required to self-report on any infringements of environmental regulations to the SMA and are incentivized to do so as SMA may then exempt or reduce the quantum of the fee to be paid (Law No. 20,417/10).
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5. Regulation of water issues post-mine closure

Post-mine closure questions		
No	Question	Answer
1.	Requirements for closure	Mining companies are required to file a closure plan for approval by SERNAGEOMIN before mining operations begin. The environmental aspects of the plan will also be evaluated and either approved or rejected during the environmental assessment of a mining project.
	(a) Closure plan: What are the requirements for a closure plan?? Who approves it, if anybody?	<p>The closure plan must be accompanied by a technical report issued by an expert that includes information about, among other things:</p> <ul style="list-style-type: none"> - National monuments and archaeological sites; - A financial assessment of the cost of mine closure and post-closure; - The amount of financial assurances to be provided. - A community consultation plan. <p>Once the mine closure plan has been approved by Sernageomin, it is audited by external auditors. In addition, the closure plan must be audited every five years.</p>
	(b) Bond requirements	Yes – financial assurance must be provided to cover the costs of implementing and monitoring the closure plan.
	(c) Water quality/ Tailings dam requirements	Tailings dams must be shut and the chemical balance of the land restored.
2.	Post-mine closure monitoring requirements	<p>Following mine closure, a fund must be established for the maintenance of closed mine. Before a mining company is issued its certificate of final closure, it must have made a non-refundable payment to the fund to cover the costs of the post closure activities.</p> <p>During the mine closure stage a monitoring and verification process will be developed that will ensure the physical and chemical stability of the</p>



		location and ensure that the local population and environment are not harmed. environment
3.	Liability period - For how long, if at all, is a mine liable for water contamination after a mine has closed?	<p>Chile’s legislation sets forth rules that specifically address liability arising from environmental damage, (which may include water contamination), and establishes important judicial remedies for parties seeking reparations.</p> <p>The director of the National Service of Geology and Mining can take action against a mine for water contamination post closure.</p> <p>Chile’s Environmental Law 19,300 also specifies that judicial remedies for parties seeking reparations for environmental damage is five years as from the damage’s clear manifestation.¹⁷ The director of the National Service of Geology and Mining can also take action against a mine for water contamination post closure.</p>
4.	Are there any reporting requirements in relation to a mine’s preparation for post-closure?	-

6. Enforcement/ Regulatory actions

General questions		
No	Topic	Answer
1.	Enforcement actions available to the government/ public authorities/ citizens take for breach of any of the relevant laws/ regulations	<p>Public:</p> <ul style="list-style-type: none"> - Any person may inform the SMA of any breach of any environmental law or regulation (Law No. 20,417/10). - Any person or group that believes it has been directly injured by environmental damage may petition the corresponding municipality to file a claim against a mining concessionaire for environmental restoration. Where a municipality fails to notify a petitioner of its decision within 45 days becomes jointly liable for the damage. <p>Authorities:</p>

¹⁷ Interview with José Ignacio Morán.



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		<p>The Mining Code provides that public authorities can take enforcement actions against mining concessionaires for a breach of any of the relevant regulations. Such actions include issuing warnings, imposing fines, suspending environmental quality certificates, temporarily closing the mining site/ suspending mining operations, and if three more serious violations occur, permanently closing the mining site/ shutting down operations.</p> <p>The SMA is also authorized (pursuant to Law NO. 20,417/10) to impose warnings, fines of up to approximately US\$10 million per each breach, temporary or permanent closures, and revocations of the RCAs for a catalogue of offences classified according to their seriousness.</p> <p>Additionally, an environmental restoration action may be filed before environmental courts if an environmental damage is caused due to negligence or willful misconduct. Such an environmental action does not preclude the possibility of bringing a claim for civil law damages against a mining concessionaire.¹⁸</p> <p>Mining concessionaires may also incur criminal liability for causing environmental damage.</p>
2.	Bodies responsible for regulatory enforcement and associated procedures	<p>The Superintendence of the Environment (SMA) is responsible for taking regulatory enforcement actions against mining concessionaires.</p> <p>The environmental courts, supervised by the Supreme Court, were also established to hear cases in relation to breaches of environmental law within Chile's 15 regions.¹⁹</p>
3.	Is there an online database of penalties/fines related to water use in the mining sector	<p>There is a database that collates information on any penalties/ fines that mining companies have to pay for a breach of legislation in relation to water use in the mining sector. http://snifa.sma.gob.cl/RegistroPublico/</p>
4.	What is the procedure for bringing a case?	<ol style="list-style-type: none">1. The affected individuals/ community lodge a complaint to the relevant municipality.

