



# **The Sustainable Solution for Remediation and Restoration of The Salton Sea**

*Prepared for*

**Independent Review Panel Evaluating Water Import Options  
for Long-Term Restoration of the Salton Sea**

*Prepared and Presented by*

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Salton Power, Inc.**

**October 10, 2021**

# TABLE OF CONTENTS

INTRODUCTION	1
I – PROJECT TEAM IDENTIFICATION	3
II – DESCRIPTION OF PROJECT	9
A. Project Concept	9
B. Business Plan	10
C. Implementation of the Project	17
III – PLANNING AND DESIGN PROCESS	18
A. Planning and Design Process	18
B. Project Feasibility	20
C. Water Source Identification	21
D. Land Use	21
E. Environmental Impact	22
F. Salton Sea Salinity	23
G. Water Use	26
H. Other Natural Air & Water Filtration Methods	26
I. Project Development Schedule	33
J. Operation Schedule	34
IV – COST PROJECTION	36
V – PLAN FOR FUNDING OF THE PROJECT	38
A. Plan for Funding	38
B. Responsible Parties for Operation and Maintenance of the Project	38
C. Estimated Annual Cost	38
VI – CONCLUSION	40

## **LIST OF FIGURES & TABLES**

TABLE 1: Total Population in Each County	11
TABLE 2: Total Daily Water Imported, Fresh Water Produced, Power Used	11
TABLE 3: Environmental Impacts and Mitigation Methods	23
TABLE 4: Estimated Cost for Water & Air Treatment Methods	33
TABLE 5: Project Development Schedule	34
TABLE 6: Cost Projection for Each Key Facility	37
TABLE 7: Estimated Capital Cost for Each Component	37
TABLE 8: Estimated Annual Costs for Each Component	39
FIGURE 1: Salton Sea Receding Projection	1
FIGURE 2: Underground Utility Tunnel below Ocean Sea Level	9
FIGURE 3: Proposed Utility Tunnel Route	12
FIGURE 4: Mix Use of Tunnel Reinforcement Options	13
FIGURE 5: Hydroelectric Turbines Efficiency Comparison Chart	15
FIGURE 6: Demonstration of Pelton Turbine Parts	16
FIGURE 7: Pelton Turbines Placement	16
FIGURE 8: Salton Sea's Water Level, 2000 to 2020	24
FIGURE 9: Salton Sea's Average Annual Salinity, 2004-2020	24
FIGURE 10: Demonstration of Proposed Sea Shoreline Berm Design	25
FIGURE 11: Demonstration of an Industrial Sprinkler	27
FIGURE 12: Benefits of Mangroves	28
FIGURE 13: Triple Layered Pore Structure in Mangrove's Root System	29
FIGURE 14: List of Volatile Organic Compounds	30
FIGURE 15: Example of Rechargeable Activated Carbon	30
FIGURE 16: The Advanced Water Treatment System	31
FIGURE 17: Water Refill Plan – One Year vs. Two Years	35

## **LIST OF EXHIBITS**

EXHIBIT A: Letter of Support from County of Imperial	41
EXHIBIT B: Engineer Opinion Letter for Maximum Power Generation	42

# INTRODUCTION

## INTRODUCTION

The Salton Sea lies in the Colorado Desert region of the Sonoran Desert in Riverside and Imperial Counties. With 35 miles long and 15 miles wide, the Sea is one of the world's largest inland seas and one of the lowest spots on earth at 238 feet below sea level.

Already a desert, climate change is making this region even drier. In addition, the growing demand for water in the cities and suburbs of Southern California has reduced the amount of Colorado River water diverted to nearby farms. Historically, the Sea has been fed by the Colorado and Gila Rivers and their tributaries, but at present only the Alamo, New River, and Whitewater Rivers feed the Sea. There are no outflows.

The Salton Sea is steadily drying up yearly, exposing thousands of acres of lakebed that threatens to trigger toxic dust storms and exacerbate already high levels of asthma and other respiratory diseases in Southern California. Currently, there are no long-term solutions to this aggravated problem.

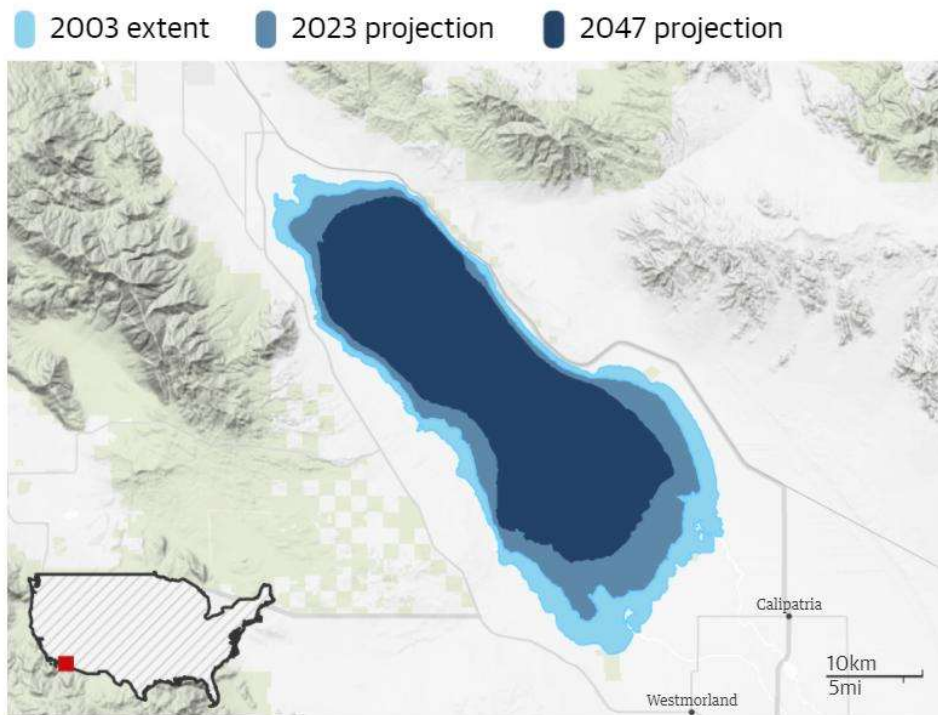


Figure 1 – Salton Sea Receding Projection

Areas in proximity to the Salton Sea are experiencing higher rates of asthma and cancer. The affected area will expand as the Sea continues to shrink and expose playa. Currently, common Salton Sea toxins

include but are not limited to selenium, arsenic, dichlorodiphenyltrichloroethane (DDT), 42 organic pesticides, polychlorinated biphenyl, chromium, zinc, lead, cyanobacteria (blue-green algae).

An environmental crisis at the Salton Sea has caused a massive die-off of birds, fish, and greatly impacted human health and the receding Salton Sea poses an urgent public health challenge for communities surrounding the Sea that already suffer from poor air quality.

In November 2019, the Imperial County Board of Supervisors declared a local emergency for air pollution at the Salton Sea and has been actively seeking solutions to resolve the issues surrounding the Salton Sea.

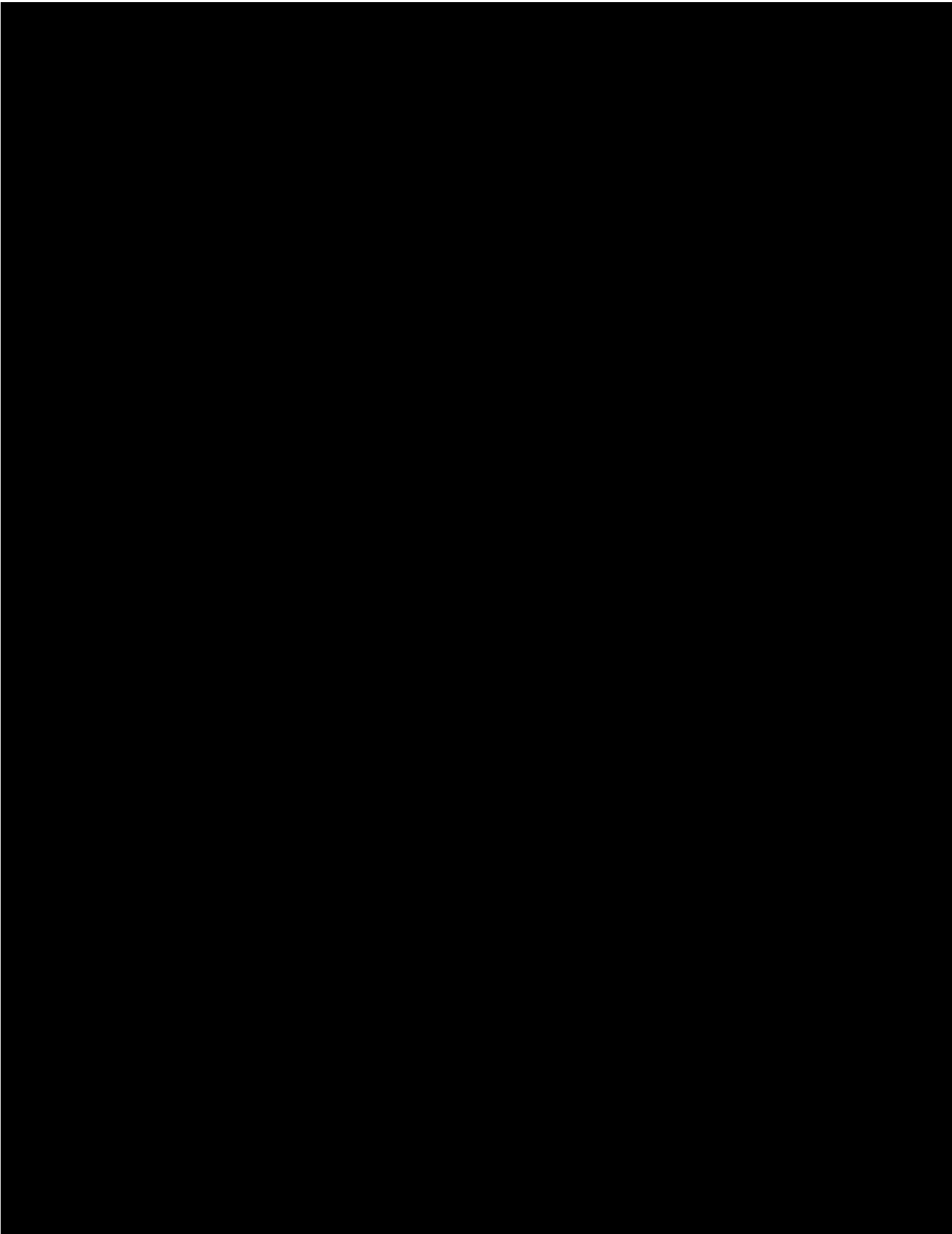
In December 2017, the California Natural Resources Agency issued a Request for Information (“RFI”) to assist the Salton Sea Management Program (“SSMP”) in identifying approaches to water importation to meet the long-range goals of the SSMP. An independent Review Panel (“Panel”) has been tasked to review all submissions to the RFI and solicit additional ideas for water importation. On August 13, 2021, the chair of the Independent Review Panel, Dr. Rominder Suri, issued an Updated RFI to invite original participants to update their submissions, and to invite new parties to make a submission now.

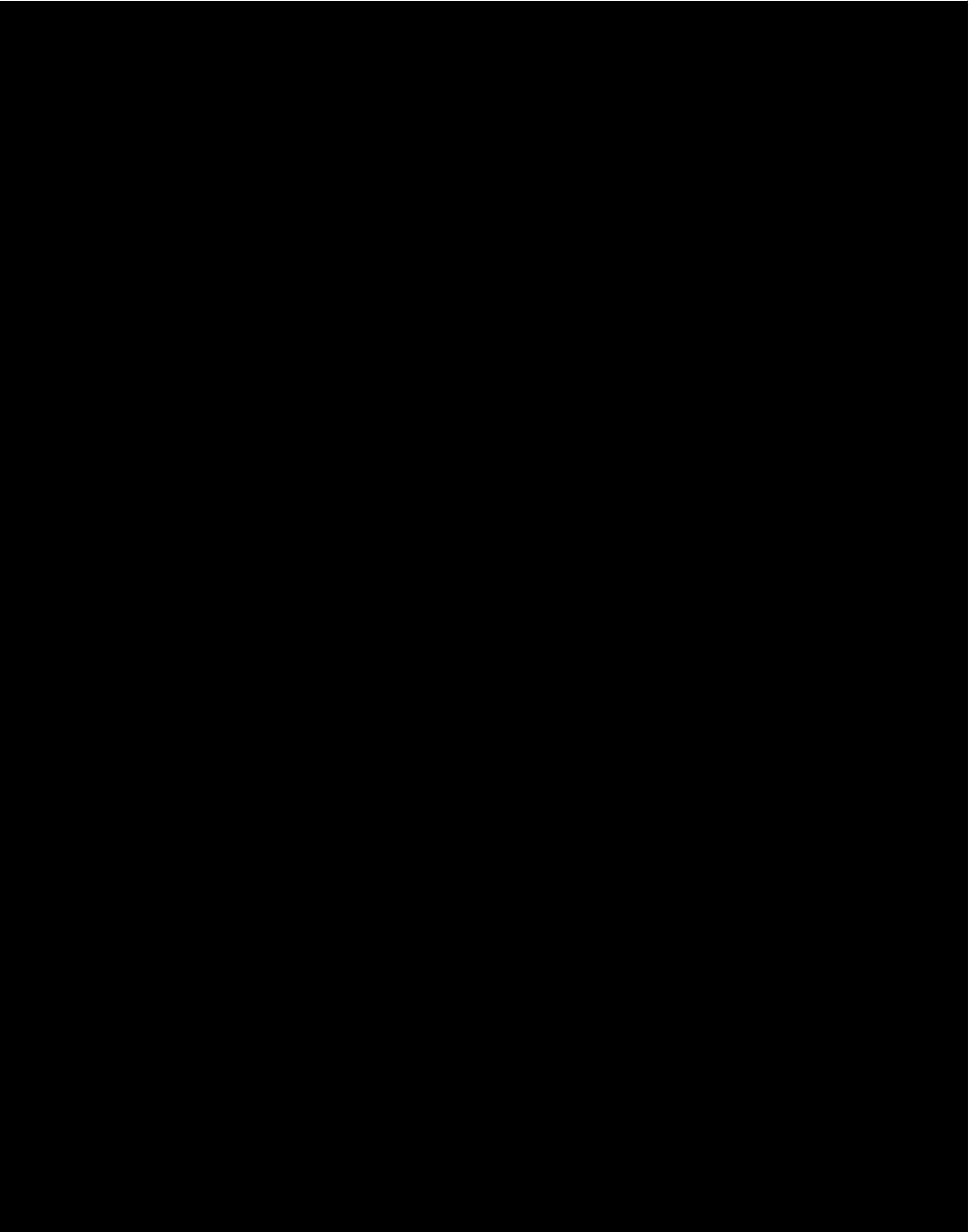
Global Premier Development, Inc. (“GPD”) and Salton Power, Inc. (“Salton Power”) are leading a team of top-notch experts and specialists who have extensive experiences in real estate development, construction, project financing, project management, environmental solutions, underground tunnel construction, and water desalinization, to participate in this mission to provide long-term sustainable solutions to Salton Sea. GPD and Salton Power proudly present to the Panel of our perpetual and sustainable solutions for remediation and restoration of Salton Sea, and to also resolve California’s water crisis. These innovative solutions will involve a wide range of engineers and specialists to design and build a specialized infrastructure to import sea water from the Pacific Ocean to Salton Sea, desalinate ocean water, and utilize hydroelectric turbines in order to power the desalination of ocean water and water at the Salton Sea. This task is monumental in scale and will require a combination of public/private funding sources and debt.

## **I – PROJECT TEAM IDENTIFICATION (CONFIDENTIAL)**

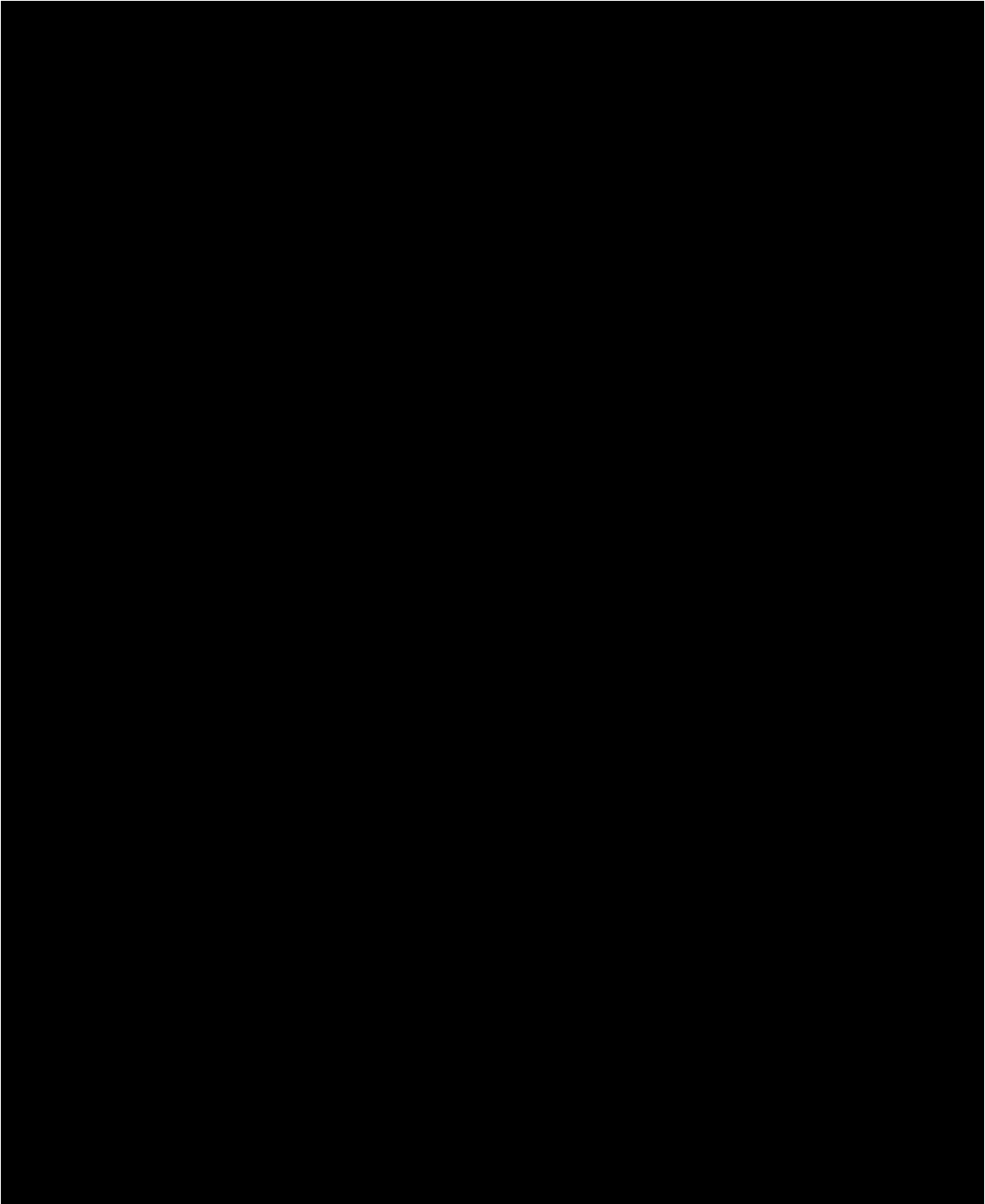
**(This Entire Section is Confidential)**

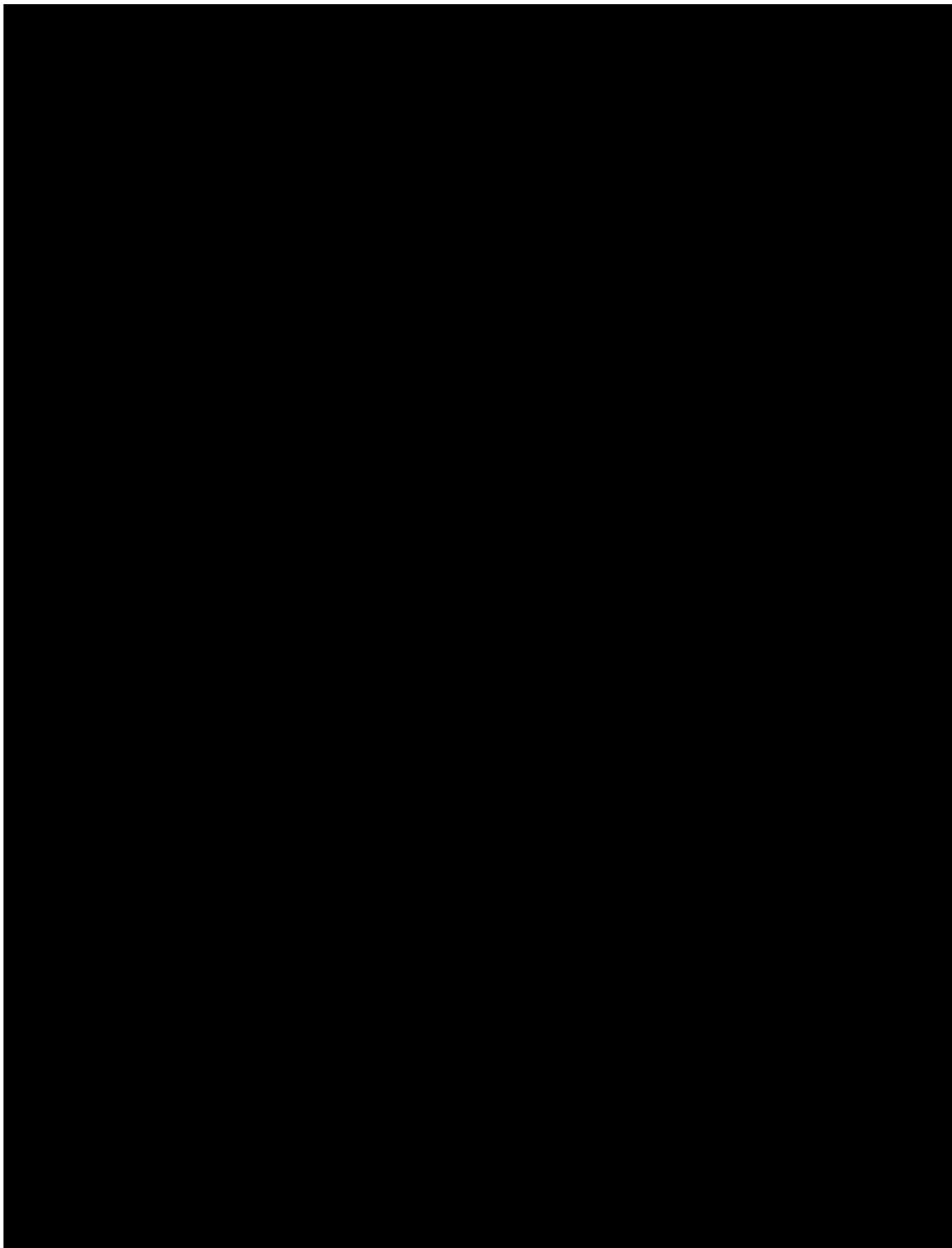












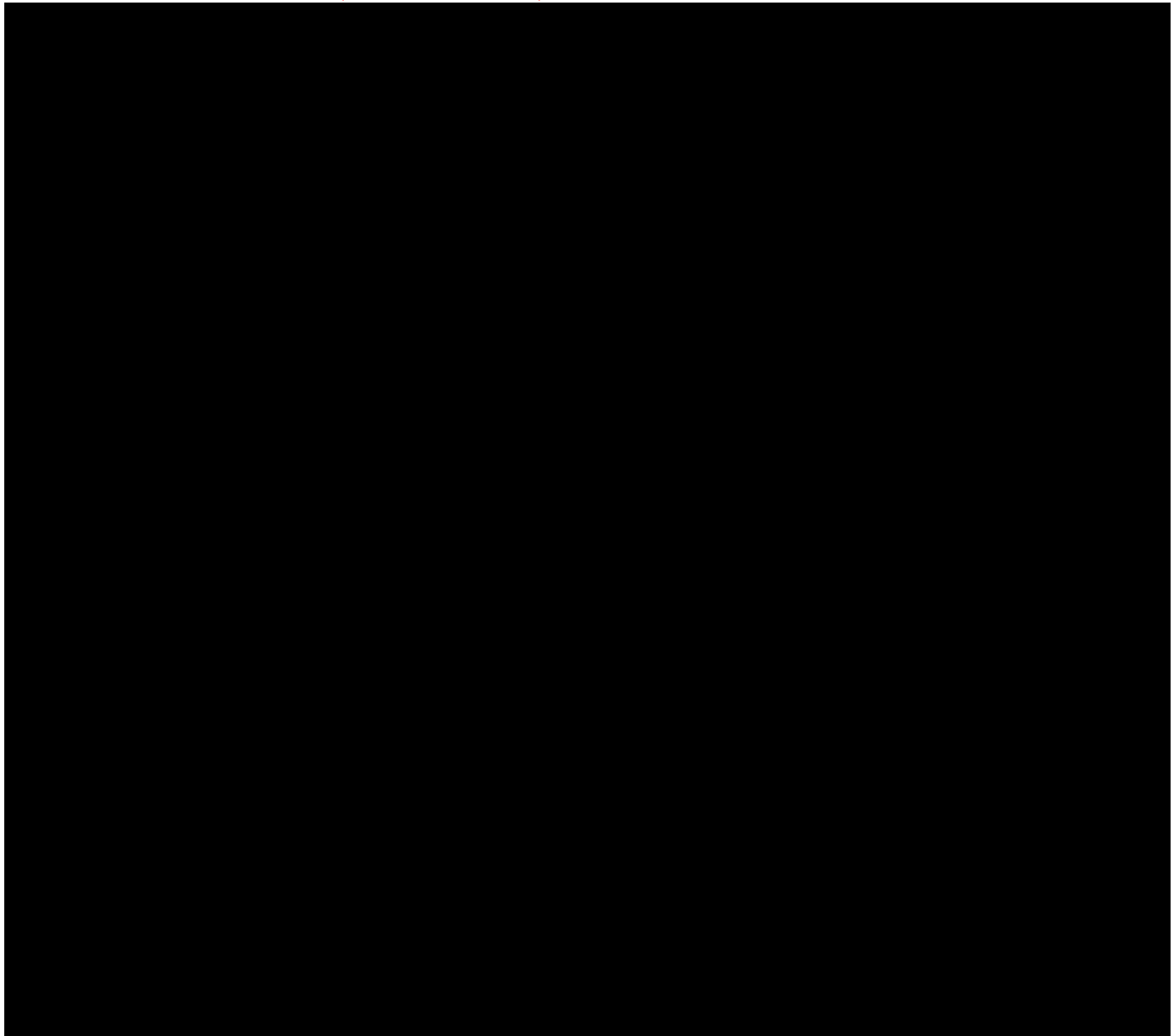


## **DESCRIPTION OF PROJECT**

The perpetual and sustainable solutions for remediation and restoration of Salton Sea and resolving California's water issues include the following key components:

- Building the world's largest environmentally friendly desalination plant at Salton Sea powered by renewable energy;
- Building a 100-110 miles underground tunnel for water importation from the Pacific Ocean to Salton Sea.
- Building hydroelectric turbine power plants within the underground tunnel for energy production.

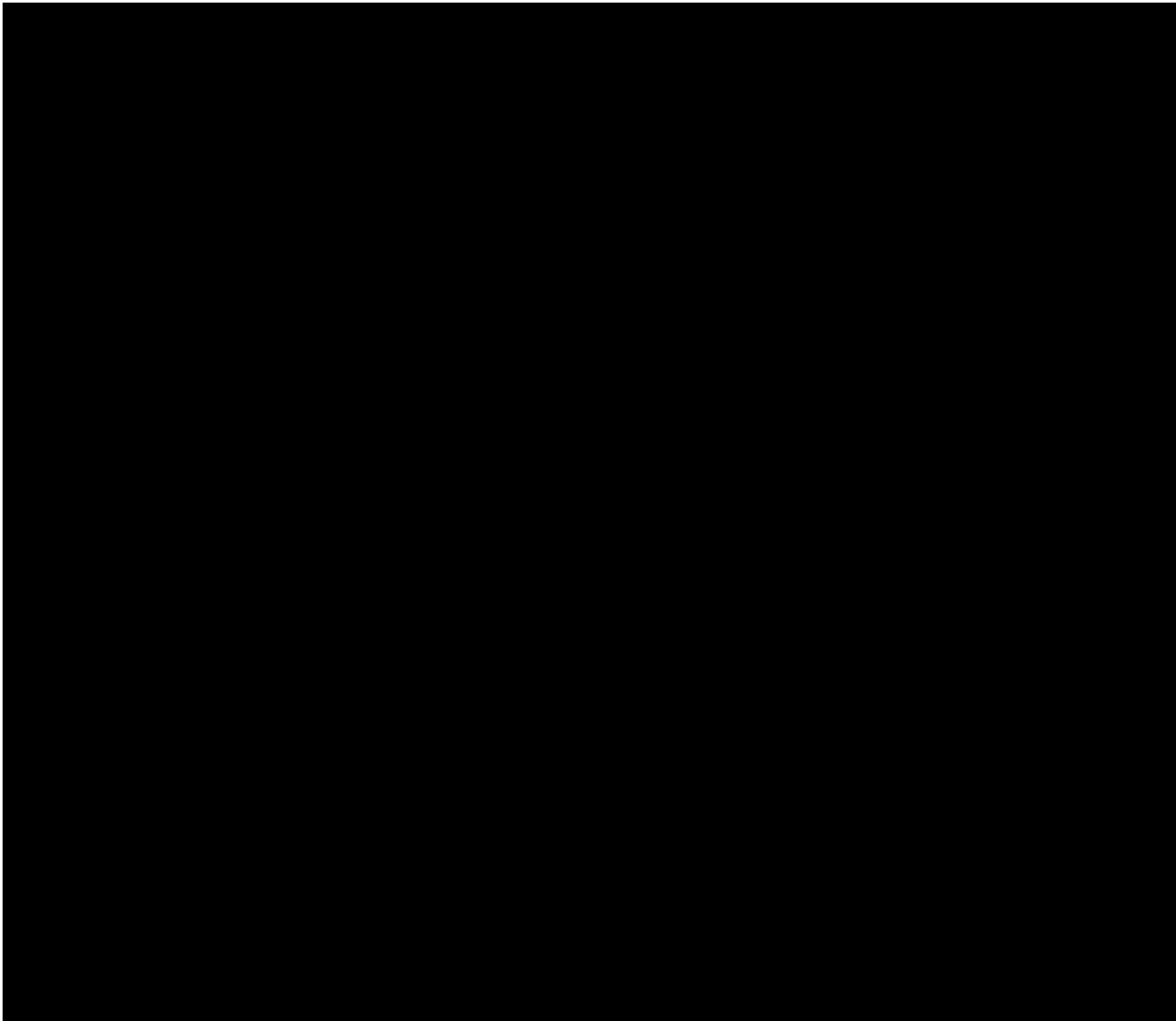
### **A. PROJECT CONCEPT (CONFIDENTIAL)**