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¹⁹ Riesco, Jose Antonio Urrutia and Enrique Oyarzun Iglesias. International Comparative Legal Guides: Chile – Environment & Climate Change Law 2014. Section 1.1 “Environmental Policy and its Enforcement: What is the basis of environmental policy in Chile and which agencies/bodies administer and enforce environmental law?” <http://www.iclg.co.uk/practice-areas/environment-and-climate-change-law/environment-and-climate-change-law-2014/chile>



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		<ol style="list-style-type: none"> 2. The municipality then provides the appropriate supervising agency with the information in order to receive advice on the subsequent legal process. 3. The municipality asks the supervising agency for the report regarding the procedure for the allegation, and the report will be presented to the appropriate Regional Commission on the Environment. 4. Once the report has been issued, or 30 days after it was supposed to have been issued, the municipality will inform the ministry “to which it depends on or through which relates the corresponding agency to the President of the Republic.”²⁰
5.	Who has standing to bring a case?	<ul style="list-style-type: none"> - The municipality where the environmental damage occurred has standing to bring a case.²¹ - The parties seeking reparations for harm caused by environmental damage. - The director of the National Service of Geology and Mining can also take action against a mine for water contamination post closure.
6.	Statute of limitations	<p>If a mining operator causes environmental damage, a restoration plan must be filed within three years, and the Superintendence of Environmental Affairs and the Environmental Evaluation Service must approve the plan. Once this process is completed, lawsuits concerning environmental damages will become invalid.</p> <p>According to Law 19.300, the remedies available in respect of environmental damage caused by a mining concessionaire are subject to a statute of limitations of five years as from the damage’s clear manifestation.</p>

²⁰ Text Of The Law N 19,300 General Bases Of The Environment, Published On The Official Gazette On 9th March 1994 Ley 19300 - Aprueba Ley Sobre Bases Generales Del Medio Ambiente. “Article 65 Title IV Control Of Enforcement And Compliance.”

http://www.cochilco.cl/descargas/english/legislation/Law19.300_general_basesofthe_environment.pdf?idNorma=1004876&buscar=Ley+20.363

²¹ Text Of The Law N 19,300 General Bases Of The Environment, Published On The Official Gazette On 9th March 1994. Ley 19300 -Aprueba Ley Sobre Bases Generales Del Medio Ambiente. “Title III Liability for Environmental Damage - Paragraph 1 Environmental Damage: Article 54.”

http://www.cochilco.cl/descargas/english/legislation/Law19.300_general_basesofthe_environment.pdf?idNorma=1004876&buscar=Ley+20.363



ANNEXURES

A. Legislation (policies, laws, and regulations) governing water use and discharge in the mining sector

No.	Name of Legislation	Brief description of how it applies
1.	Constitution of the Republic of Chile (1980) (<i>Constitucion de la Republica de Chile</i>)	<p>The Constitution sets out the purpose and regulation of mining concessions.</p> <p>In relation to the environment, the Constitution guarantees to all persons the right to live in an environment free from contamination and requires that the state protect this right.</p>
4.	Law N° 19.300 Environmental Law (1994) (<i>Ley 19.300 - Aprueba Ley Sobre Bases Generales Del Medio Ambiente</i>)	<p>The Environmental Law sets out the regulatory framework governing environmental issues in Chile. It:</p> <ul style="list-style-type: none">- Introduced a number of procedures for assessing environmental impact. The most important of these is the Environmental Impact Assessment System (SEIA).- Established various regulatory bodies, including the Ministry of the Environment, the Environmental Assessment Service and the Council of Ministries for Sustainability.- Established the Environmental Superintendence (SMA).- Established environmental courts to adjudicate environmental disputes pursuant to a further amendment (Law No. 20,600/12).²²
5.	Water Code (1981) (<i>Ley 1122 - Fija Texto Del Código De Aguas</i>)	<p>The Water Code regulates the ownership and use of water rights over surface water and groundwater in Chile, as well as the approval of civil works for the use of water and exercise of such rights.</p> <p>In Chile, water is considered to be "national property for public use" (Water Code). However, water rights granted under the</p>

²²Nicolás Eyzaguirre: "Chile – Environment 2016", *LatinLawyer.com*, available at: <http://latinlawyer.com/reference/topics/51/jurisdictions/3/chile/>.