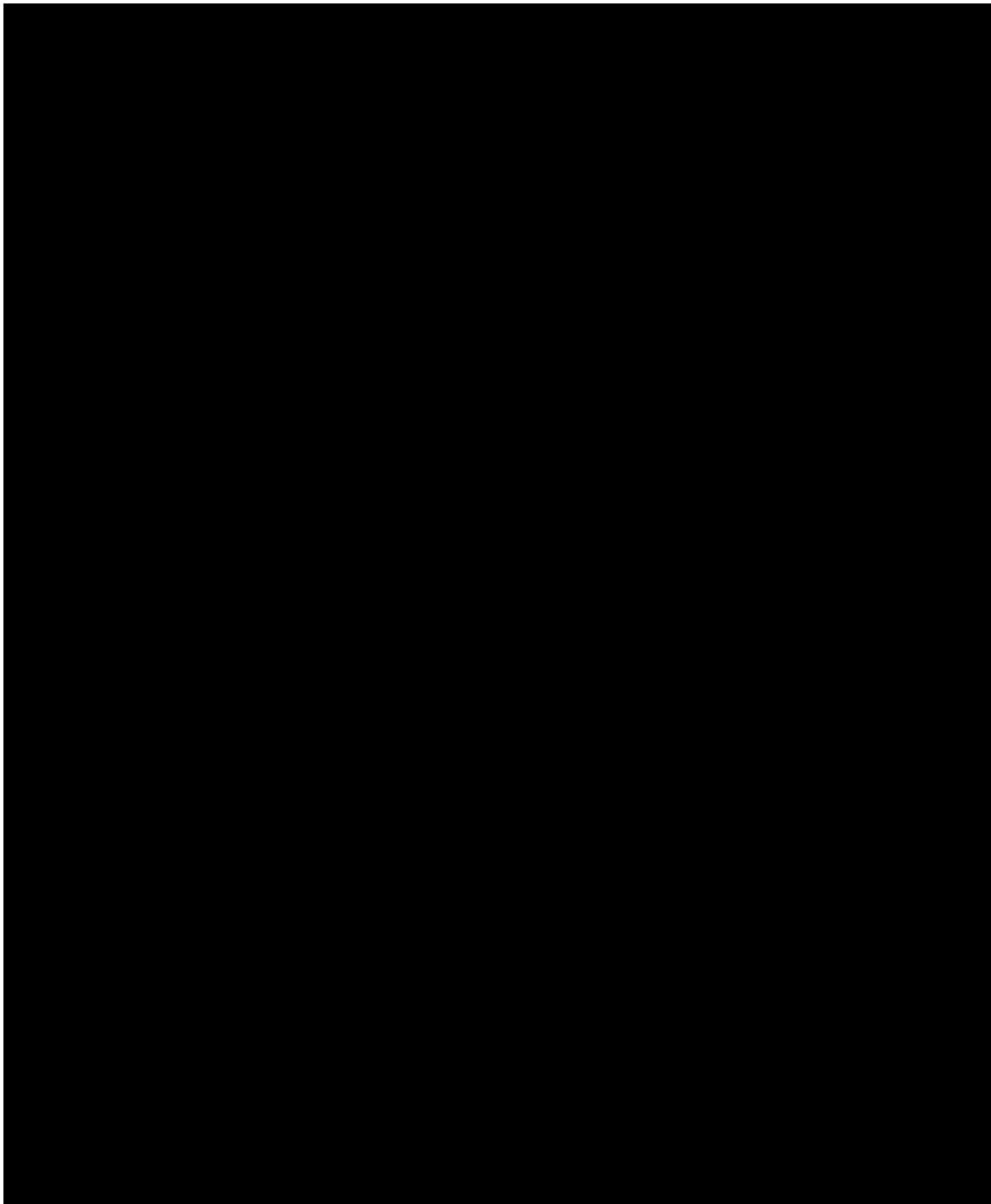


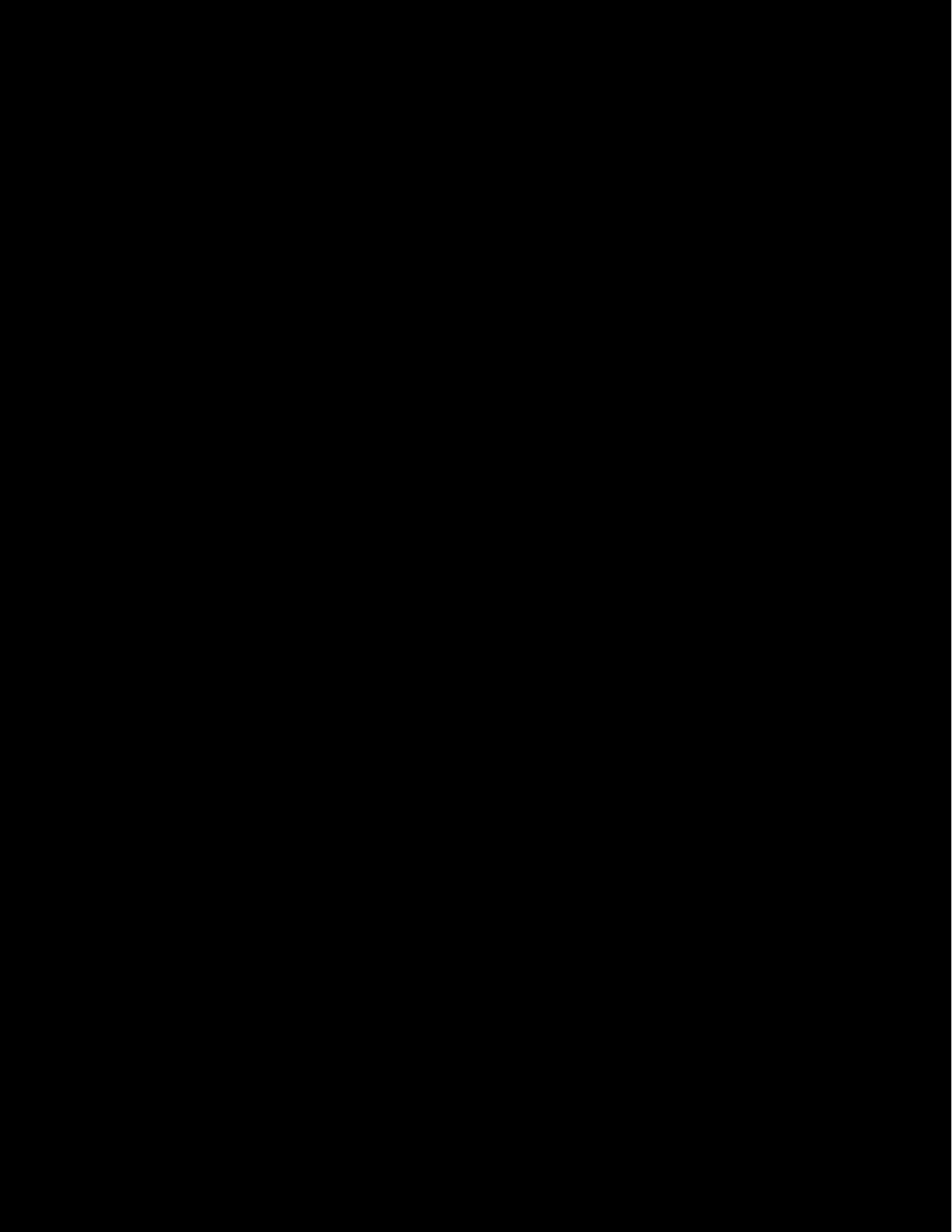
## **B. BUSINESS PLAN**

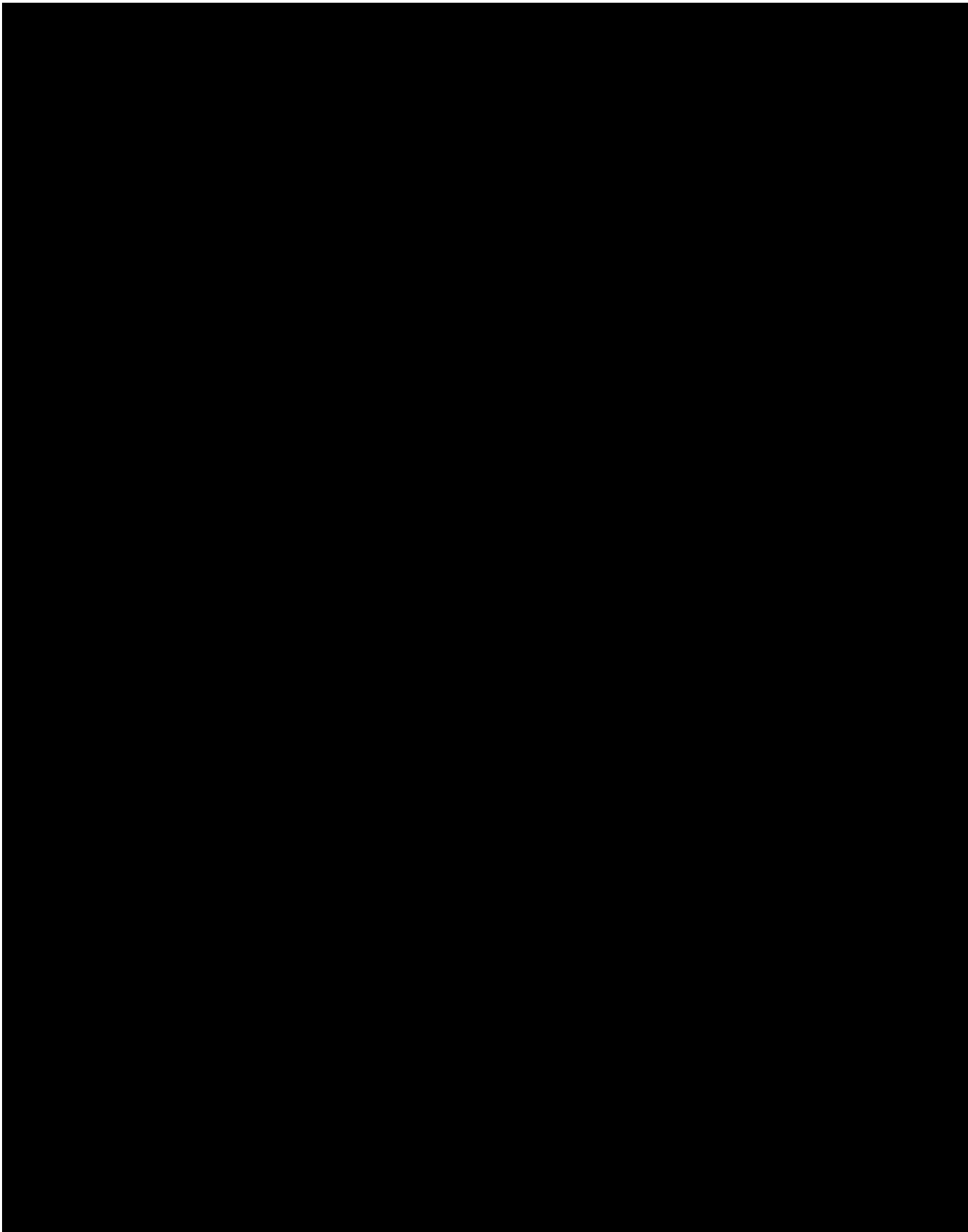
The ownership of the proposed project will be Salton Power, Inc. supported by affiliated entity Global Premier Development Inc. The revenue from the project will be generated through power sales, water sales and salt distribution. Gross annual power sales from renewable energy generated from water importation would be approximately \$3.9 Billion from a 15,000 megawatts plant. Therefore, this proposed project will be self-sustaining as a new commercial enterprise.

As introduced above, the perpetual and sustainable solutions to Salton Sea and California's water issue involves building the world's largest desalination plant at Salton Sea powered by renewable energy, building a 100-110 miles long underground tunnel to import water from the Pacific Ocean to Salton Sea, and building hydroelectric power plants within the tunnel for energy generation. This section will discuss these three components in details.

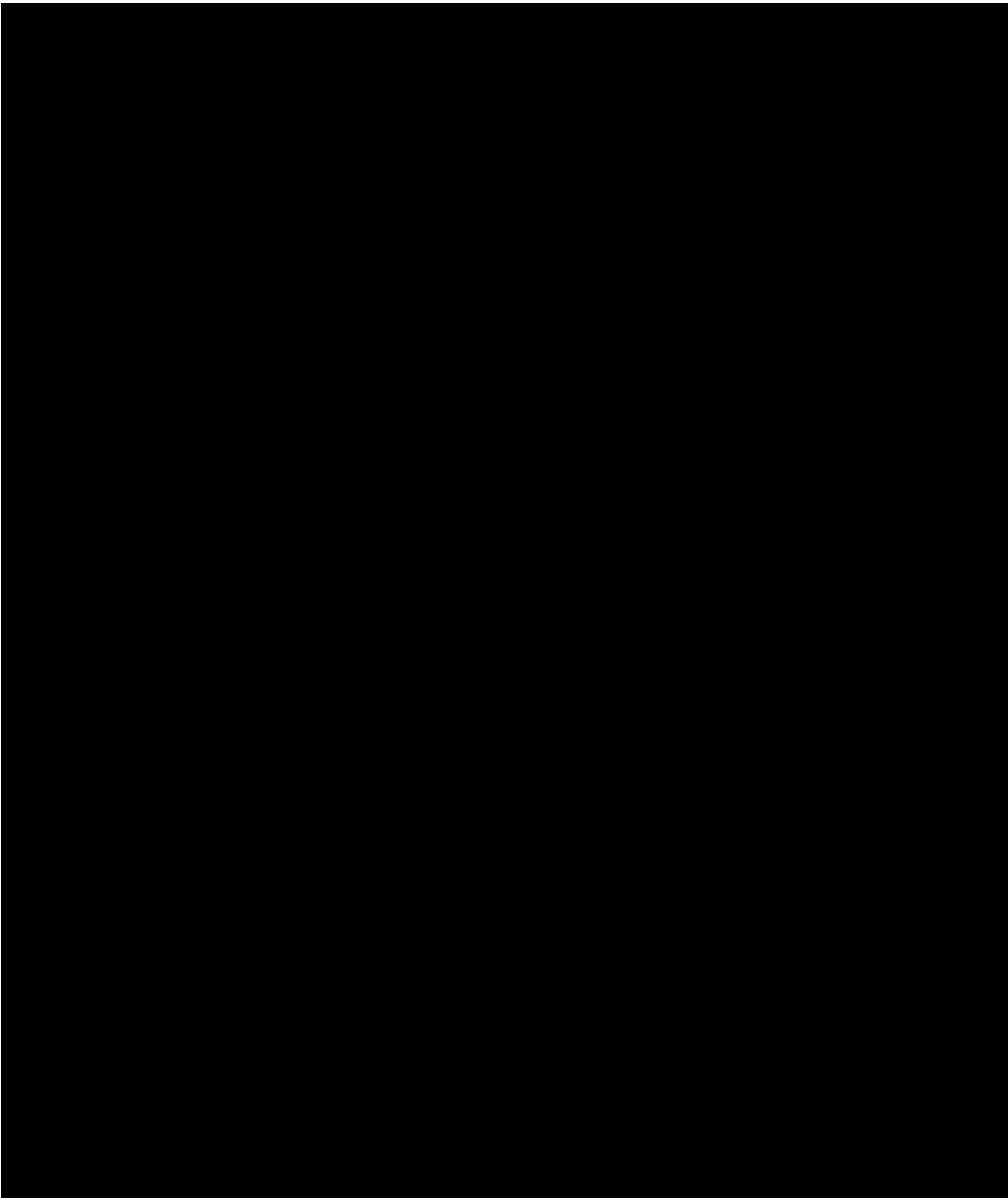


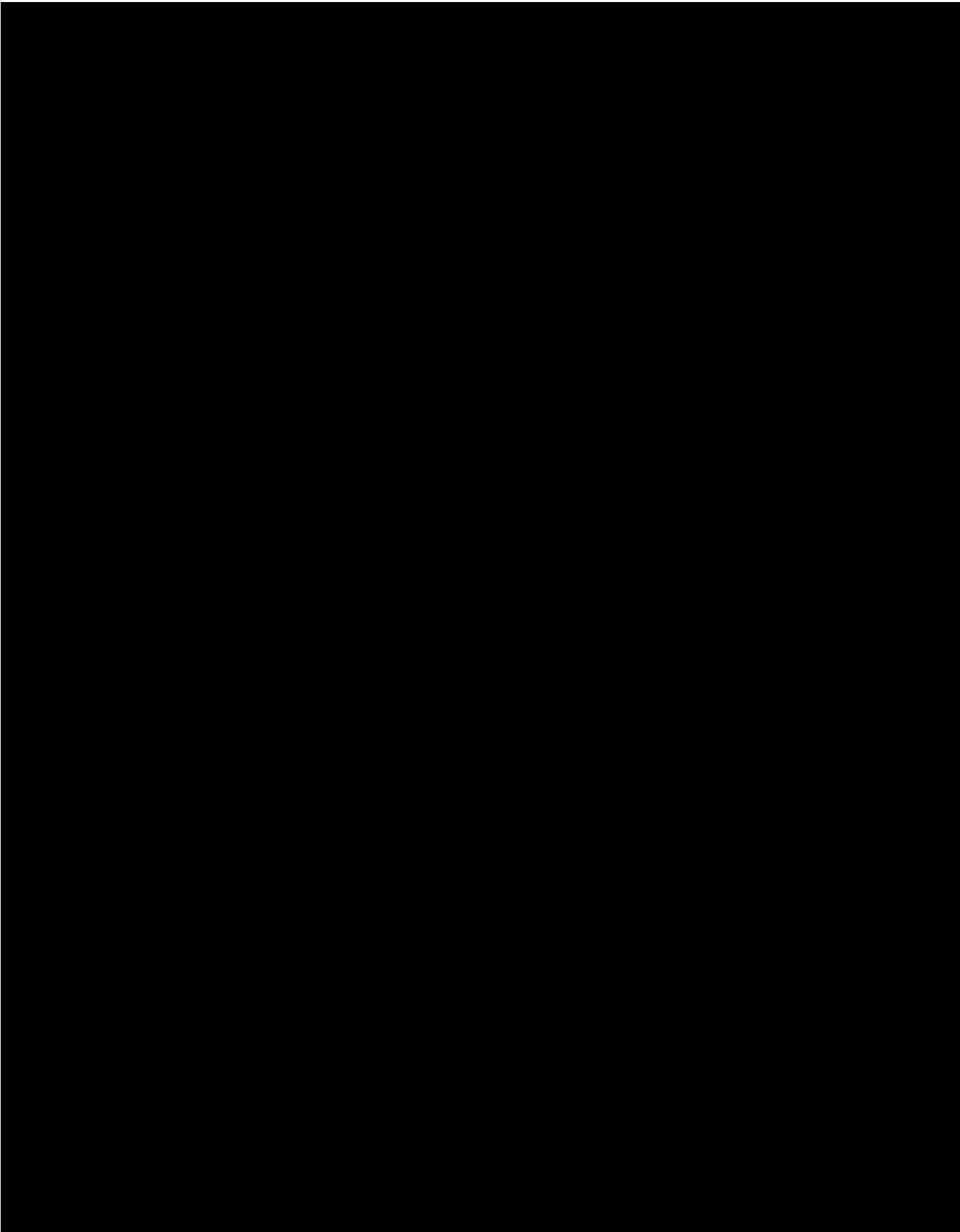


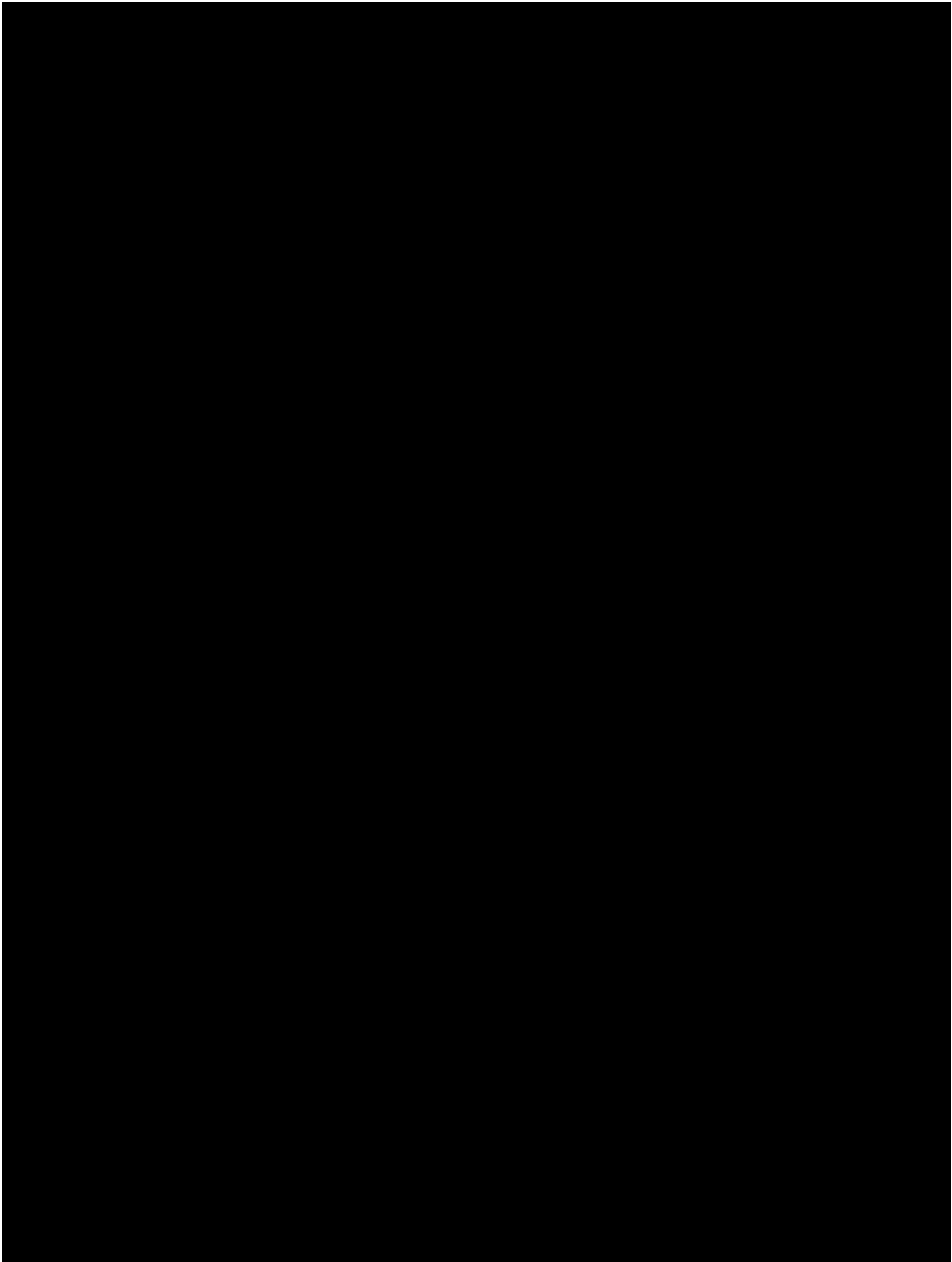


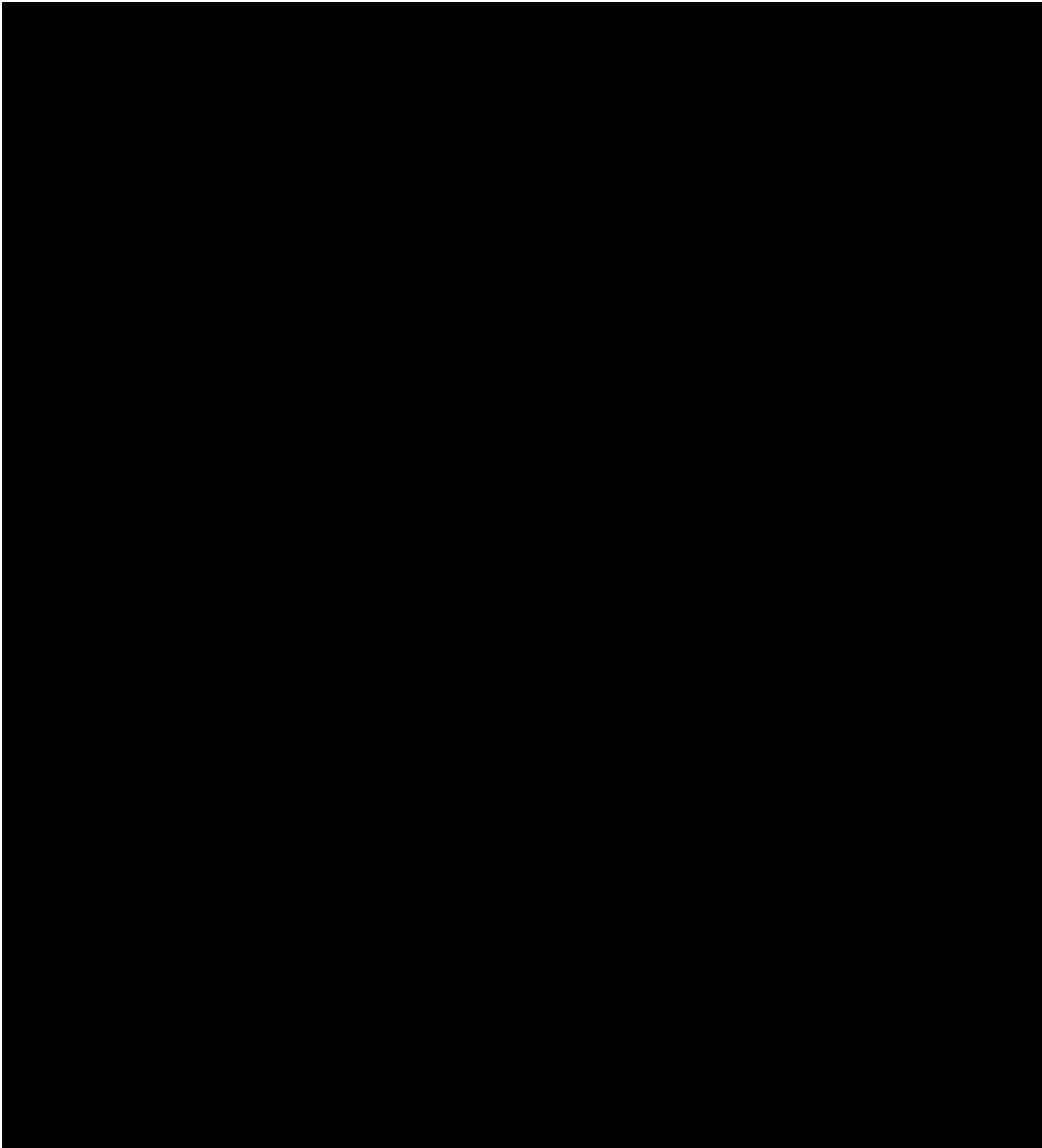






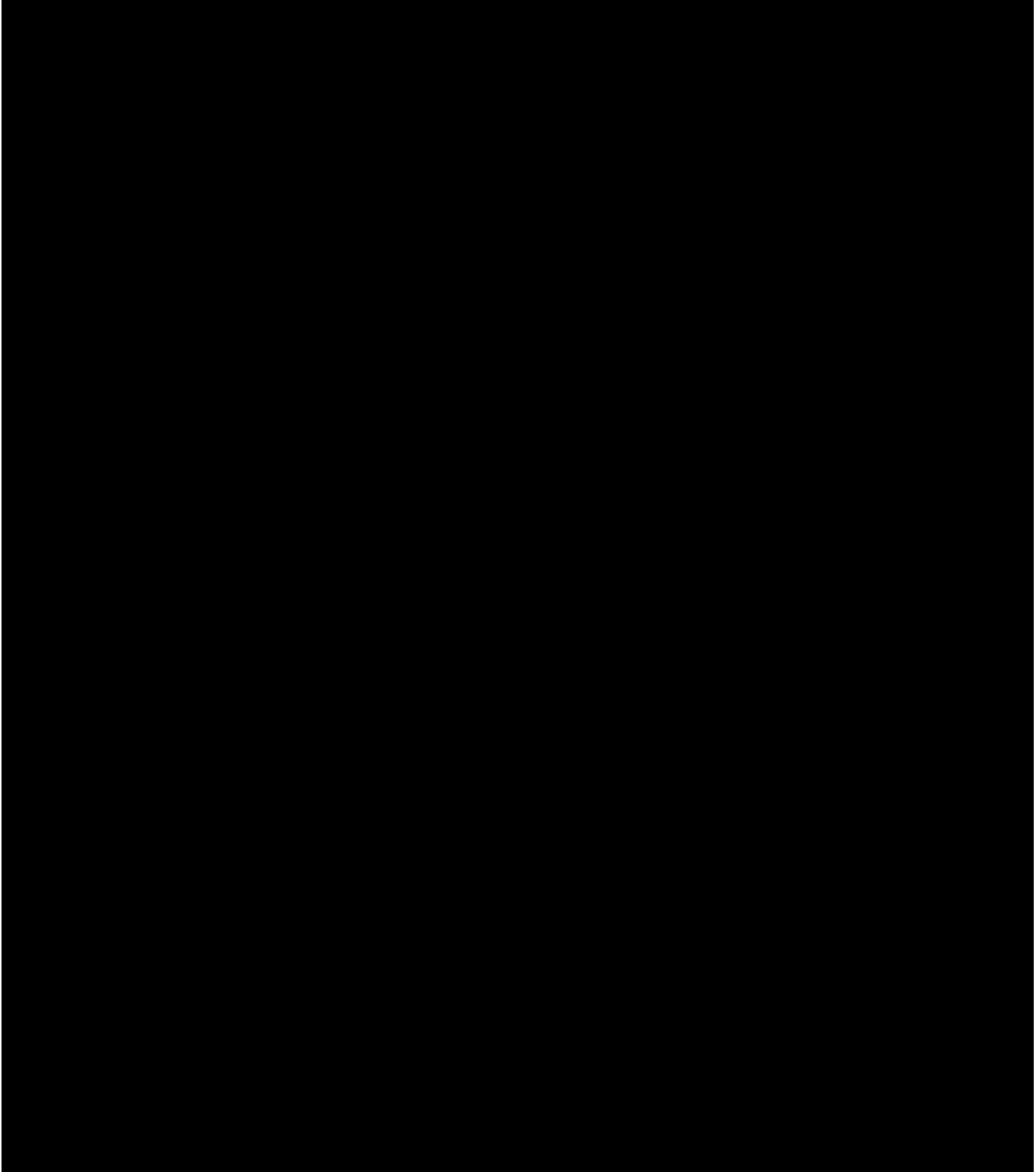


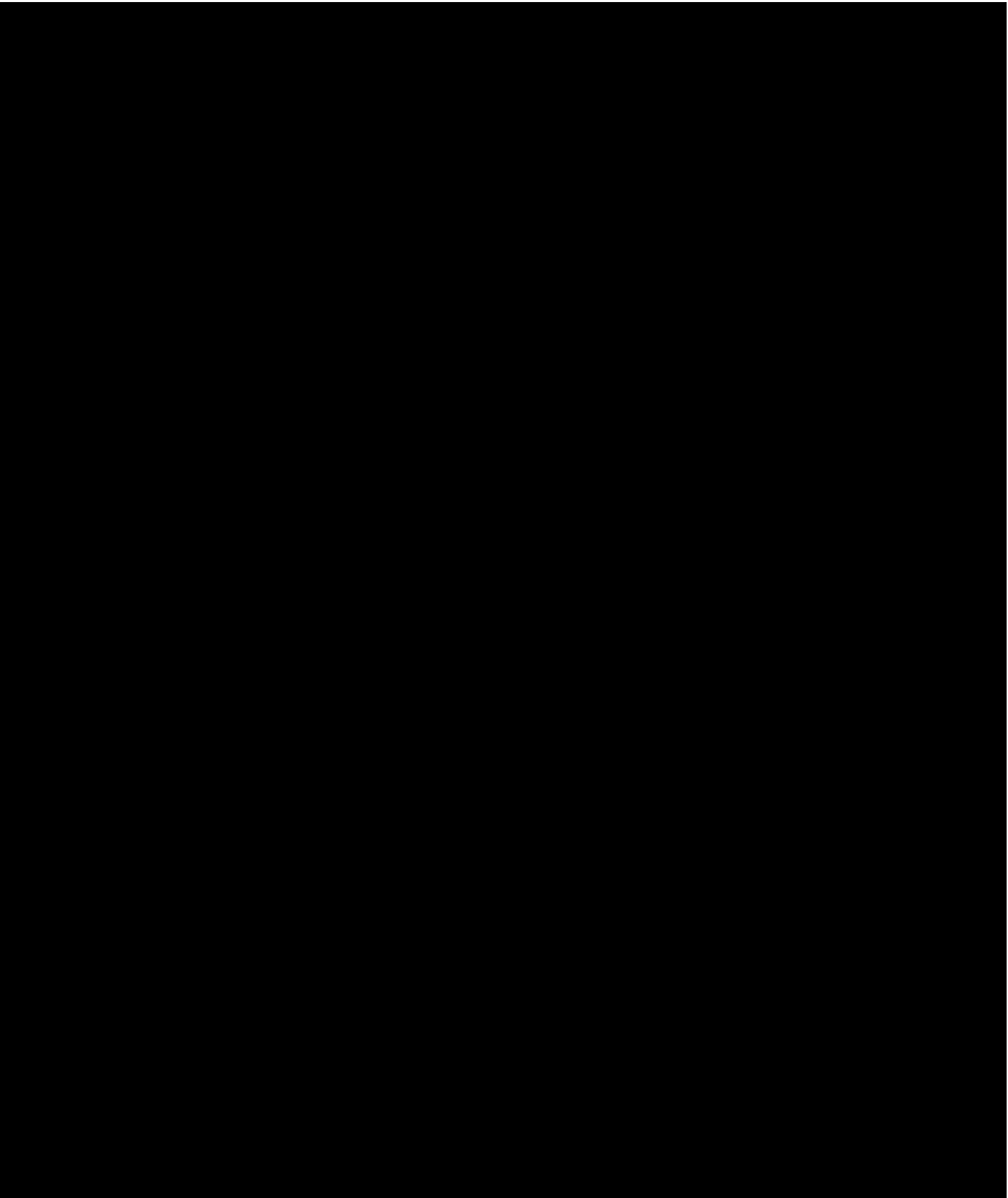




## **III – PLANNING DESIGN PROCESS**

### **A. PLANNING AND DESIGN PROCESS**

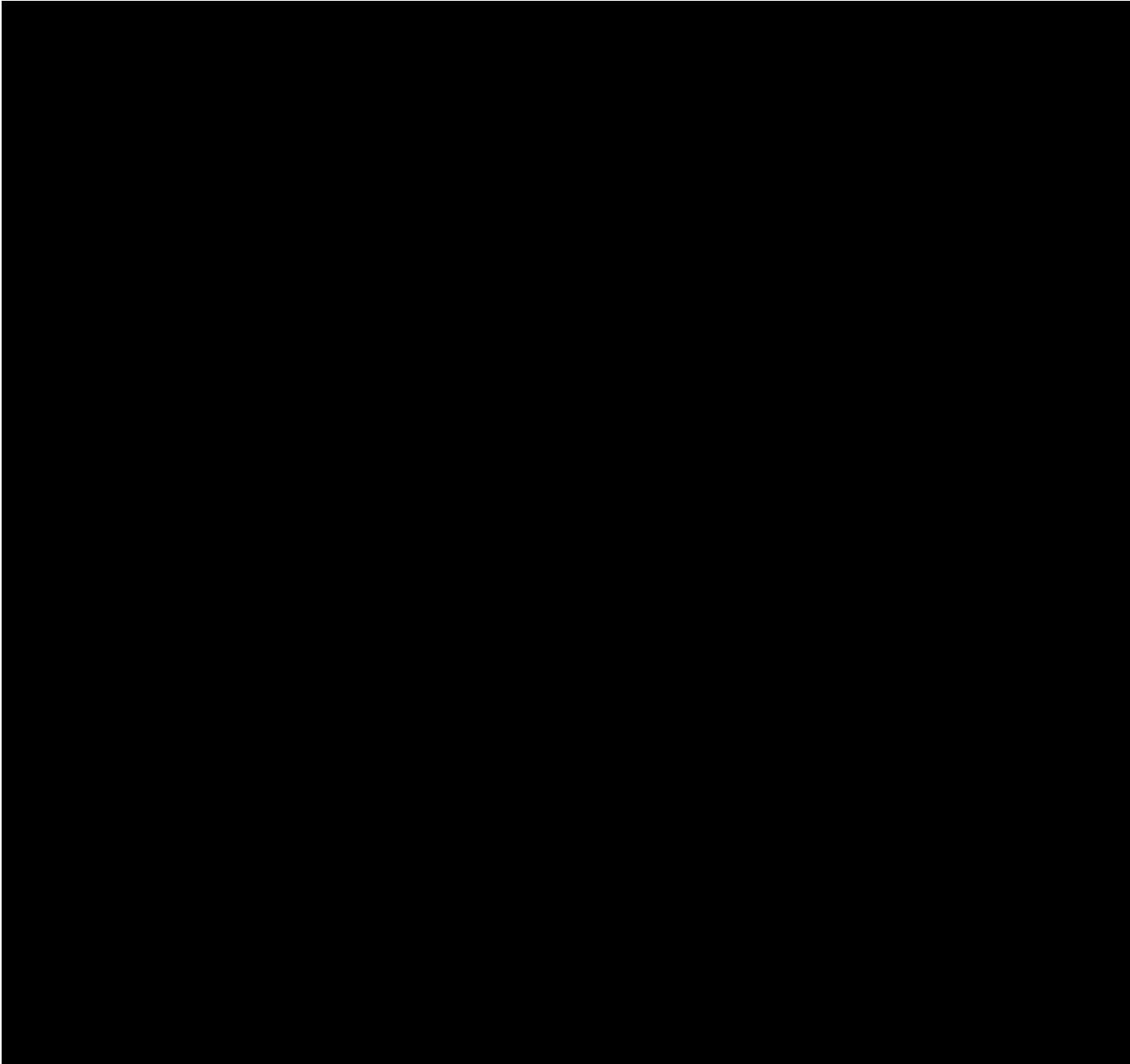




## **B. PROJECT FEASIBILITY**

### **Financial Feasibility**

Our team has analyzed the feasibility of the construction of a 100-110 miles long underground utility tunnel, installation of hydroelectric turbines inside the utility tunnel and building a high production freshwater desalination plant. The revenues generated from selling energy, fresh water, and salt are adequate to support the debt services required for achieving a stabilized operation within 2-3 years, which is the fundamental difference compares our proposed plans to others, as our project doesn't rely on any government funding and is self-sufficient in its short term/ long term operational goal.





#### **D. LAND USE**

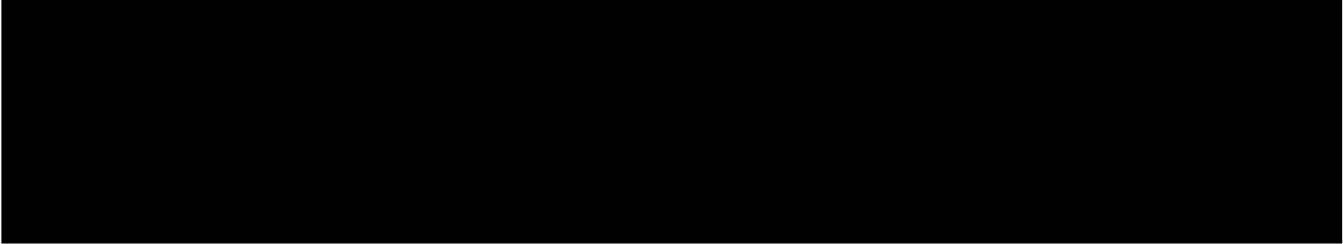
We have examined and analyzed every parcel's ownership records from the Pacific Ocean intake to the Salton Sea outflow destination area. The final tunnel route we selected was mainly determined by minimizing use of costly non-governmental easements. Approximately 90% of the selected tunnel route is through federally owned properties which is highly beneficial for execution of our proposed plan.

Since our tunnel will be built underground from the Salton Sea to the Pacific Ocean, we will only need to handle very few "right-of-way" issues. With a potential Public Private Partnership with the County of Imperial and the State of California, we anticipate that no major barriers would prevent us from being able to construct the underground utility tunnel with the selected route. Coordination with the government to exercise eminent domain rights will only be used as last resort if a private landowner refuses to grant subsurface rights to complete the construction of the utility tunnel.