		<p>Water Code confer property rights that can be transferred to other users and mortgaged.</p> <p>The Water Code eliminated priority uses of water as had previously been established in the Water Codes of 1951 and 1967. Currently, if two applications are presented simultaneously, the issue is solved through a judicial auction procedure.</p>
6.	<p><u>Law 20.551 on the Closure of Mines and Mining Facilities (2012)</u> (<i>Aprueba Reglamento De La Ley De Cierre De Faenas E Instalaciones Mineras</i>) (Approved in Decree 41 of 2012)</p>	<p>Law Nº 20.551 regulates the closure of mining operations and its facilities, through the Supreme Decree Nº 41.</p> <p>The Mine Closure Law has three main pillars: (1) the obligation to submit for the approval of the authorities a closure plan that guarantees the physical and chemical stability of the mining facilities after finishing their operations; (2) the requirement to provide the state with a financial guarantee equal to the value of the implementation of the closure measures and works; and (3) the establishment of a post-closure fund.</p> <p>In addition, the Mine Closure Law gives more power to the National Service of Geology and Mining (SERNAGEOMIN) to establish audits and apply rigorous sanctions to those non-compliant mining companies.</p>
	<p>Groundwater Regulation - Supreme Decree Nº203 of Ministry of Civil Works (2013) (<i>Decreto Supremo N°203 de Ministerio de Obras Públicas, Reglamento sobre Exploración y Explotación de Aguas Subterráneas</i>)</p>	<p>The Groundwater Regulation sets requirements for the granting of exploration of groundwater permits over public lands, and for the granting of water rights over groundwater sources.</p>
	<p>Ecological Minimum Flow Regulation – Supreme Decree Nº14 of Ministry of Environment (<i>Decreto Supremo N° 14 del Ministerio de Medio Ambiente – Reglamento de Caudal Ecológico Mínimo</i>)</p>	<p>The Ecological Minimum Flow Regulation sets the parameters and criteria for the establishment of ecological flow when granting new water rights.</p>



5.	<u>Regulation on the Closure of Mines and Mining Facilities (2012)</u> (<i>Ley 20.551 - Regula El Cierre De Faenas E Instalaciones Mineras</i>)	The Mine Closure Regulation sets out the components that should be included in mine closure applications, and the bodies regulating the approval of and compliance with mine closure plans.
6.	<u>Regulation of Commission for the Qualification of Competencies in Mineral Resources and Reserves (2007)</u> (<i>Ley 20.235 - Regula La Figura De Las Personas Competentes Y Crea La Comisión Calificadora De Competencias De Recursos Y Reservas Mineras</i>)	<i>Law 20.235 sets out the responsibilities of the Commission for the Qualification of Competencies in Mineral Resources and Reserves.</i>
7.	Supreme Decree 248 Regulations for Approval of Projects Design, Construction, Operation and Closure of Tailings Deposits (2007) (<i>Decreto Supremo N 248 Reglamento Para La Aprobacion De Proyectos De Diseño, Construcción, Operación Y Cierre De Los Depósitos De Relaves</i>)	Supreme Decree 248 sets out the procedures for approving projects tailings deposits, and requirements for the design, construction, operation, and closure of tailings deposits, as well as the layout of their additional works to ensure the safety of persons and property. http://www.sernageomin.cl/pdf/mineria/seguridad/reglamentos_seguridad_minera/DS248_Reglamento_DepositosRelave.pdf
8.	Decree No. 90/01,	Establishes the maximum concentration of pollutants allowed for wastewater discharges into the ocean or continental surface water within Chile.
9.	Decree No. 46/03	Establishes the maximum concentration of pollutants permitted for wastewater discharges into groundwater.
10.	Decree No. 609/98	Establishes the maximum concentration of pollutants permitted for industrial wastewater discharges into the public sewage by industrial facilities.