## **E. ENVIRONMENTAL IMPACT**

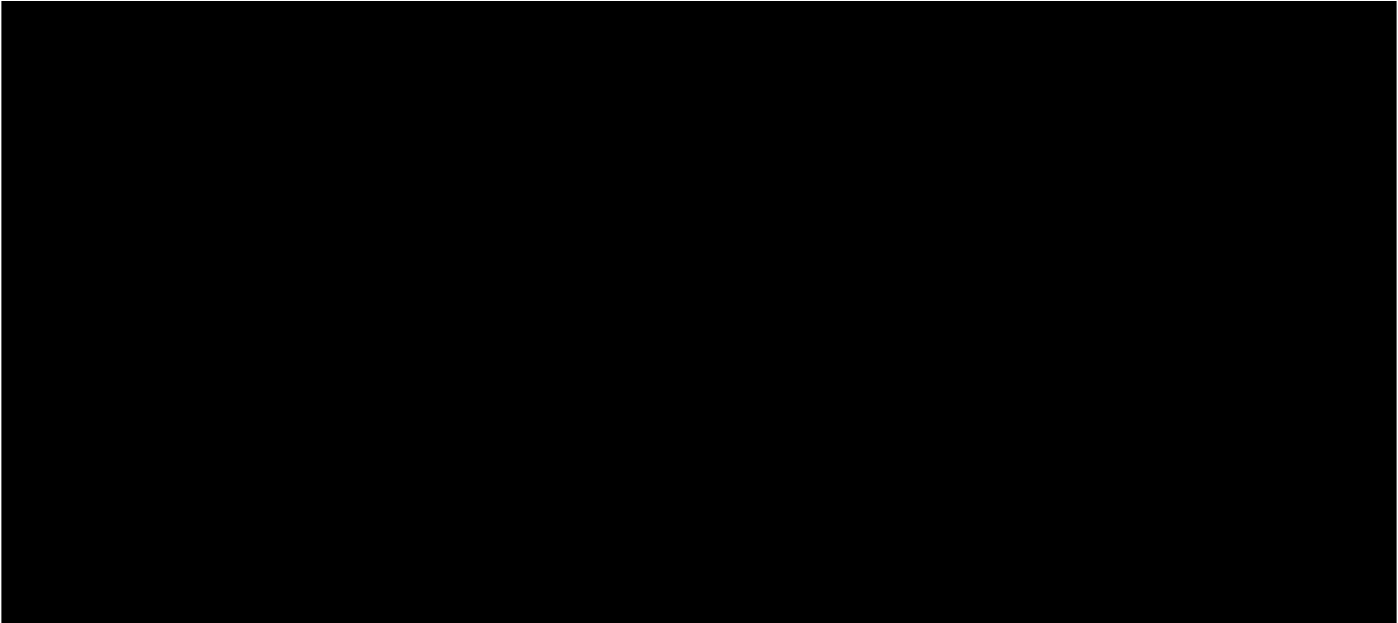
Our team has studied the environmental impact of water importation from the Pacific Ocean to the Salton Sea. All environmental impacts over the water transfer can be easily mitigated using various techniques. Environmental Impacts were discussed with various agencies and our final mitigation plans will be implemented with ultimate care in reducing risks to the environment. Below is a description of some key environmental impacts and solutions associated with the proposed project.

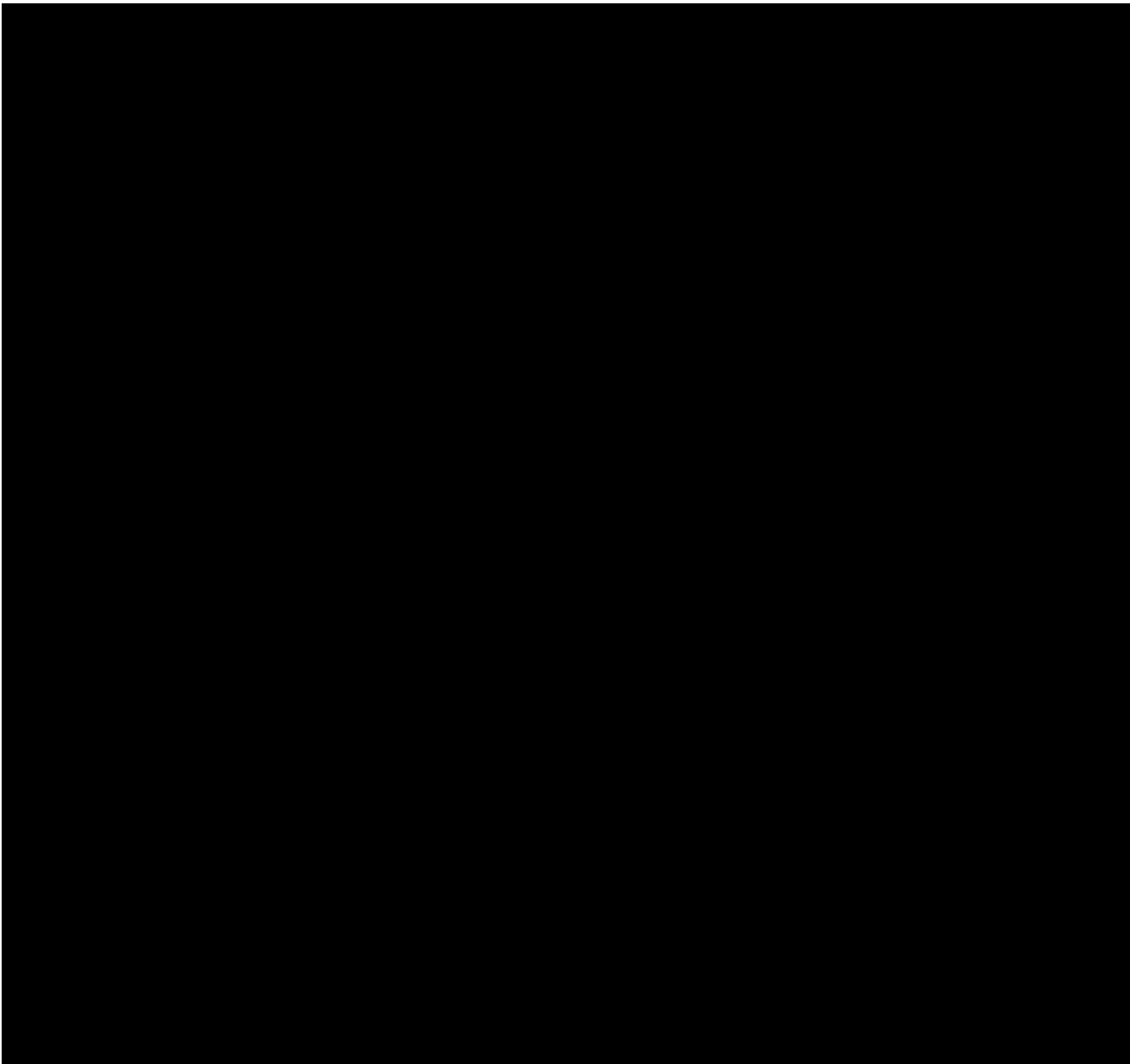


### **Potential Water Leak in Water Importation/ Detection and Reinforcement Method**

While the water is travelling through the utility tunnel, there is always a possibility that salt water may leak from a crack or fracture of the utility tunnel. As a mitigation measure, numerous saltwater sensor detectors will be placed at every 50 feet and every 5 feet over any earthquake fault line underneath the tunnel. Additionally, multiple layers of protection will be placed on the tunnel walls to lower the permeability of the tunnel's walls.

Our tunnel material will be mixed use of reinforcement options, such combination includes the use of section joints, anchor bolts, which are a great combination for this specific project considering the tunnel building area is within the zone for seismic activity. To avoid water leaking, granular backfill, cements, clays, and fiber glass will be used in tunnel layers design, these material layers allow the tunnel's walls to act as a virtually impermeable wall. Tunneling reinforcement with liners lowers the possibility of a collapse and decreases the likelihood of water leaks as well.





**F. SALTON SEA SALINITY**

Water levels in Salton Sea continue to drop on a yearly basis, subjecting nearby communities to harmful levels of toxic dust stirred up from the dry, exposed lakebed.

For more than a century, the shallow lake has been a beneficiary of the Colorado River water that feeds the nearby Imperial Valley farm fields. As water was sold off and diverted, more than 15,000 acres of playa containing years of fertilizer and pesticide runoff were exposed to the air and desert winds. Currently, the Salton Sea has another problem, climate change, such as minimal rainfall and constant high temperature, is making this dry region even drier.

Combating the Sea’s fast evaporation, the Irrigation District continued to put 800,000 acre-feet of water directly into the lake as it implemented efficiency measures. Those water deliveries ended in 2018, and in the subsequent years, the pace of the Salton Sea’s evaporation has tripled.

The dwindling water supply subsequently increases the lake's salinity, killing off fish, destroying once-lush migratory bird habitats and making children sick from the airborne toxins stirred up in the dust.

The Salton Sea salinity is approximately 80 parts per thousand (PPT). By comparison, ocean water salinity is approximately 35 PPT. The salinity of the Sea increases every year. As the Sea evaporates every year all the salt delivered to it is left behind thereby increasing the salinity with each passing year.

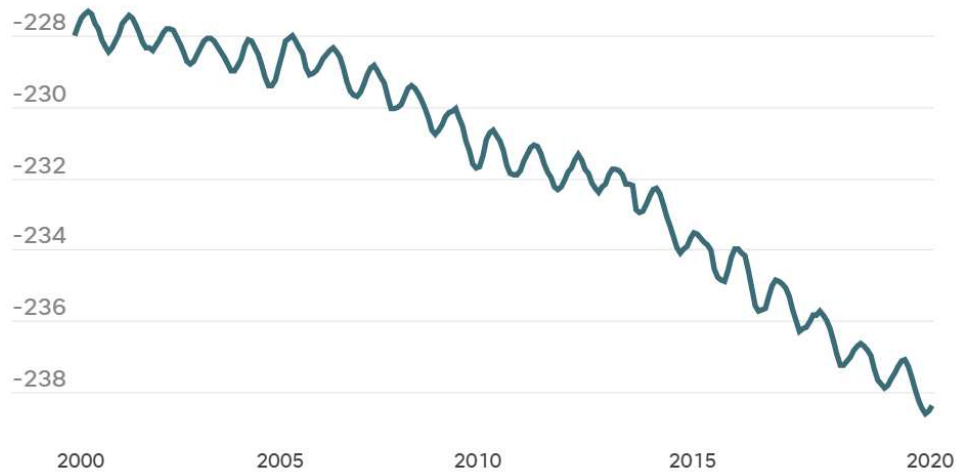


Figure 8 – Salton Sea’s Water Level, 2000 to 2020 (monthly change in mean elevation, in feet below sea level)

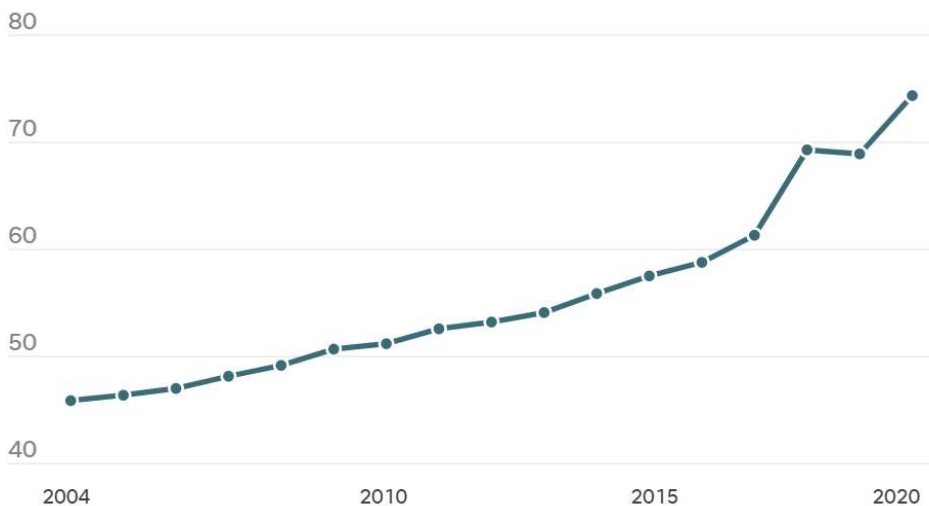


Figure 9 – Salton Sea’s Average Annual Salinity, 2004-2020 (in parts per thousand)

Our solution to increase the water level of Salton Sea and reduce its salinity will be accomplished in three stages:

*Stage one* - import the Ocean water to Salton Sea, diluting the Sea water with the Ocean water, since the salinity of Ocean water is lower than the Salton Sea water. Assuming the current volume of the Sea is between 4,000,000 to 6,000,000 acres feet with salinity between 70,000 to 80,000 milligrams per liter, it would take a minimum deposit of 4,000,000 acre-feet of ocean water to reduce the salinity to approximately 42,000 milligrams per liter.

*Stage two* - focus on the on the Sea perimeter by constructing isolated berms around the entire playa around the Sea. Each set of berms will have their own active small scale ultra-high pressure desalination systems that will remove toxins and control the saline levels within that berm. Upon completion of the initial playa berms, residents will be able to enjoy the benefits of the targeted remediation effort; the water within each berm will be suitable for swimming, fishing, and other water activities.

*Stage three* - place additional berms behind the plays berms. Once the salinity within each playa berm has reached the desired salinity level, and the small-scale desalination system will be used again in removing toxins in additional berms, until the entire Sea has reached the desired salinity level. The goal is to divide the huge desalination/toxin removal mission of the entire Sea into smaller targeted sections which will be much easier to manage and see results.

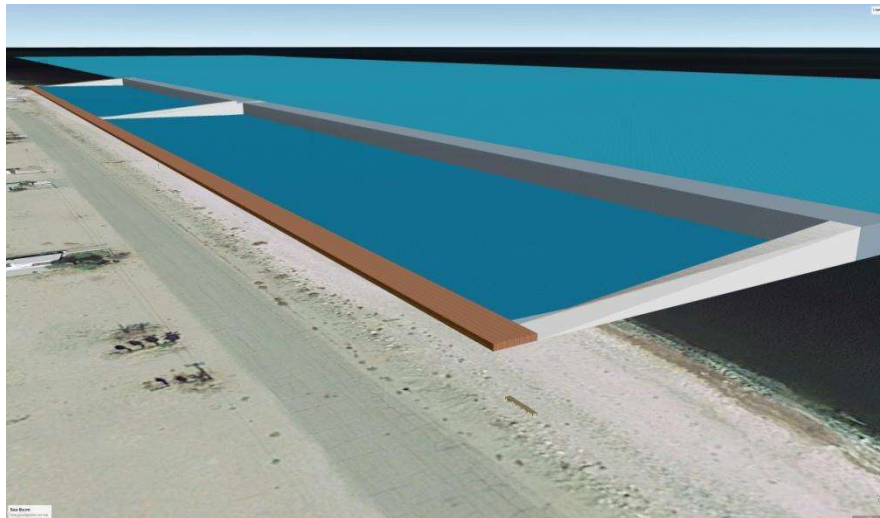


Figure 10 – Demonstration of Proposed Sea Shoreline Berm Design

Advanced ultra-high pressure reverse osmosis membranes will be used to remove toxins and salinity up to 130,000 milligrams per liter. On a separate note, new developments surrounding the sea that benefit from the berms and clean water will be required to share some of the cost of the active toxin/salt removal.

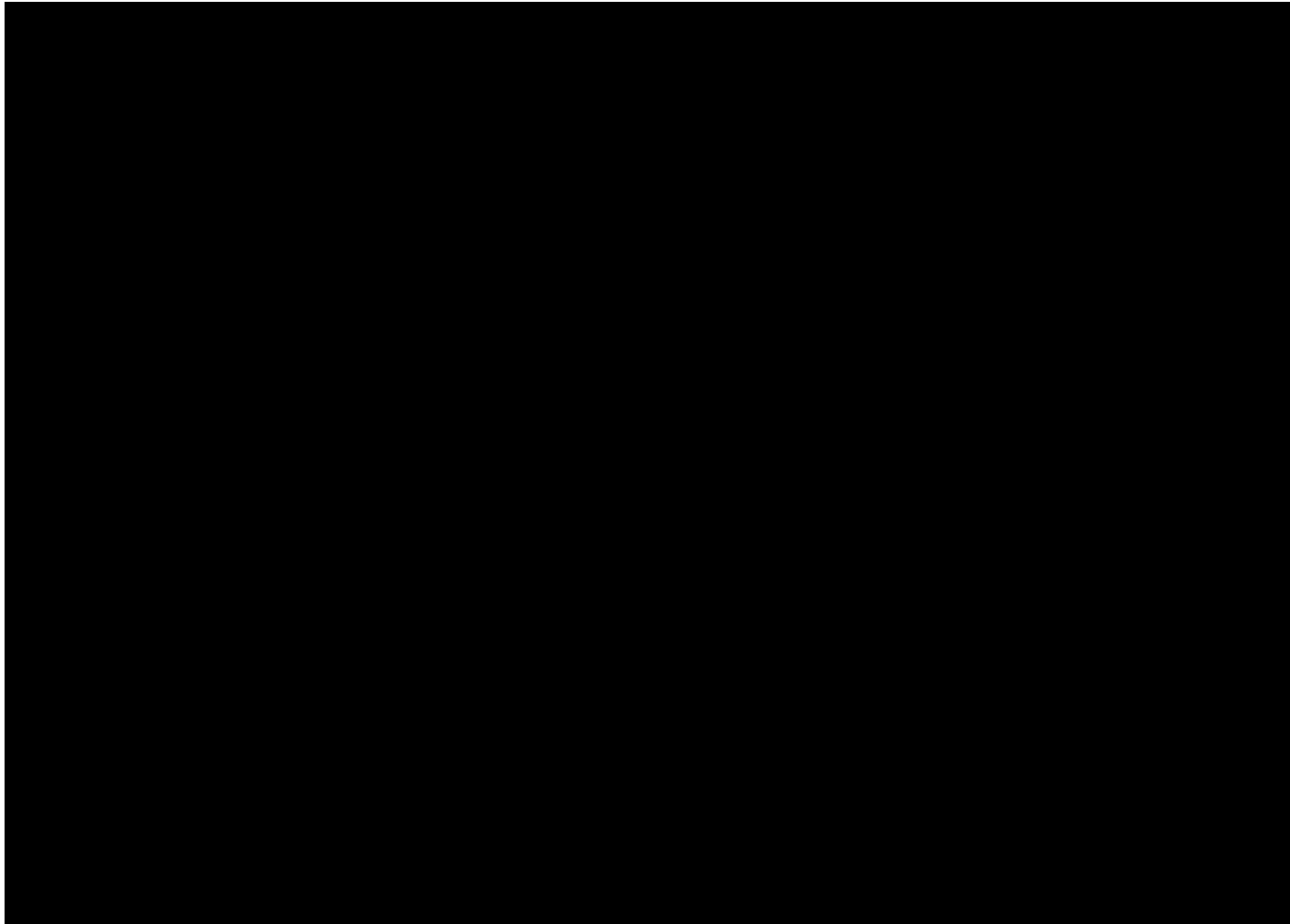
As discussed in the "Environmental Impact" sector, toxins from the sea including brine will be thermally processed (dehydrated) and shipped to an approved EPA disposal site or sent to lithium battery manufactory/ supplier for lithium extraction. A few clean energy companies plan on building a lithium battery supply chain in Southern Inland California have already expressed an interest in coordinating with our team in the future for supplying abundant lithium containing brine to their need.