B. List of relevant ministries/ departments/ agencies/ authorities involved in the regulation of water in the mining sector

No.	Name (In English and local language)	Brief description of its role
1.	<u>The Ministry of Mining</u> (<i>Ministerio de Minería</i>)	The Ministry of Mines is responsible for the administrative aspects of the mining process and policies.
2.	<u>The Ministry of the Environment</u> (<i>Ministerio del Medio Ambiente</i>)	<p>The Ministry of the Environment collaborates with the President of the Republic on creating and implementing environmental programs, policies and plans, and on protecting and preserving water resources in order to contribute to sustainable development.²³</p> <p>There are also regional divisions of the Ministry of the Environment: The Regional Ministerial Secretary (Secretaría Regional Ministerial (SEREMI)).</p>
3.	<u>The Directorate General of Water</u> (<i>Dirección General de Aguas/DGA</i>)	<p>The DGA, which forms part of the Chilean Ministry of Public Works, has overall responsibility for water use planning and for the monitoring, protection and development of water resources and basins in Chile.²⁴</p> <p>The DGA is responsible for granting new water rights, for the supervision of water users and for the approval of all major civil works in riverbeds and margins.²⁵</p> <p>Under the Water Code's regulations, the state's role in the management of water resources once the water rights have been granted is very limited.²⁶ The DGA can only intervene in very exceptional circumstances and for limited periods of time (for example, in cases of extreme drought, the DGA can interfere in water distribution for a non-renewable period of six</p>

²³ Chilean Ministry of the Environment, "Vision Mision," available at: <http://portal.mma.gob.cl/vision-y-mision/#>

²⁴ José Ignacio Morán, "Water legislation in Chile: the need for reform," Practical Law Company (October 2014).

²⁵ Dirección General de Aguas website, available at: <http://www.dga.cl/acercadeladga/Paginas/default.aspx>

²⁶ Jose Ignacio Moran, "Water Legislation in Chile: The Need for Reform," Practical Law Article 9-547-7926 (2014).



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		<p>months). In addition, the DGA cannot interfere in water rights transactions between individuals.</p> <p>There are regional water authorities in each of the following 15 regions in Chile: Tarapaca, Antofagasta, Atacama, Coquimbo, Valparaiso, Libertador General Bernardo O’ Higgins, Maule, Bio Bio, La Araucanía, Los Lagos, Aysén del General Carlos Ibáñez del Campo, Magallanes y la Antártica Chilena, Los Ríos, Arica y Parinacota, and Santiago Metropolitan. Among other things, the DGA collects and maintains hydrological data through its 15 regional offices.</p>
4.	<p><u>Environmental Evaluation Service</u> (Servicio de Evaluacion Ambiental (SEA))</p>	<p>The Environmental Evaluation Service oversees the Environmental Impact Evaluation System (<i>Sistema de Evaluacion de Impacto Ambiental (SEIA)</i>), interpretes the RCAs, and encourages and assists with public participation during the project assessment procedures.²⁷</p>
6.	<p><u>The Superintendence of the Environment</u> (<i>Superintendencia del Medio Ambiente/SMA</i>)</p>	<p>The SMA manages and monitors compliance with:</p> <ul style="list-style-type: none"> - Environmental Qualification Resolutions (Resolucion de Calificacion Ambiental (RCA)) which Chile’s environmental discharge permits; - Prevention and Decontamination Plans; and - Environmental Quality Standards and Emission Normsl - Management Plans; and - Any other environmental instrument established by law in Law No. 20,417/10, which amended the Environmental Law.²⁸
7.	<p><u>National Service of Geology and Mining</u> (<i>Servicio Nacional de Geologia y Minería/SERNAGEOMIN</i>)</p>	<p>The National Service of Geology and Mining approves mine closure plans and maintains a national registry of mining concessions. SERNAGEOMIN also performs a technical review of applications for mining concessions.</p>

²⁷ Jose Antonio Urrutia and Enrique Oyarzun. Practical Law. “Environmental law and practice in Chile: overview. Environmental Evaluation Service Main activities” <http://us.practicallaw.com/1-503-4725#a994068>.

²⁸ Superintendencia del Medio Ambiente Gobierno de Chile. “Quienes somos?” available at: www.sma.gob.cl.



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5.	Private Water Users Associations	The private water associations regulate the distribution of water, and are regulated by law and their bylaws.
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