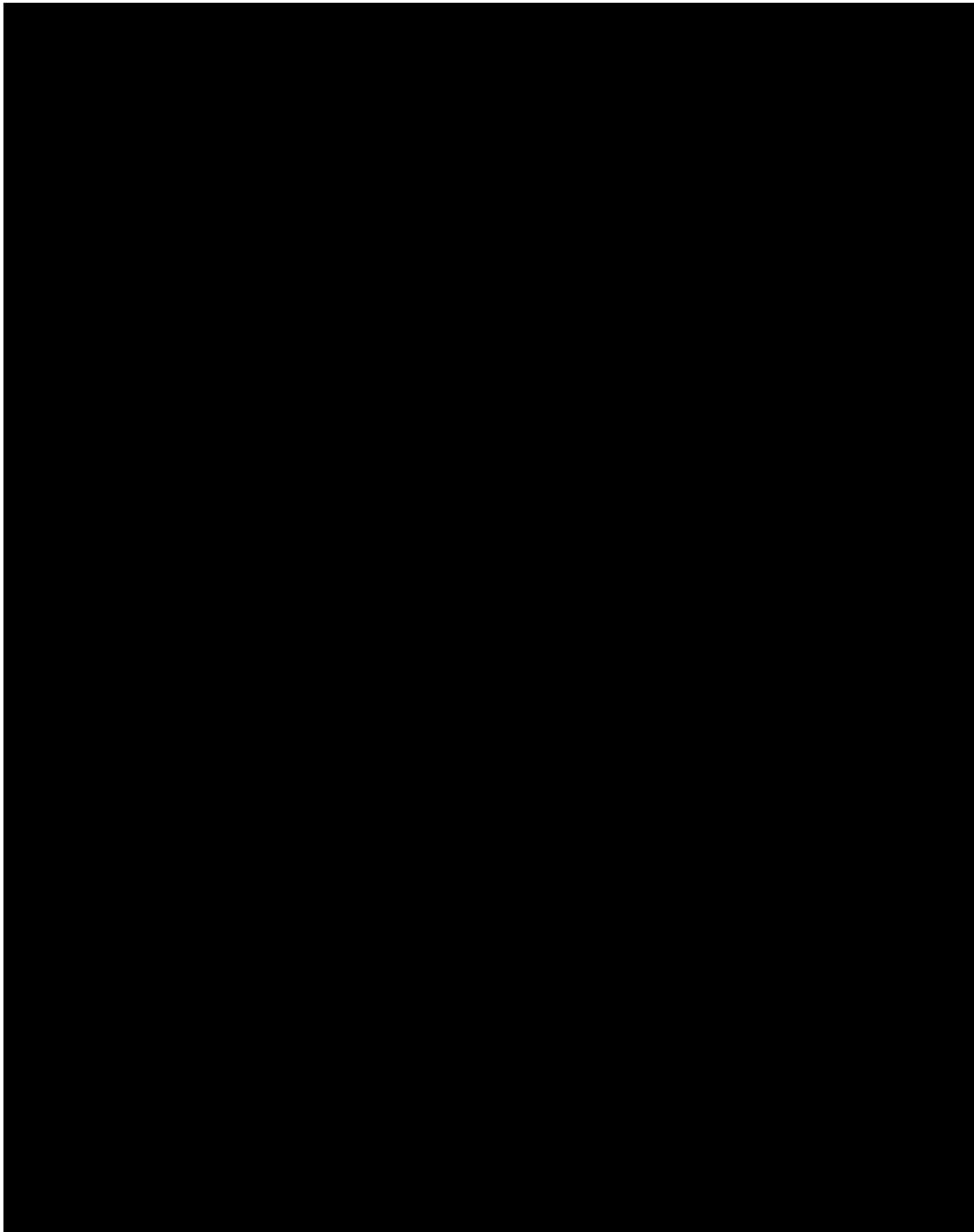
## **G. WATER USE**

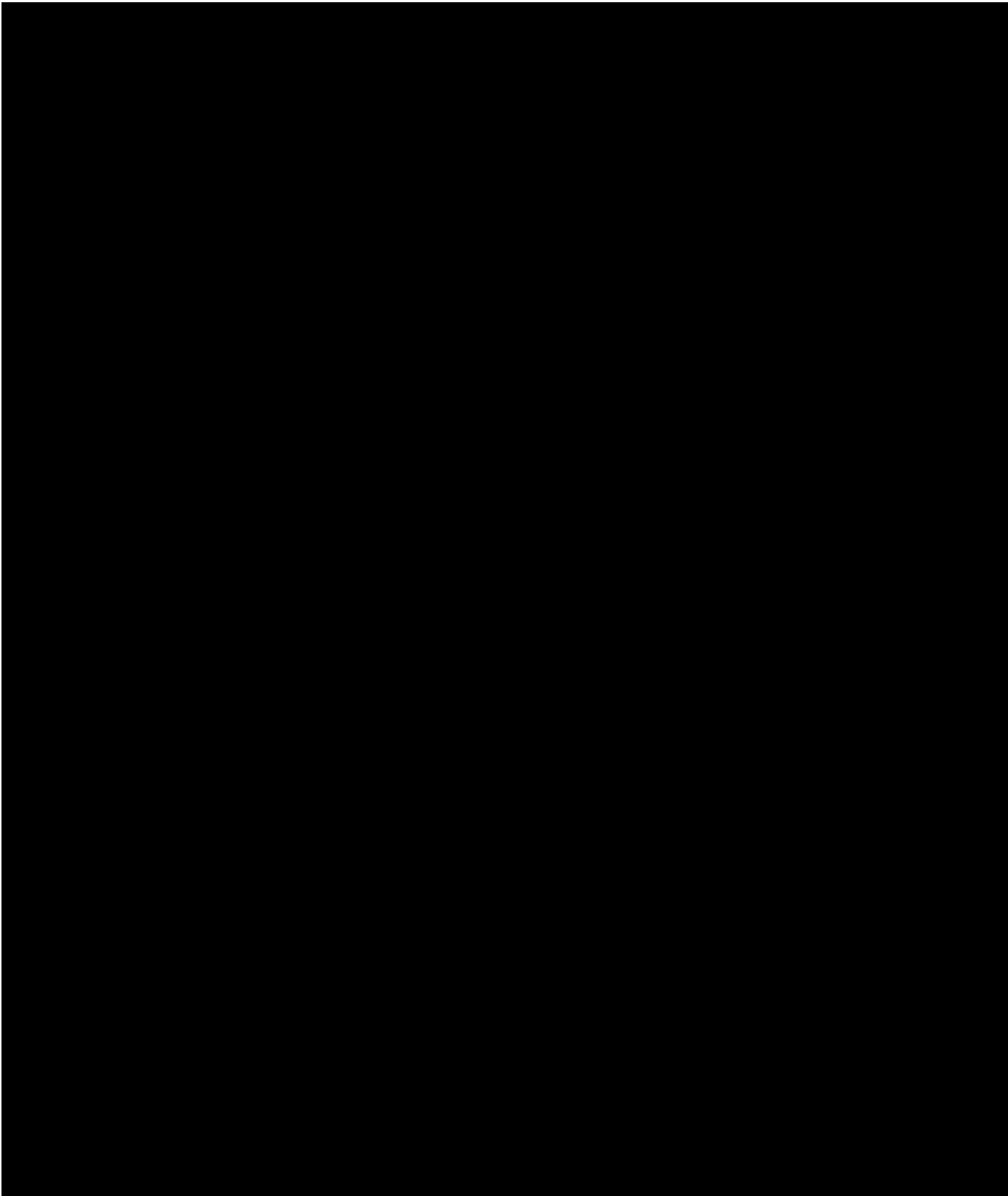
Our proposed water importation plan to transfer water from the Pacific Ocean to Salton Sea will successfully increase the water elevation to an ideal level (-226 below sea level) within a one to two years period. Furthermore, a tremendous amount of renewable energy will be generated through the underground hydroelectric power stations.

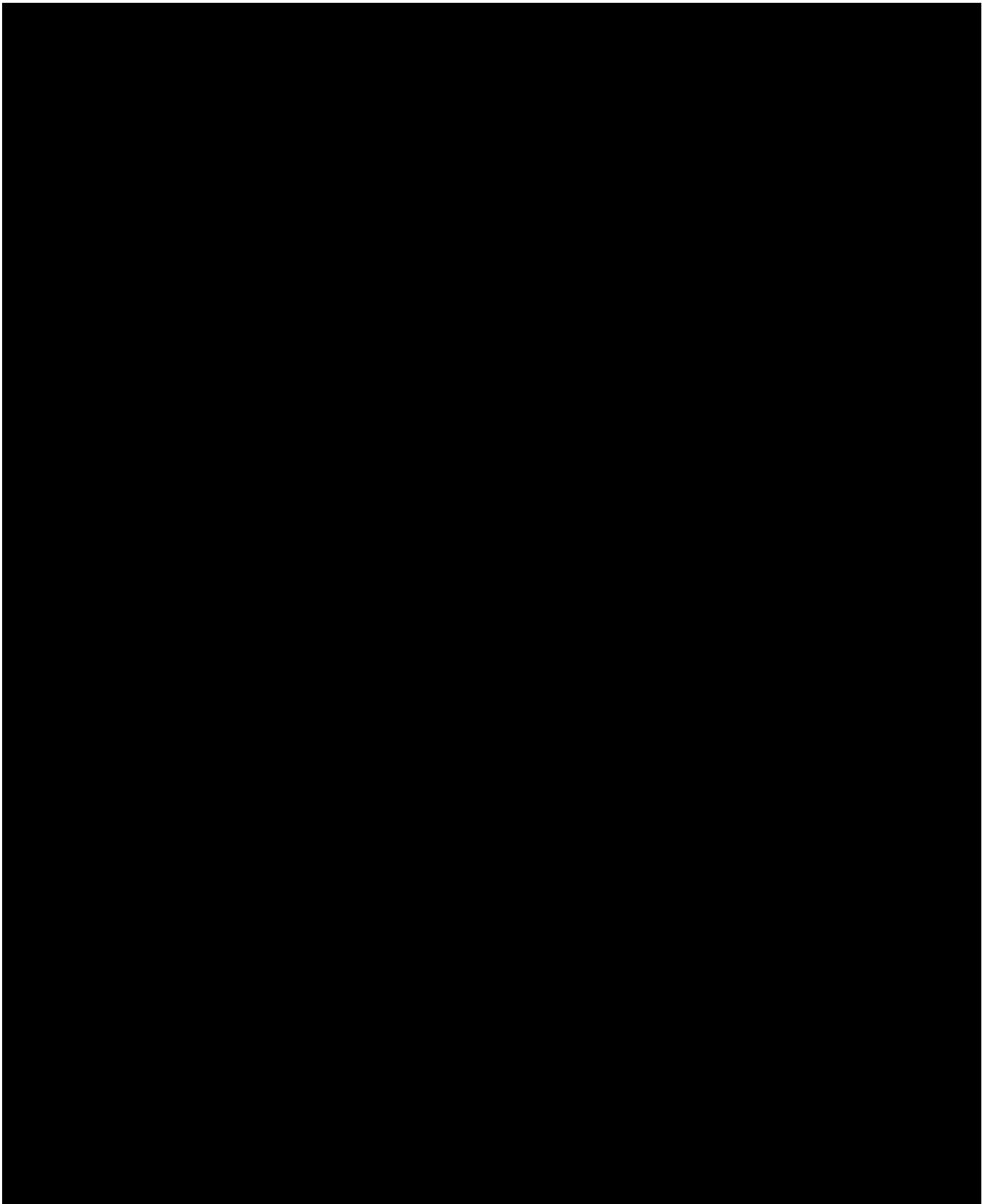
Salton Sea is an agricultural drainage sump; 90% of its inflow is agricultural drainage from the Imperial, Coachella, and Mexicali Valleys. With sufficient fresh water for irrigation, farmers will no longer need to use water from the Colorado River which is toxic and very high in salinity. As a result, the agriculture drainage into Salton Sea will be less of a factor contributing to the toxic inflow and salinity into the Sea.

Once Salton Sea has reached its ideal level, the amount of water being imported from the Pacific Ocean to Salton Sea will be directly correlated with the Sea's evaporation rate (approximately between 15,000-30,000 gallons per second) and the amount of acre feet or gallons exported to the County of Imperial, Riverside, Los Angeles, San Diego, San Bernardino, State of Nevada, Arizona, Utah and Mexico. Salton Sea will eventually become California's largest freshwater reservoir once all known toxins have been removed and toxic inflows have ceased.

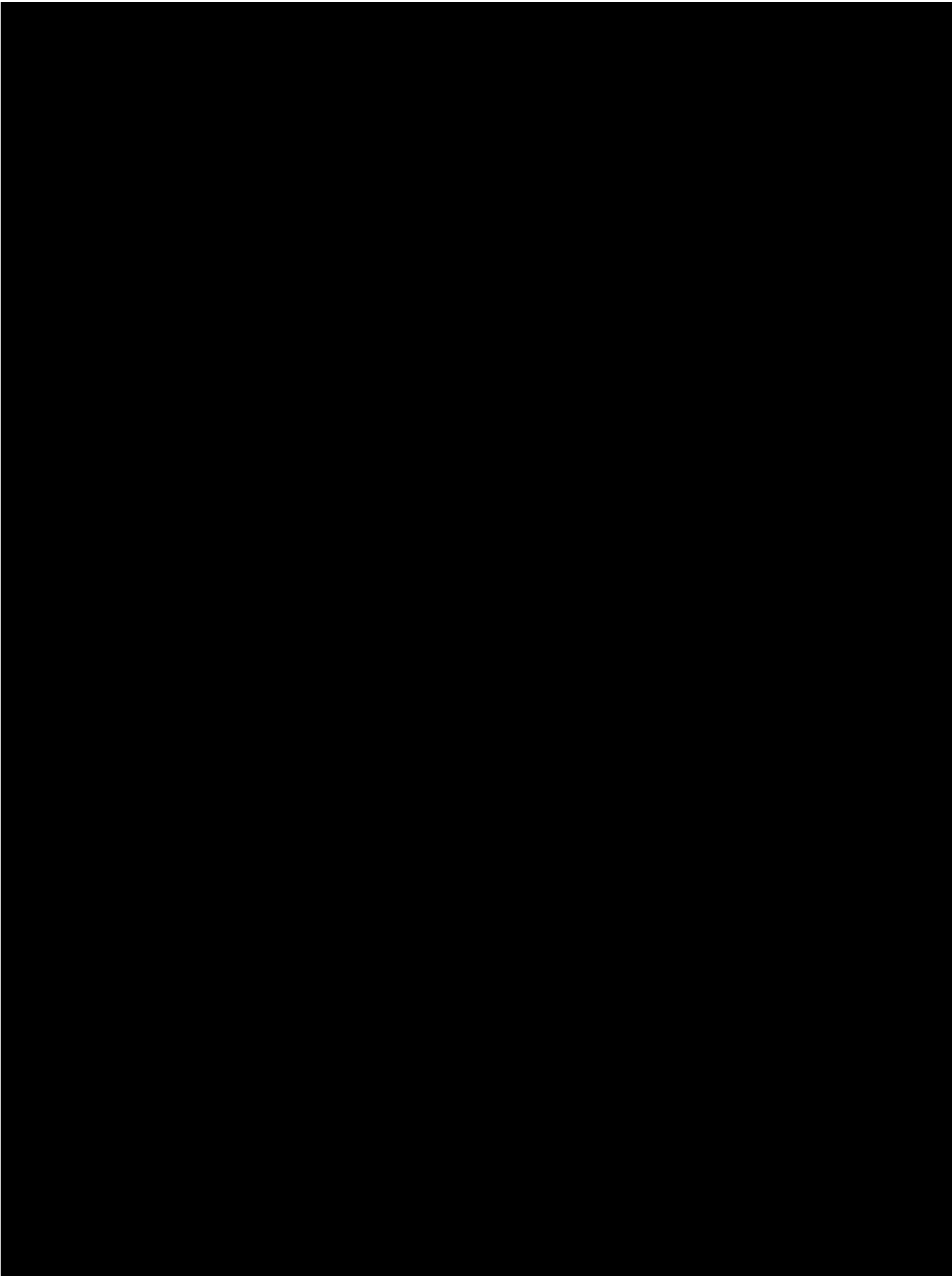


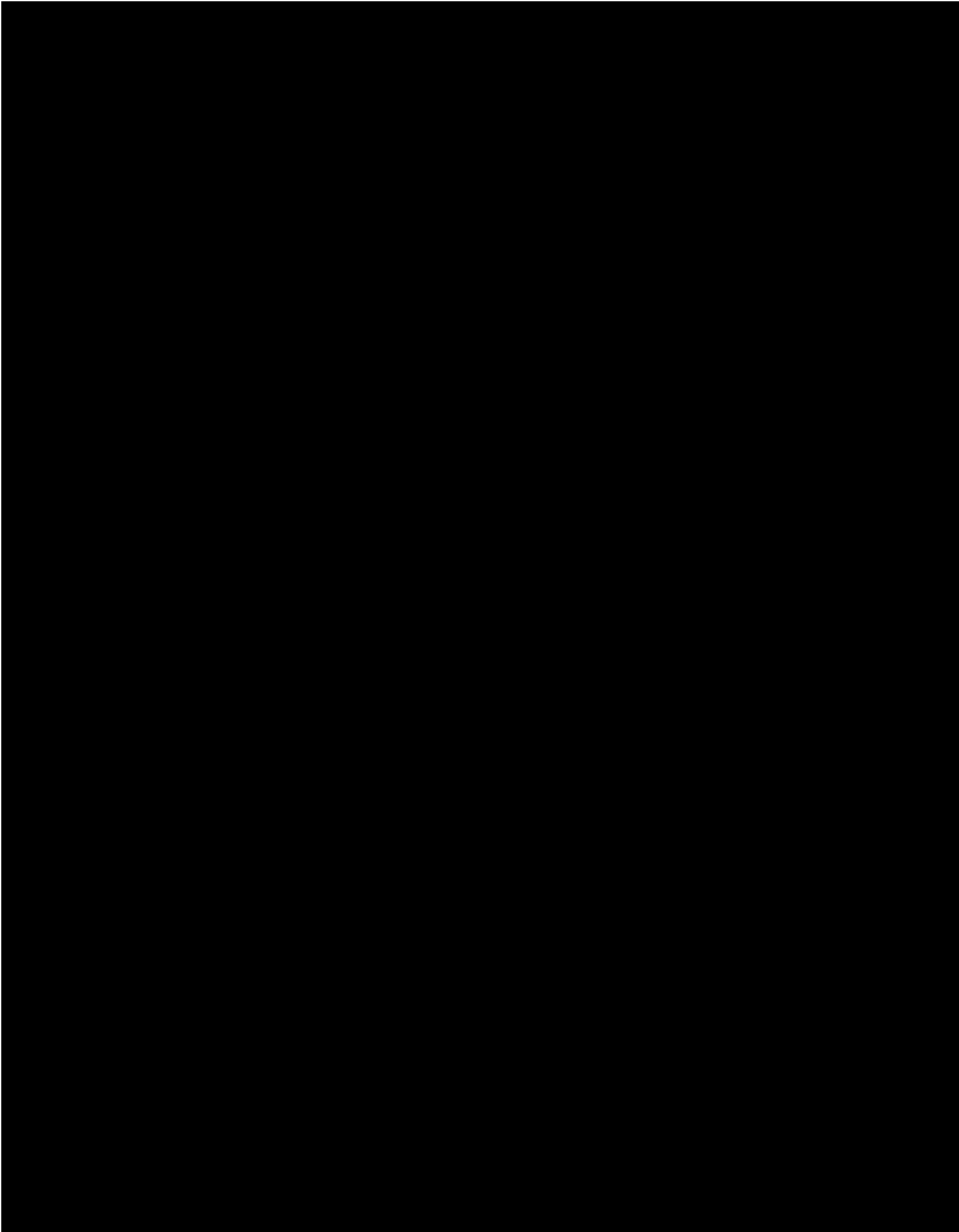


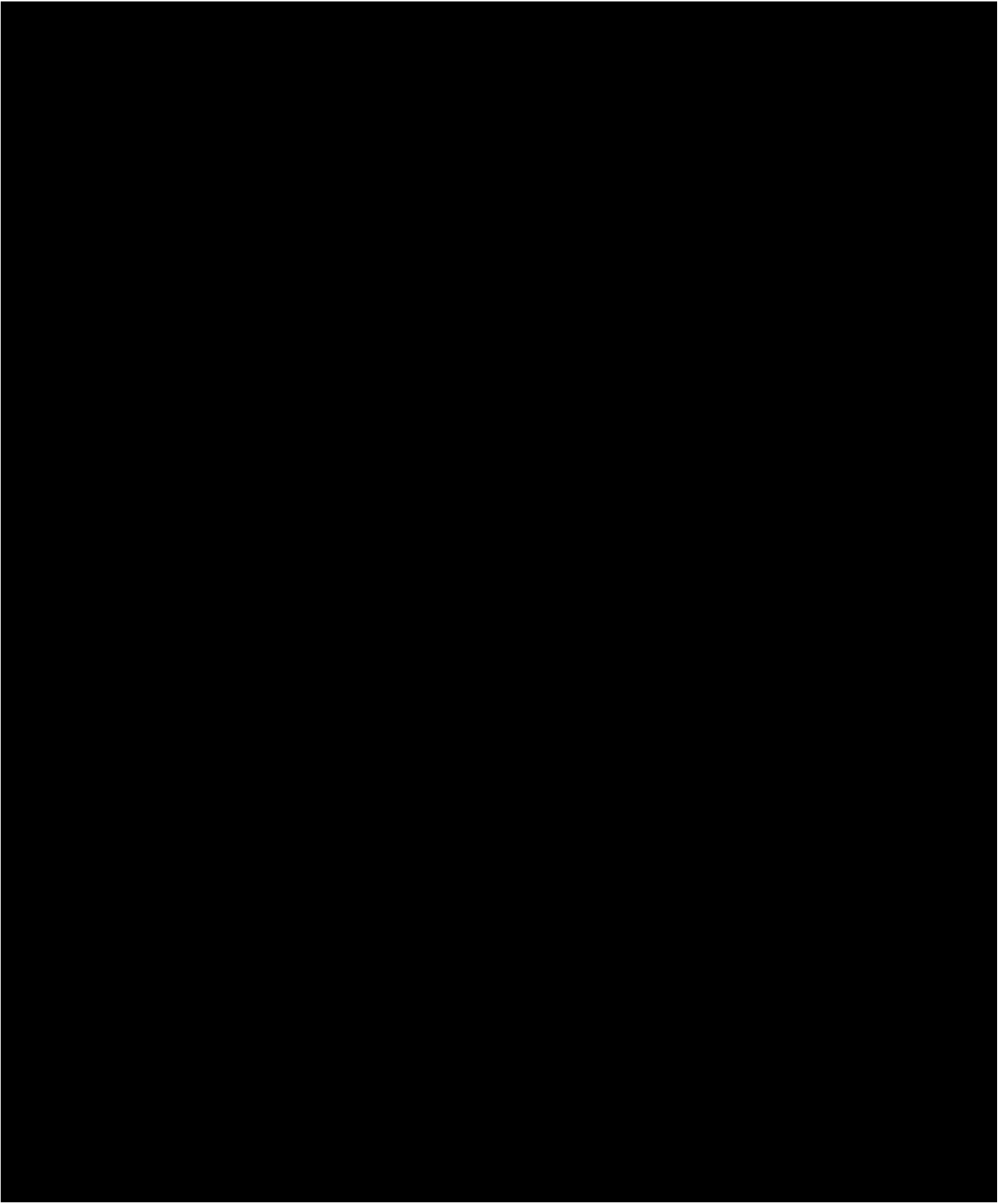


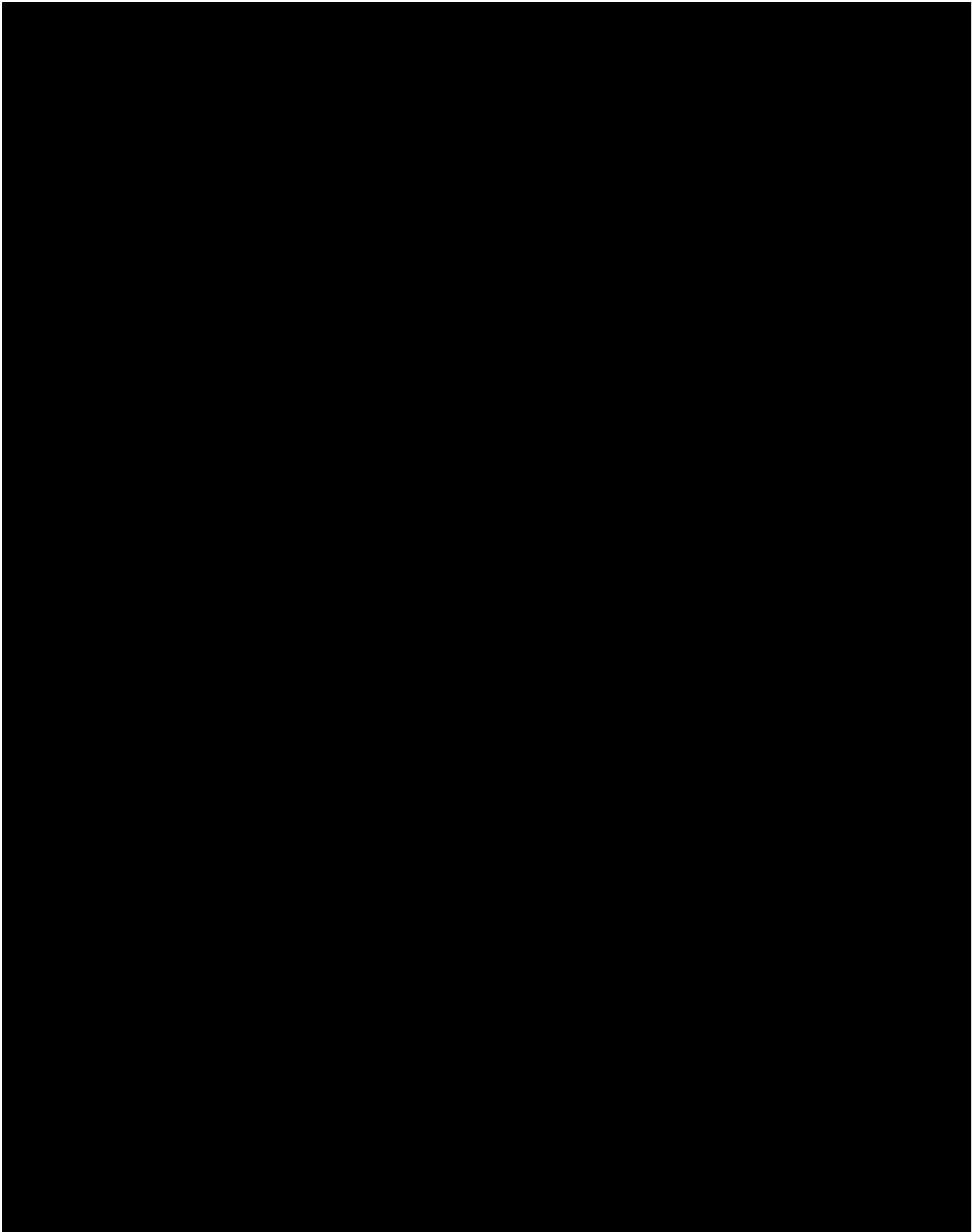


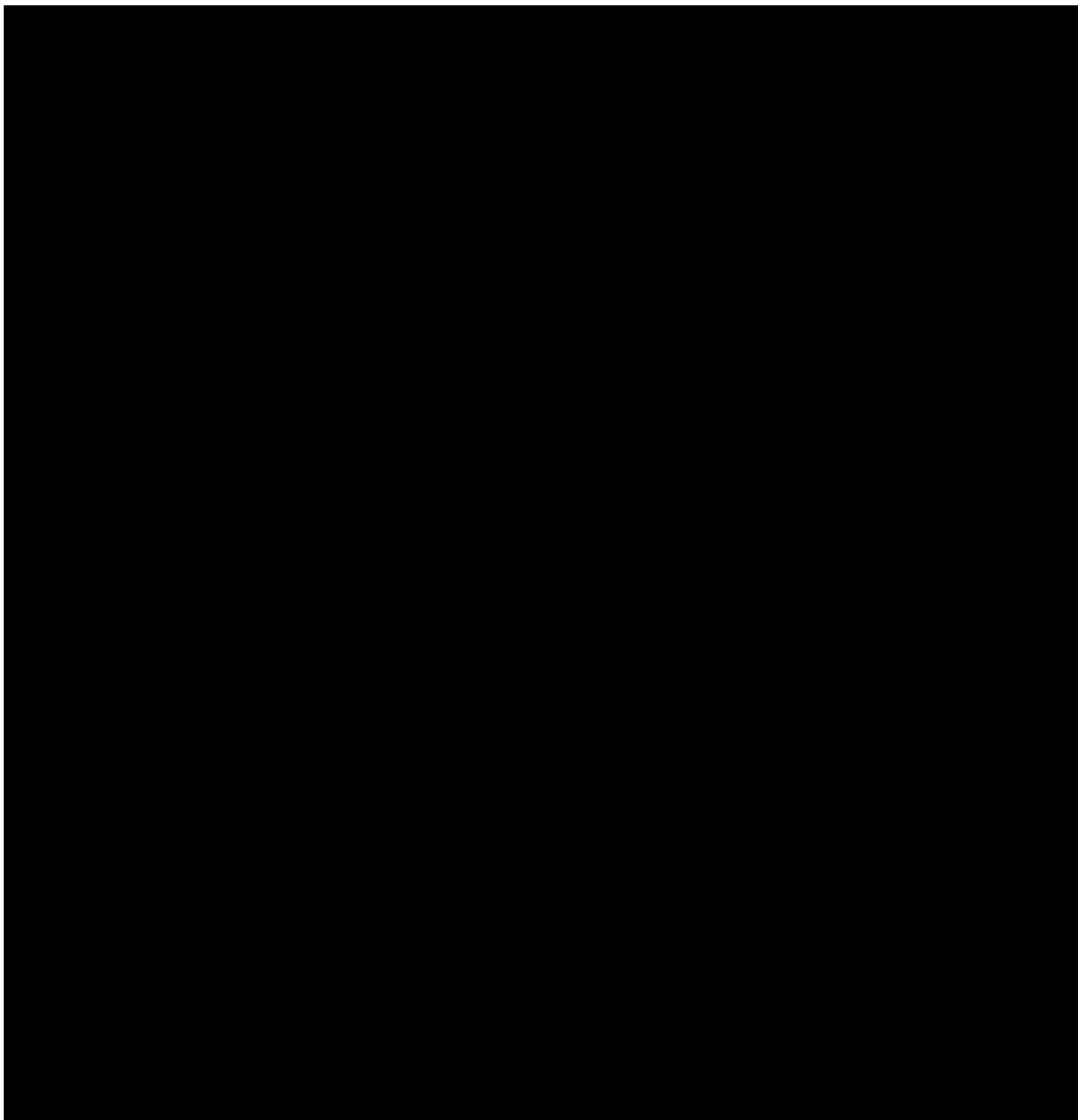












**J. OPERATIONAL SCHEDULE**

We are proposing two plans (one year and two years) to bring Salton Sea elevation to the ideal level up to 226 Feet below sea level equal to about 12 feet increase from the current elevation.

**Plan 1 - One Year Plan**

Importing a total of 4,794,489 acre-feet of water from the Pacific Ocean to Salton Sea, which equals to 1.5 trillion gallons of water within one year's period. The water flow required to achieve this goal requires depositing 49,539 gallons of water per second consistently for one year's period.

**Plan 2 - Two Years Plan**

Importing a total of 3,397,244 acre-feet of water per year from the Pacific Ocean to Salton Sea, which equals to 1.1 trillion gallons of water at a flow of 35,000 gallons per second consistently for one year's period. Within two years, there will be a total of 2.2 trillion gallons of water imported to Salton Sea.

Once the Sea has achieved its ideal level, the constant inflow in maintaining the sea level will be driven by the evaporation rate and pre-determined freshwater export plans.

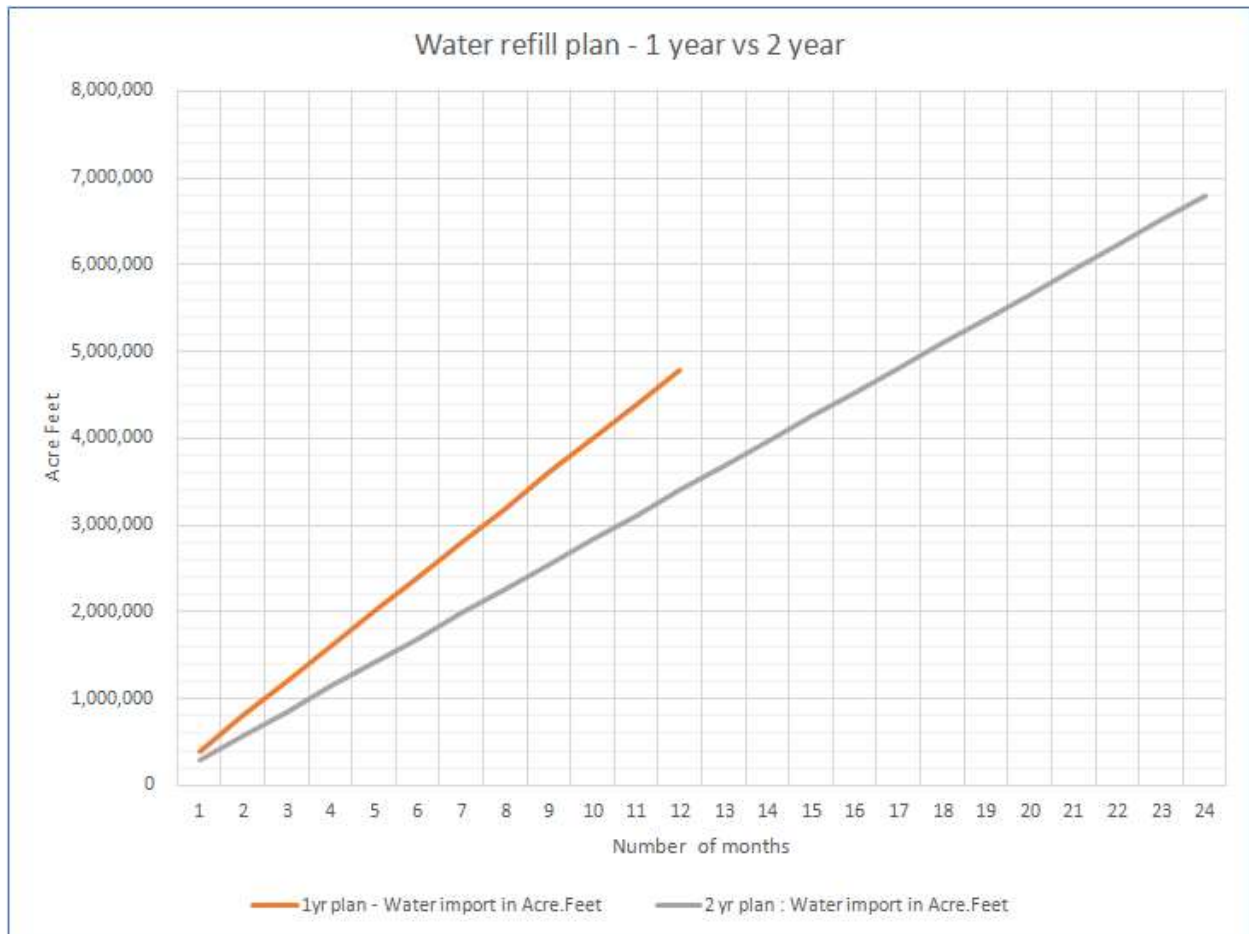


Figure 17 – Water Refill Plan – One Year vs. Two Years

## **IV – COST PROJECTION**

The sustainable solutions of water importation plan will only be feasible while combining potential power generation and fresh water production to justify the cost of the tunnel construction.

### **Projected Cost of Building the Desalination Plant**

The Second highest cost of the project is building the desalination plant within the tunnel. We estimated the total project cost is \$8,165,721,600. The proposed size of the plant will produce 1,250,000,000 (One Billion two hundred fifty million) gallons of fresh water per day, enough to supply fresh water to 14,000,000 California residents. The scale of the plant can easily be scaled back depending on drought severity and final budget. Reports have shown that efficiency of desalination plants are directly related to its scale. For calculating the cost of building a desalination plant, our team also referred to the article published by the industrial specialist Advisian Worley Group for consideration. (<https://www.advisian.com/en/global-perspectives/the-cost-of-desalination>)

### **Projected Cost of Building Hydroelectric Turbine Power Plant**

The third highest cost of the project is building hydroelectric turbine power plants. We estimated the cost for installation of hydroelectric turbines, powerhouses and shafts is approximately \$7,500,000,000 (for producing 15,000 megawatts consistent). This amount is much smaller than the traditional cost for building a hydro power plant, since we have a separate budget to build out the underground utility tunnel

in lieu of a dam. With a total capital cost of \$1.5 billion per megawatt places us in line with historical cost data published by the National Hydropower Association. (Please refer to: <https://www.hydro.org/waterpower/why-hydro/affordable/>)

Facilities	Capital Expense	Unit Cost	Energy Consumption
Hydroelectric Turbines	\$7.5 Billion	\$500,000 per installed MW (Dam cost is not included as installation of turbines are within underground tunnel)	< 1 MWH
Utility Tunnel	\$15 Billion	136 million per mile	< 1 MWH
Desalination Plant	\$8.1 Billion	\$3,256,621 per acre-feet daily	1000 MWH

Table 6 – Cost Projection for Each Key Facility

### Projected Cost for Other Components

Besides the three key facilities as discussed above, project cost for other components should be analyzed, such as land acquisition, site development cost, piping and electrical cost, taxes, engineering and design cost, construction management cost, etc. Total capital cost and a breakdown of all components are as follows:

<b>Capital Cost for Each Component</b>			
<b>Project Categories</b>	<b>Capital Cost</b>		
	<i>Amount</i>	<i>Rate</i>	<i>Unit</i>
Hydroelectric Turbines	\$ 7,500,000,000.00	\$ 500,000.00	Mega Watt
Tunnel From the Pacific Ocean to Salton Sea	\$ 14,999,999,960.00	\$ 136,363,636.00	Mile
Desalination Plant	\$ 8,165,721,600.00	\$ 58,260.00	Acre Feet
Land Acquisition	\$ 5,500,000.00	\$ 10,000.00	Acre
Site Development Cost	\$ 156,657,216.00	1%	
Piping	\$ 313,314,432.00	2%	
Electrical, Remote Control	\$ 469,971,648.00	3%	
Taxes	\$ 974,919,237.00	7.75	
Mobilization/Bonds/Permits	\$ 316,056,649.00	1%	
Engineering and Design	\$ 632,113,297.00	2%	
Special Studies	\$ 316,056,649.00	1%	
Construction Management	\$ 632,113,297.00	2%	
Owners Administration	\$ 316,056,649.00	1%	
Environmental/Permitting	\$ 632,113,297.00	2%	
Contractor Overhead & Profit	\$ 3,160,566,486.00	10%	
Estimate Contingency	\$ 1,580,283,243.00	5%	
<b>Total</b>	<b>\$ 40,171,443,660.00</b>		

Table 6 - Estimated Capital Cost for Each Component



## **V – PLAN FOR FUNDING OF THE PROJECT**

### **A. PLAN FOR FUNDING**

We plan on financing this epic scale project through multiple funding sources, which include ESG loans, private equity funds, IPO proceeds, potential humanitarian funds, tax exempt/ taxable bonds and venture capital funds. We currently are in negotiation with several well-established Venture Capital firms, SPAC sponsors and Private Equity firms for funding this project. Once the proposed project is approved by the Panel and the State, Definitive Agreements will be executed with our funding partners.

We have designed this proposed project to be completely self-sufficient regarding the project feasibility and sustainability. Our goal is to remove the financial burden from the State by designing this profitable business model that does not rely on ongoing government financial support.

We fully understand that water should be a right of every human being at zero to minimum cost. Our financial projection on the water desalination operation is to demonstrate enough operating income to support the debt. Our self-sustaining business model enables us to make a slight profit by producing fresh water for the County of Imperial, other Cities/ Counties, and neighboring States that need fresh water.

The initial construction planning related costs will be funded by Venture Capital or Private Equity partners, The construction drawings, engineering process, and the construction of the water tunnel, hydroelectric power plant and desalination plant will all be funded by raising capital from public and private market in combined with institutional debt for infrastructure.

### **B. RESPONSIBLE PARTIES FOR OPERATION AND MAINTENANCE OF THE PROJECT**

GPD and Salton Power have earmarked General Electric and or their affiliates to operate and maintain the hydroelectric power plant and Posidion as the operator for the desalination portion of the project. General Electric has a vast amount of experience in all aspects of hydropower generation and engineering of turbines, control centers, and high and low voltage power transmission.

### **C. ESTIMATED ANNUAL COST**

Operations of the desalination plant and hydroelectric power plant will undoubtedly incur significant costs and expenses to this monumental project. With the current scale of our projections, we plan on hiring approximately 3,000 staff members just to operate and maintain the hydroelectric power plant. The desalination plant is less laborious due to the innovations in automation. We estimated that 1,200 full-time jobs and 8,050 indirect jobs will be created just to support operations and maintenance of this world's largest desalination plant.

Our projected annual payroll for desalination will be approximately \$102,000,000 per year and payroll of \$172,800,000 for the power plant staff. The desalination plant will be using approximately Eight Billion Seven Hundred Sixty Million Kilowatt Hours per year equal to 172,800 Giga Watt Hours.

In addition to the labor and power cost, we estimate that each megawatt hour of power will have an associated operating cost of approximately \$60, totaling \$328,500,000 annually. Further, our desalination process will cost \$2,108 or more per acre feet or \$2,738,373,010 in total, assuming the plant is running at full capacity. Depending on California drought conditions at the start of construction, we will be able to determine how much scaling back capacity would be needed.

<b>Estimated Annual Costs for Each Component</b>				
<b>Project Component</b>	<b>Operations &amp; Maintenance</b>			
	<i>Annual Amount</i>	<i>\$/Unit</i>	<i>Qty</i>	
<b>Tunnel &amp; Hydroelectric Power Plants</b>	\$ 328,500,000.00	60	5,475,000	MWH
<b>Tunnel &amp; Hydroelectric Power Plants Staff</b>	\$ 172,800,000.00	\$ 57,600.00	3000	
<b>Desalination Plant</b>				
<b>Maintenance</b>				
Instruments, Pump upkeep, intake cleaning	\$355,823,860.00			
<b>Legal/Permitting</b>				
Environmental monitoring / Permit compliance	\$ 159,000,000.00			
<b>Opeations</b>				
Labor	\$ 102,000,000.00			
Sludge and Solids waste disposal	\$ 118,699,660.00			
Filter and RO Membrane Replacement	\$ 526,000,000.00			
Power Consumption for Desalination Plant	\$ 700,800,000.00			
Chemicals	\$ 278,000,000.00			
Other	\$ 320,000,000.00			
<b>Total</b>	<b>\$2,738,373,010.00</b>	<b>\$1,880.77</b>	<b>1,455,985</b>	<b>acre-feet</b>

Table 8 – Estimated Annual Costs for Each Component

## VI - CONCLUSION

### CONSLUSION

The Salton Sea is the most polluted lake in the state, with toxic air and copious amounts of dust making it hard to breathe, algal blooms contaminate the water. Salton Sea is expected to be deemed completely "unlivable" within the next few years. If this problem were in a more affluent area such as Los Angeles, San Francisco, the issues would have been resolved. Salton Sea has become a devastating public health hazard, which can still be reversed.

We understand that getting anything major accomplished at the Salton Sea has been a struggle for decades, mainly because of lack of financial resources. Therefore, the self-sustainable plan we proposed will remove the financial burden imposed on the State, with cooperation with State and local government by granting us environmental and permitting streamline process, we will be able to start water importation and desalination process within two years. By 2025, Salton Sea will reach its desired ideal water level.

As a summary, the distinctive advantages of our proposed plan include the following aspects:

- The water importation plan from Pacific Ocean to Salton does not involve any complex cross-border related issues and intergovernmental political obstacles;
- To implement the proposed plan, no government financial support is needed which completely removes the burden to the State of California, and enable the project to start sooner than later;
- We have a solid and feasible plan for raising sufficient capital through public/ private funding sectors, certain PE firms, Venture Capitalists and SPAC sponsor have already expressed their interests in participating in this project.
- The proposed plan is completely powered by renewable perpetual energy to not only provide a sustainable solution for remediation and restoration of Salton Sea, but also resolve California and surrounding States' urgent water and power shortage issues;
- Once environmental and permitting streamline process are granted, we will be able to increase Salton Sea to its desired water level in only two years. No time will be wasted;
- We have a systematic plan for disposing of brine and it will not be pumped back into the ocean to cause environmental hazard.
- The water transfer process does not require water pumps which are highly energy inefficient.
- Our unique "berm" design along the Sea shoreline will allow residents to enjoy the water activities within the decontaminated berm sections much sooner, before the entire Sea being desalinated, filtered, and restored.
- The natural treatment methods for air/ water filtration and dust control as proposed in our plan (Installation of industrial sprinklers, ozone water treatment, setting up mangrove nurseries, and VOCs removal program) can be implemented immediately while awaiting the State and local approval of our proposed plan.
- Last but not the least, the County of Imperial highly supports our proposed plan, and offered their full cooperation in assisting us to accomplish the final goal.

Action is needed more than ever to save our biggest lake in California. We are confident and optimistic that Salton Sea will become the destination of dreams once again!

I appreciate your time and consideration of our proposed plan. Please feel free to contact us with any questions.

Sincerely yours,



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Andrew Hanna

President  
Global Premier Development, Inc.  
Salton Power, Inc.  
2010 Main Street., Suite 125  
Irvine, CA 92614  
Office: (949) 777-6931  
Cell: (949) 874-5068  
Email: [Andrew@GlobalPremierDevelopment.com](mailto:Andrew@GlobalPremierDevelopment.com)

**EXHIBIT A – LETTER OF SUPPORT**

*Letter of Support  
from the County of Imperial*



**Board of Supervisors**  
**County of Imperial**

July 14, 2021

Andrew Hanna, President  
Global Premier Development, Inc.

As a member of the Imperial County Board of Supervisors for four consecutive terms, I have witnessed and worked tirelessly to address the environmental and public health crisis at the Salton Sea. Furthermore, as the unit of general-purpose local government that encompasses the vast majority of the Salton Sea and is responsible for administering public health services and regulating air quality, Imperial County has an enormous stake in policy considerations affecting the future of the Sea. For many years, the Board of Supervisors has been sounding the alarm regarding the large-scale ecological, environmental, and public health crisis that has been unfolding due to the Salton Sea's rapid decline.

After years of insufficient action on the part of the Federal government and delayed action from the State of California, the Board voted in October of 2019 to declare a local state of emergency due to the proliferation of toxic air pollution stemming from the release of contaminated dust particles from the Sea's increasingly exposed lake bed. Additionally, recent studies have linked dust emissions from the Salton Sea to illness and disease; and the alarmingly high salinity levels, algal blooms, and subsequent byproducts of decomposition have resulted in repeated ecological disasters.

Taking into consideration all the concerns previously stated, I am in support of efforts to bring a solution to our Sea, and I am in support of Global Premier Development's comprehensive sustainable two-phase project, which includes:

- Designing and building a specialized infrastructure to transfer water from the Pacific Ocean to the Salton Sea.
- Utilizing the renewable energy produced to power the desalination plant and placing all excess power on various grids
- Seeking exclusive rights for commercial and residential real estate development within a 10-mile radius from the shoreline.
- The designing, building, and installation of infrastructures to support developments around the Sea.

Now more than ever, action is needed at our Salton Sea for the health and safety of our residents and natural environment. I look forward in assisting and cooperating with Global Premier Development on this endeavor to bring a solution to our Sea.

Sincerely,



Michael W. Kelley,  
District 3 Supervisor  
Imperial County Board of Supervisors

## **EXHIBIT B – ENGINEER OPINION LETTER**

*Engineer Opinion Letter-  
Maximum Power Generation by Using Hydroelectric Pelton Turbines*

# ENGR SULIMAN

CIVIL ENGINEER PROFESSIONALS

09/20/2021

Andrew Hanna  
President/ CEO  
Global Premier Development  
Salton Power, Inc.  
2010 Main St. # 1250  
Irvine, CA 92614

Re: **Engineer Opinion on Maximum Power Generation by Using Hydroelectric Pelton Turbines**

Dear Mr. Hanna,

Thank you for engaging our group to analyze the maximum power generation by using hydroelectric Pelton turbines while importing Pacific Ocean water to Salton Sea through a 100-110 miles long underground utility tunnel.

You have presented to us that the Ocean intake would be located at around 226 feet below Pacific Ocean Sea level, which equals to approximately six bars with a cross-section of 540 square feet. In our opinion, with the initial depth of 226 feet and cross-section of 540 square feet, approximately 2,248 cubic meters of fluid per second will flow through the water intake at a velocity of 102 miles per hour ("MPH") initially.

Coriolis forces, gravitational acceleration forces, water mass and original ocean pressure together will cause the velocity of the fluid to increase to a range of 125-175 MPH until the initial 2,248 cubic meters fluid comes in contact with the first hydroelectric power stations within the underground tunnel.

With a water mass of approximately one million tons, equals to the weight of 5,000 "Boeing 747" airplanes, during the first ten minutes of flow, among the total of 2,248 cubic meters of ocean water inflow, approximately 1,004 cubic meters of water will be funneled into the intakes of the first series of Pelton turbines. To achieve highest efficiency, the remaining 1,244 cubic meters of water will need to be placed in a separate bypass tunnel to bypass the first series of turbines and flow directly into the next series of turbines which are located at around 20 miles away from the first series of turbines. The bypass tunnels are designed to be smaller and shorter in distance with sole purpose of separating the water flow in order to maintain the high water velocity flowing into the second series of turbines.



# ENGR SULIMAN

CIVIL ENGINEER PROFESSIONALS

## Energy generation

- Before the 1,004 cubic meters of water is funneled into the first series of Pelton turbines, the cross-section of the tapering tunnel will be reduced from the original intake at cross-section of 540 square feet to 59 square feet right before water entering the turbines, the tapering tunnel forces the water velocity to increase momentarily to 600 feet per second right before entering the turbine, then slows down once discharged. Approximately 15,000 megawatts will be generated at the first hydroelectric power station by leveraging up water mass, velocity by ocean pressure, Coriolis forces and gravitational acceleration. (600 feet per second is the equivalent water head of approximately 1,800 meters)
- The original 1,004 meters of water that being discharged from the first series of turbines will continue its natural flow into the second series of turbines at a much lower velocity; a separate “slow lane” will be created to separate the lower velocity water from the bypass high velocity water, to avoid energy reduction. The 1,244 cubic meters of bypass water will travel at a high velocity in “fast lane” to approach the second series of Pelton turbines which is located at around 20 miles from the first series of turbines, the second series of Pelton turbines will then process 1,004 cubic meters of fluid with the same method as described above, with 240 cubic meters of water bypassing from the second series of turbines to flow directly with into the last series of turbines.

This unique design includes three separate hydroelectric power stations, with shorter distance bypass water tunnel- the “fast lane” and turbines discharge water tunnel – the “slow lane” being built to achieve maximum power generation, with peak power output of over 30,000 megawatts in total. Depending on the final engineering design, the total megawatts can be reduced to 15,000 megawatts by removing the second and third series set of Pelton turbines.

Please feel free to contact us with any further questions.

Very truly yours,



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Engr Suliman  
Civil Engineer/ Fluid Specialist  
Email: Engr.Suliman123a@gmail.com  
Phone: +923451381242

# ENGR SULIMAN

CIVIL ENGINEER PROFESSIONALS

Introduction: Mr. Engr Suliman graduated from University of Engineering and Technology Jalozi Campus with Bachelor of Science degree in Mechanical Engineering. Mr. Engr Suliman and his team have extensive experiences in fluid, structure and soil mechanics, reinforced concrete design, environmental, material and foundation engineering, geotechnical engineering, and other subject related to civil engineering.